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“Spinoza’s Way of Ideas”

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Spinoza's Way of Ideas

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An abstract of
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Abstract

Spinoza's Way of Ideas By Matthew Homan

One of Spinoza's most important, yet elusive, philosophical innovations is his concept of an adequate idea, which he defines as one with the intrinsic marks of its truth. My dissertation explores adequacy at the intersection of Spinoza's theories of ideas and knowledge.

In the first part of the dissertation, I develop an interpretation of adequacy, according to which an idea is adequate if it is thought through its cause, such that all the properties of the object can be deduced therefrom. I highlight the difficulties this epistemic model must face when applied to the knowledge of natural things (and not just mathematical objects), and I discuss Spinoza's arguments against skepticism.

In the second part of the dissertation, I develop successive interpretations of Spinoza's three kinds of knowledge from the standpoint of his theory of adequacy. I show how the second and third kinds of knowledge (reason and intuitive science) exhibit the scope for adequate knowledge of natural things.

Throughout the dissertation I explain and argue for the sophistication of Spinoza's methodology. I show that Spinoza is sensitive to the need to balance an *a priori* conception of the nature of knowledge with a naturalistic understanding of human cognitive capacities; and as such, Spinoza exemplifies an approach *avant la lettre* to the problem of naturalizing epistemology.

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Abbreviations and Notes on Texts

Quotations from the *Ethics* are taken from *A Spinoza Reader*. Edited and translated by Edwin Curley. Princeton, NJ: Princeton University Press, 1994. E = *Ethics*; a = axiom; c = corollary; d = definition; dem = demonstration; l = lemma; p = proposition; s = scholium. For example, E2p40s2 refers to *Ethics*, Part 2, Proposition 40, Scholium 2.

For quotations from Spinoza's other works, I use: (1) *The Collected Works of Spinoza*, Volume 1. Edited and translated by Edwin Curley. Princeton, NJ: Princeton University Press, 1985; and (2) drafts of Edwin Curley's translations to be included in *The Collected Works of Spinoza*, Volume 2 (forthcoming), to which Professor Curley generously gave me access. In the case of the *Treatise on the Emendation of the Intellect*, I use the abbreviation *TIE* followed by references to paragraph number. For example, *TIE* §17 refers to *TIE*, paragraph 17.

I have also included citations to the Gebhardt edition of Spinoza's works: *Spinoza Opera*. 4 Vols. Edited by Carl Gebhardt. Heidelberg: Carl Winter, 1925. For example, G II 239 refers to the Gebhardt edition, volume 2, page 239.

So they maintained it as certain that the judgments of the Gods far surpass man's grasp. This alone, of course, would have caused the truth to be hidden from the human race to eternity, if Mathematics, which is concerned not with ends, but only with essences and properties of figures, had not shown men another standard of truth [...]

– Spinoza, *Ethics*

Introduction

In a public exchange with John Locke in the late 1690s, Edward Stillingfleet, the Bishop of Worcester, expressed his concern about a “new way of ideas”:

The world hath been strangely amused with ideas of late; and we have been told that strange things might be done by the help of ideas; and yet these ideas, at last, come to be only common notions of things, which we must make use of in our reasoning. You [Locke] say in that chapter about the Existence of God, you thought it most proper to express yourself in the most usual and familiar way, by common words and expressions. I would you had done so quite through your book; for then you had never given occasion to the enemies of our faith, to take up your *new way of ideas* as an effectual battery, as they imagined, against the mysteries of the Christian faith. But you might have enjoyed the satisfaction of your ideas long enough before I had taken notice of them, unless I had found them employed about doing mischief.¹

¹ This letter is included as a footnote in John Locke, *An Essay Concerning Human Understanding* (Prometheus Books, 1995), 5, emphasis added.

This passage is remarkable for its coinage of a very apt phrase, and for its intimation of the radical connotation that the “new way of ideas” could have in seventeenth-century ears. Stillingfleet does not think that ideas are pernicious *per se*, but merely “common notions of things, which we must make use of in reasoning.” The implication is that it is only when ideas are detached from their “usual and familiar” usage as such “common notions of things” that they may be “employed about doing mischief.” In his response to the Bishop, Locke correctly denied that the “way” was an innovation of his, and suggested that philosophers have always engaged in a like concatenation of ideas. In one sense Locke might be right, but in another, his suggestion ignores the fact that there was indeed something new in the air.

The new way of ideas was the indirect result of the mechanistic understanding of the physical world afforded by new quantitative methods. The latter meant that the material world could no longer be thought to interact with non-material entities, in particular, volitions, without polluting calculations and violating general laws. If the non-material entities were not to be reduced to the material, they needed to be dealt with in their own terms, apart from their relation to matter, resulting in the detachment from “usual and familiar” connotations that Stillingfleet worried about. The mechanical philosophy implies either materialism or a problematic rift between the material and the non-material. Whether philosophers opted for the former or the latter result, knowledge of the world needed to be reconstructed and justified anew. The new methods in science were therefore attended by new methods in epistemology.

The new way of ideas, as one such epistemological approach, was the indirect result of the mechanical revolution insofar as it was advanced by philosophers who, in

the first place, accepted the mechanical philosophy, and in the second, refused to reduce ideas to matter. In particular, this approach can be traced back to Descartes. As a result of his commitment to the mechanical philosophy, as well as to the reality of non-material entities, Descartes embraced a dualist ontology, and pioneered the construction of an edifice of knowledge using only the resources native to the mind, i.e., ideas. Descartes introduced the word “*idea*” (in Latin), or “*idée*” (in French), into the emergent modern context, because, he explained (to Hobbes), “it was the standard philosophical term used to refer to the forms of perception belonging to the divine mind, even though we recognize that God does not possess any corporeal imagination.”² It is the concessive clause that reveals the motivation behind Descartes’ word choice (one that came to dominate seventeenth-century philosophical discourse) – he sought a connotation that did not tie ideation to the body. Descartes proceeded thence to attempt to re-bridge the gap between mind and matter opened up by the new philosophical currents. We are all familiar with Descartes’ appeal to the intrinsic certainty of the *cogito* in pressing this agenda.

Those prepared to do away with ideas and to embrace some brand of materialism, of which group Hobbes and Gassendi were forerunners, produced their own “new ways.” This is more true in the case of Hobbes, who drew (more so than Gassendi) from the mathematical methods that proved so successful in the physical sciences (as in the celebrated case of Galileo), and in some cases, helped to foster some of those methods.³

² René Descartes, *The Philosophical Writings of Descartes*, 3 Vols., edited and translated by John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny (Cambridge, UK: Cambridge University Press, 1984-91), 127.

³ For Hobbes’s mathematical efforts, see Douglas Jesseph, *Squaring the Circle: The War between Hobbes and Wallis* (Chicago: University of Chicago Press, 1999).

Both materialist and dualist epistemologies that arose in the context of early seventeenth-century upheavals appropriated the analytic and synthetic methods of geometry and algebra, and took inspiration and influence from the essential, quantitative aspect of the mechanical revolution. To the extent that they shared this inspiration, materialist and dualist epistemologies can both be described as “new ways.” In this light, if Descartes was the source of the new way of ideas, it must be recognized that he forged the ideas part of the new way of ideas, but not the way itself; although instrumental in adapting mathematical approaches to metaphysics in general, Descartes was joined by Hobbes and others in that enterprise.

Undoubtedly, Stillingfleet found all such “new ways” disturbing – the Hobbesian most likely even more so than the Cartesian. Nevertheless, as the Bishop’s letter makes clear, there was a sense in which the new way of ideas, in particular, posed its own dangers. What did the Bishop find dangerous? As his stated concerns about the status of Christian mysteries would suggest, the answer is most likely the fact that, at the root of the new way of ideas is an invigorated, heightened quest for certainty, and the correlative doubt of everything that does not meet that standard. For Descartes, the standards of certainty were inherent in ideas themselves. It is on this basis that his method, beginning from ideas, was able to lift itself up at all. The reflection upon the nature of ideas with a view to discerning the internal marks of their epistemic value – with all the dangers that endeavor posed to the establishment – begins to convey the connotation of Stillingfleet’s phrase, the “new way of ideas.”⁴

⁴ Descartes himself was keenly aware of the radical implications of his theory of ideas. Referring to his principle that all clear and distinct ideas are true, he wrote, “so great is its importance for rescuing the whole of philosophy from darkness that, by adding the weight of his [Caterus’] authority to it, he has greatly helped me in my enterprise” (Descartes, Vol. 2, 81).

In this sense, Spinoza was an early practitioner of the new way of ideas. By this I simply mean that a reflection on the intrinsic properties of ideas with a view to gaining a grasp of the human capacity to know is at the base of Spinoza's philosophical enterprise. While Descartes inaugurated the inquiry into the intrinsic properties of true ideas, he did so in an abortive manner, going little further than the description of such ideas as "clear and distinct."⁵ Flourishing on Descartes' heels, Spinoza both understood the problem, and met it, even if not quite head on. As we shall see, Spinoza himself could have gone much farther in articulating his theory, focusing it, and pushing it to completion. Perhaps the relative brevity of his life is to blame for that. Whatever the reason, Spinoza's account of the intrinsic nature of true ideas – what he calls the "adequacy" of ideas – is at once profound and under-developed. At least, a fair amount of interpretive work is required to draw out his theory of adequacy, as we shall see.

As with Descartes, Locke, and other philosophers of the new way of ideas, the theory of the intrinsic nature of ideas is not, for Spinoza, an end in itself, but developed with a view to securing a system of knowledge. In turn, the theory of knowledge cannot properly be understood without the theory of ideas. As we shall see, the most important, and indeed, the governing distinction, in Spinoza's theory of knowledge is that between adequate and inadequate knowledge. Thus, the theory of knowledge illuminates the meaning of the theory of adequacy, while the theory of adequacy clarifies the structure

⁵ Leibniz said that "even Descartes did not entirely do justice" to the matter of true and false ideas, for, as he explains, "what seems clear and distinct to men when they judge rashly is frequently obscure and confused. This axiom is thus rendered useless unless the criteria of clearness and distinctness which we have proposed are applied and unless the truth of the ideas is established." We see here that Leibniz pushes for *criteria* of clarity and distinctness. The criteria that Leibniz specifies involve analyzing or resolving ideas into primitive elements whose possibility or contradiction is manifest. He goes on to explain that causal definitions are superior insofar as they manifest the possibility of the thing directly. See Gottfried Leibniz, *Philosophical Papers and Letters*, trans. and ed. Leroy Loemker (Dordrecht: Kluwer Academic Publishers, 1989), 291-4.

and logic of the theory of knowledge. The two elements of Spinoza's system are intimately related and mutually enlightening. This is not to say they could not be analyzed separately, and for their own sake, but considering them together reveals a deeper logic, structure, and meaning in Spinoza's method and epistemology. It is the goal of this dissertation to illuminate the connection between Spinoza's theory of adequacy and his theory of knowledge. Together they constitute what I am calling "Spinoza's way of ideas." In Spinoza's case, I take this phrase to signify, in the first place, that Spinoza methodically seeks knowledge, and in the second, that Spinoza justifies knowledge claims through appeal to the intrinsic nature of ideas. My hope is that the pertinence of the phrase in connection with Spinoza will emerge over the course of the dissertation, and that it will be easier to see, by the end, how Spinoza might be fitted into a broader discussion of the development of seventeenth-century "ways of ideas."

The connection between Spinoza's theory of adequacy and his theory of knowledge is far from obvious, and this is not only due to the degree of obscurity that shrouds his theory of adequacy. The mature statement of Spinoza's theory of knowledge emerges in the second part of his great work, the *Ethics*, wherein it is comprised of a constellation of doctrines and theories that bear on different aspects of human knowledge, including the nature of truth, justification, and the various means and modes of human cognition, which climaxes in the epistemological taxonomy of three kinds of knowledge in 2p40s2.⁶ Despite the fact that the distinction between adequate and inadequate

⁶ Philosophers in the seventeenth century did not speak of "epistemology" or "theory of knowledge" as demarcated philosophical sub-disciplines. Despite this fact, seventeenth-century philosophers had robust

knowledge is the principal one in the theory of knowledge, there is at no point in the *Ethics* an explanation of the intrinsic marks of truth that define adequacy – a striking omission.

The theory of adequacy is not the only hole that needs to be filled in the service of a solid understanding of the theory of knowledge that emerges in the *Ethics*. The fact that Spinoza's theory emerges only in the second part of the *Ethics* has been interpreted to mean that epistemology is not first philosophy, for Spinoza.⁷ Admittedly, Spinoza is wont to make comments to this effect. For instance, in answer to a question from Blijenbergh about his denial of the free will, Spinoza says, "the necessity of things concerns metaphysics, the knowledge of which must always come first."⁸ In reality, matters are much more complicated. The geometrical order – i.e. that order with which the reader of the *Ethics* is confronted – does not map perfectly on to what Descartes called "the order of discovery," as we will see later. Just because the theory of knowledge only emerges in *Ethics* Part 2, does not mean that the findings of Part 1 are not predicated upon prior epistemological grappling. The epistemology that lies behind the geometrical order, as it were, needs to be accounted for.

Spinoza's unfinished early methodological work, *Treatise on the Emendation of the Intellect (TIE)*, provides an indispensable supplement to studying Spinoza's mature theory of knowledge. It illuminates both the theory of adequacy and the broader methodological underpinnings of Spinoza's philosophical project. It also helps to clarify

theories of truth, justification, and the various means and modes of human cognition, which can be highlighted in retrospect as inter-related aspects of a theory of knowledge without anachronism.

⁷ See, for examples, Richard Mason, *Spinoza: Logic, Knowledge, Religion* (Hampshire, England: Ashgate Publishing Limited, 2007), 141; Yirmiyahu Yovel (ed.), *Spinoza on Knowledge and the Human Mind* (Leiden: E.J. Brill, 1994), xi; Errol E. Harris, "Method and Metaphysics in Spinoza" in *Studia Spinozana: Volume 2* (Walther and Walther Verlag, 1986).

⁸ *The Collected Works of Spinoza*, Vol. 1, edited and translated by Edwin Curley (Princeton, NJ: Princeton University Press, 1985), 395; G IV 160-1.

how the theory of adequacy and the methodology are inter-related. The *TIE* is not completely unequivocal on these matters, or as clear as we might like. (It is an unfinished work after all.) Nevertheless, there are very strong indications and clues which, when considered against what we find in the *Ethics*, shed significant light. In particular, the *TIE* points to the centrality of causal knowledge for both Spinoza's methodology and his theory of adequacy. In the *Ethics*, we encounter the "causal axiom" at the outset of Part 1, which states, "The knowledge of an effect depends on, and involves, the knowledge of its cause" (1a4). However, we are given no indication how precisely the causal axiom functions at a general level, but only its role in the demonstration of specific propositions. By contrast, the *TIE* makes clear that causal knowledge plays an absolutely pivotal role in both the theory of adequacy and the general methodology. We find strong evidence in the *TIE* that causal knowledge of a thing, such that all of its properties could theoretically be deduced, is the intrinsic denomination of a true idea that defines adequacy, and that the *Ethics* neglects to spell out. Adequacy, for Spinoza, in other words, is knowledge *per causam*. At the general methodological level, in turn, the feature that a true system of thought has, for Spinoza, is to develop an understanding of nature on the basis of its ultimate cause. Thus, the aim of method is to arrive at the idea of this ultimate cause as a basis for everything else. The tenet "*vere scire est scire per causas*" is not an innovation of Spinoza's, of course; it dates back at least to Aristotle, as Spinoza himself points out.⁹ Nevertheless, Spinoza's assimilation of the tenet, and the particular role it plays in his philosophy, is unique in ways that will emerge in due course.

⁹ Spinoza cites it as an ancient tenet in *TIE* §85; G II 32.

The *TIE* is not the only text useful for gaining an understanding of Spinoza's theory of adequacy, but it is the most important. What the *TIE* reveals about the meaning of knowledge *per causam* for Spinoza is an invaluable key for penetrating the theory of knowledge. Any study of Spinoza's mature theory of knowledge must confront the *TIE* with respect to the issues we have outlined. The most important commentaries on Spinoza's theory of knowledge have, in general, done this, albeit to greater or lesser extents, and with varying emphases.

G.H.R. Parkinson recognized the importance of taking into account Spinoza's methodology for interpreting the theory of knowledge, turning accordingly to the *TIE* to set up the relevant background in his classic study, *Spinoza's Theory of Knowledge* (one of the few works devoted to Spinoza's epistemology).¹⁰ Parkinson's chief take away from his consideration of the *TIE* was that, for Spinoza, knowledge constitutes a deductive system, such that it is first a question of arriving at the proper axioms or starting points (in Spinoza's case, the idea of God) from which everything else can be logically deduced. Parkinson then uses this methodological framework as a way of making sense of the *Ethics*' theory of knowledge, interpreting, for instance, the second and third kinds of knowledge as species of deductive processes, and the first kind of knowledge as demarcating all species of cognition that fall short of the certainty of deductive reasoning. Parkinson's study offers an excellent model for how to reveal the logic and systematicity of Spinoza's theory of knowledge by interpreting it through a methodological lens. However, the study has two shortcomings: first, it widely underestimates the role that sense perception plays in Spinoza's methodology, and as a result, perpetuates the misconception that Spinoza accorded hardly any importance to

¹⁰ G.H.R. Parkinson, *Spinoza's Theory of Knowledge* (London: Oxford University Press, 1954).

experience; (2) it provides a very weak account of adequacy, overlooking the emphasis in the *TIE* on defining a thing on the basis of its cause.

Martial Guérout's celebrated tomes on Parts 1 and 2 of Spinoza's *Ethics* (subtitled *Dieu* and *Ame*, respectively) include not only a strong account of Spinoza's methodology, but emphasize genetic thinking as the heart of that methodology. In Guérout, we see how the tasks of setting up a methodological framework and identifying the intrinsic denominations of truth might very much be linked. Guérout sees that an adequate idea, for Spinoza, has the intrinsic property of having been generated through its cause, pointing, in addition, to the Hobbesian pedigree of the emphasis on genesis. As with Parkinson's interpretation, for Guérout, once the correct cause is in place, the rest of the system follows from it. Guérout's reading of how the rest of the system follows is somewhat different from that of Parkinson, however, since, for the French scholar, the system is not so much deduced as it is *produced*, or spontaneously generated, by the mind (hence the link between adequacy and methodology, which are both genetically structured, for Guérout). Another difference from Parkinson is Guérout's enthusiasm for (as opposed to criticism of) the strictly rationalist nature of this program. Like Parkinson, however, Guérout seems not to appreciate sufficiently what we might call the "experimental" or "experiential" side of Spinoza.

In the essay, "Experience in Spinoza's Theory of Knowledge," which includes a comparative analysis of the theories of knowledge in the *TIE* and *Ethics*, Edwin Curley compellingly challenges the view, common to Parkinson and Guérout, that Spinoza was a rationalist in the stereotypical sense of the term whereby everything proceeds from self-

evident axioms à la classical mathematics.¹¹ Curley argues that, although reason, or the second kind of knowledge, is indeed a deductive system originating from first principles known *a priori*, in its descent to lower-level principles (at the extreme of which, for Curley, is the knowledge of singular things constitutive of the third kind of knowledge), appeals to experience come into play.

The logical terminology of deductive and inductive reasoning is not the only language in which discussions about Spinoza's method and epistemology can be framed. There is also the analysis/synthesis distinction, which perhaps better captures the seventeenth-century context insofar as it comes from a mathematical, rather than a logico-empiricist, background, and which it will be helpful to introduce. The distinction can be traced to pre-modern sources, but the early modern version is epitomized in the Cartesian and Hobbesian formulations, which most likely, as far as I can see, represent the chief sources for Spinoza's adoption of the distinction.

In the second set of objections to Descartes' *Meditations*, Mersenne et al. request that Descartes set out his argument in geometrical fashion. In reply, Descartes distinguishes between two kinds of method of demonstration. "Synthesis," for Descartes, is merely a mode of presenting the argument, which proceeds from definitions, postulates, and axioms to the main points of the argument in such a way that the argument is set out in an easily discernible step-wise fashion. According to Descartes, synthesis does not display how the argument was actually arrived at. "Analysis" is the method of demonstration which shows how the argument works in real time, as it were, such that the reader actually rediscovers the truths for herself.

¹¹ Edwin Curley, "Experience in Spinoza's Theory of Knowledge" in *Spinoza: A Collection of Critical Essays*, ed. Marjorie Grene (Garden City, NY: Anchor Press, 1973).

Hobbes attributed a more substantive role to synthesis than Descartes, and accounted for how synthesis and analysis might work in harmony. In Hobbes, analysis and synthesis represent two directions of causal explanation. Analysis finds causes for given effects, while synthesis deduces effects from given causes. The coordination of these procedures could be loosely translated into the terms of modern science, such that analysis corresponds to the formulation of hypotheses to explain given data, while synthesis corresponds to the prediction of testable results. In modern science, these two methods work together in the progressive refinement of theory. This idea is examined further later on.

In the light of the analysis/synthesis distinction, another way to articulate the traditional rationalist interpretation of Spinoza is to aver that Spinoza favors synthesis to the detriment of analysis. Guérout reads him along these lines explicitly,¹² and Parkinson does so as well, albeit implicitly. Thus, another way to put Curley's challenge would be to contend that analysis and synthesis work together in Spinoza. Aaron Garrett does this in a recent book, *Meaning in Spinoza's Method*, where he shows how Spinoza's method stems from Hobbes, as well as Zabarella, but not without some important innovations on Spinoza's part.¹³ The chief point of difference between Hobbes and Spinoza, for Garrett, turns on the innate ideas which the latter embraces and the former rejects.¹⁴ Garrett argues that both Hobbesian (and Zabarellian) movements of analysis and synthesis (or resolution and composition, in Zabarellian terms) are operative in Spinoza, except that, in Spinoza, analysis does not work its way back to hypothetically

¹² See Guérout, *Spinoza II – Ame* (New York: Georg Olms Verlag Hildesheim, 1974), 467-487.

¹³ Aaron V. Garrett, *Meaning in Spinoza's Method* (Cambridge, UK: Cambridge University Press, 2003).

¹⁴ I find the language of "innate ideas" in connection with Spinoza to be problematic. See the fifth section of Chapter 4 for a discussion of this issue.

constructed causes, but rather to innate, adequate ideas, in particular, to an adequate idea of God. Instead of “construction,” Garrett prefers to speak of “emendation,” arguing that, for Spinoza, we do not acquire new adequate ideas, but rather, via “emendative therapy,” uncover those we are born with, stemming from our idea of God.¹⁵

Garrett’s book does a fine job of articulating what is going on behind the geometrical method in Spinoza in historically sensitive terms. Garrett also goes some way toward carrying out the second task I suggested is prerequisite to developing a coherent understanding of Spinoza’s theory of knowledge, i.e., piecing together a theory of the intrinsic denominations of true ideas. Like Guérout, Garrett identifies the importance of genetic definitions and causes for Spinoza’s theory of adequacy on the basis, primarily, of evidence from the *TIE*. Inverting Spinoza’s claim (from the *Ethics*) that inadequate ideas are “like conclusions without premises,” Garrett points out that “it seems to follow that adequate ideas are like conclusions *with* premises,” (emphasis added) inferring, “I take Spinoza to mean that adequate ideas are ideas whose causes we know, as well as knowing how and that these causes result in the idea.”¹⁶ Ultimately, Garrett maintains, the causes of things go back to God, such that “to have an adequate idea is to have knowledge of God’s eternal essence in thought.”¹⁷ Garrett also goes some way toward making sense of Spinoza’s theory of knowledge as it appears in its mature form in the *Ethics* on the basis of his findings concerning Spinoza’s methodology and theory of adequacy. However, the book is primarily concerned with method rather than with interpreting the theory of knowledge.

¹⁵ This also relates to Garrett’s emphasis that inadequate ideas are just partial perspectives of adequate ideas.

¹⁶ *Ibid.*, 55.

¹⁷ *Ibid.*, 71.

The present study builds on the work of each of the commentators just discussed, as well as others to be singled out along the way. I intend for this study to fit into the interpretive arc I have just sketched, and to develop it further. However, my particular focus and approach will be somewhat different. My focus is the theory of adequacy, and my aim is to interpret the theory of knowledge in its light. I will develop an interpretation of Spinoza's theory of adequacy and consider to what extent it illuminates and actually fits with the theory of knowledge. Although the two theories should correlate, it is not obvious how, or even if, they in fact do. In general, studies of Spinoza's theory of knowledge have not pressed this question of adequacy's nature and role in the epistemology, as it seems to me it should be pressed. Presumably, this is because such studies have taken their cue from Spinoza himself, and particularly the *Ethics*, where the absence of any explicit discussion of adequacy or development of the concept makes it easy to ignore. However, the price paid for ignoring the nature and role of adequacy is an incomplete grasp of the theory of knowledge, for, regardless the neglect of any explicit treatment in the *Ethics*, the theory of adequacy has a governing relationship to the theory of knowledge, as will become clearer as we go on. Much can be learned about the *Ethics*' theory of knowledge on the basis of internal evidence, but not everything. Much as Mersenne et al. requested that Descartes cast his *Meditations* in geometrical fashion, one would like to ask Spinoza to cast his *Ethics* in *non*-geometrical fashion, according to the analytic method of demonstration. The *TIE* is indicative of what such a recasting might look like, at least in its beginnings, and there, the theory of adequacy is not neglected.

This focus on adequacy does not mean I ignore the other task cited as necessary for an understanding of Spinoza's theory of knowledge, i.e., gaining a grasp of Spinoza's general methodology. The theory of adequacy and the methodology are intimately related. They could, indeed, be considered as different perspectives on the same thing – the theory of adequacy being a microscopic look at what the general methodology concerns at a more macroscopic level. If the general methodology concerns the approach to setting up a philosophical system, in other words, a system of knowledge, including questions of where to begin, how to proceed, and what the scope of the system will be, the theory of adequacy takes up similar issues at the level of ideas and particular knowledge claims. As the brief sketch of the literature on Spinoza's theory of knowledge indicates, most commentators have focused primarily on the general methodology rather than the theory of adequacy. While I think it would be overly simplistic to try to claim that one or the other is prior, there are good reasons for starting with, and focusing on, the theory of adequacy, besides the fact that this approach remains to be explored.¹⁸

As we shall see, the theory of adequacy functions as something of an epistemic ideal. After all, adequacy involves the markers by which truth itself is demarcated. Thus, most of Spinoza's examples dealing with adequate ideas are abstract examples, drawn from geometry and mathematics. There is good reason to think that Spinoza's

¹⁸ An exception here is Eugene Marshall, "Adequacy and Innateness in Spinoza" in *Oxford Studies in Early Modern Philosophy Vol. 4*, ed. Daniel Garber and Stephen Nadler (New York: Oxford University Press, 2008). Marshall's essay develops a reading of the three kinds of knowledge on the basis of an interpretation of Spinoza's theory of adequacy, as the present study seeks to do. Marshall correctly identifies some principal features of the theory of adequacy and their relation to the epistemology. In particular, Marshall sees that the causal requirement for adequacy means that an infinite series of causes as one finds in the common order of nature prohibits adequate knowledge, such that another finite causal series needs to be identified if adequate knowledge is to have any basis. Marshall identifies this finite series as the series of attributes and infinite modes. Since Marshall's study is relatively short, many important details regarding the epistemology are left unaddressed. In addition, I have an objection to Marshall's exact formulation of the criteria of adequacy, especially the importance he accords to 2p11c in this regard, as I discuss in Chapter 2. Nevertheless, Marshall's essay initiates aspects of the interpretive strategy that this study intends to pursue further.

philosophy “begins” – to the extent that any such claim can be made with justification – with the identification of, and reflection upon, these lights of truth. Unlike Descartes, Spinoza seeks their nature, rather than appealing to their self-evidence. Spinoza’s theory of adequacy, however, is just the beginning, since, for Spinoza, the goal is not to remain within the sphere of mathematical knowledge, but to proceed to a knowledge of what he calls “Physical and real beings” (“*entia Physica, et realia*”) (*TIE* §95; G II 35). It is in this move from the theory of adequacy *in abstracto* to the knowledge of physical and real beings that we discern the general outlines of Spinoza’s methodology, by which I mean his approach to erecting a system of knowledge, or philosophical system. This shift is apparent when we examine the *Ethics*’ three kinds of knowledge in terms of the theory of adequacy, since the three kinds of knowledge, at least as they appear in the *Ethics*, are cast in terms of the knowledge of physical and real beings (even if certain illustrations of them take advantage of the clarity and simplicity of abstract, mathematical examples).

To a significant extent, Spinoza’s theory of adequacy survives in the concrete epistemology insofar as the marker of truth – knowledge *per causam* – can be discerned in the adequate forms of knowledge, but not in the inadequate. However, the abstract framework does not fit perfectly onto the concrete forms of knowledge, even while it helps to illuminate them, and the limitations of this application reveal the contours of the shift from the abstract to the physical and real – a definitive move in Spinoza’s way of ideas. In the first place, there are two kinds of adequate knowledge, not one, as the *TIE* would lead us to expect. Secondly, neither kind of knowledge generates effects through causes according to the abstract ideal of geometric demonstration (*pace* Guérout). As a result, analysis and synthesis must work together. This, I want to argue, is an outcome of

the application of the theory of adequacy to a knowledge of physical and real beings. Therefore, discussions of general methodological approach, including the workings of synthesis and analysis in Spinoza, arise naturally along with our treatments of the ways of knowing physical and real beings, rather than at the outset.

Here is a summary of how we shall proceed. In Chapter 1, we turn to Spinoza's description of method in the *TIE*, with its focus on the nature of a true idea. Appealing to the illustrations that Spinoza employs, especially those of defining geometrical objects, we argue for the view that adequate knowledge is knowledge *per causam*. At this stage we are still on an abstract level since geometrical figures do not constitute the "physical and real beings" that Spinoza's method aims to understand. So, in the second part of the chapter, we turn to the metaphysics of Spinoza's *Ethics* to see in broad terms what kinds of "physical and real" causes there are upon which concrete knowledge might be based. In the third part, we look at Spinoza's justification for his strategy of focusing on the intrinsic properties of ideas, and how he is able to answer skeptical objections. Going beyond Spinoza's explicit responses to the skeptic, I argue that Spinoza's doctrine of parallelism implicitly grounds his theory of adequacy. The last part deals with an alleged alternative formulation of adequacy found in *Ethics* 2p11c.

Chapter 2 initiates the second phase of the study, where the framework developed in the first chapter is employed in successively interpreting the three kinds of knowledge as found in the *Ethics*. Since the point is to understand Spinoza's theory of *human* knowledge, the first two parts of the chapter treat Spinoza's theory of the relation of the human mind and body, which undergirds the very possibility of human perception and cognition. The first part analyzes Spinoza's visionary thesis that the mind is the idea of

the body, while the second explains the possibility of the perception of external things, given the implications of this thesis. We turn to the first kind of knowledge, or imagination, in the third part of the chapter, explicating the inadequacy of imagination in terms of our *per causam* framework. The chapter leaves off with a look at Spinoza's theory of error.

Chapter 3 turns to the first of the two kinds of adequate knowledge: reason. As will become clear in what follows, the definitions of both reason and intuitive science are considerably more complicated and opaque than is that of imagination. In the case of reason, the most important component concept is that of "common notions." The other relevant features of Spinoza's definition of reason are the "universal notions" formed on the basis of common notions, and next, the relation from the common notions, which Spinoza says serve as the "foundations of our reasoning," to the "universal notions." In the first part of the chapter, then, we examine the common notions themselves. Determining the nature of common notions and their presence in the human mind raises questions that prompt a discussion of how synthesis and analysis figure into Spinoza's approach. So the second part of the chapter constitutes a methodological digression. In the third, we return to the remaining elements comprising Spinoza's definition of reason, fitting them together to yield a coherent interpretation of the second kind of knowledge. Then, in the fourth part of the chapter, we consider the second kind of knowledge in terms of the *per causam* interpretive framework. The chapter ends with reflections on the origins of reason in Spinoza.

Chapter 4, which deals with the third kind of knowledge, or intuitive science, begins, like the third chapter, with an analysis of the terms of the definition of intuitive

science as presented in the epistemological taxonomy of 2p40s2. The first part analyzes in turn, the first term, “an adequate idea of the formal essence of certain attributes of God,” and the second, “the adequate knowledge of the essence of things.” In the next two parts of the chapter, we examine the nature of the relation between the terms, which Spinoza expresses by the phrase “*procedit ab...ad....*” First we consider the light shed by the propositions relevant to intuitive science at the end of *Ethics* Part 2 (2p45-47), with a focus on the connection between the singular essences to the knowledge of which intuitive science leads, and Spinoza’s *conatus* doctrine. Then, in the third part of the chapter, we analyze the “proceeding” involved in intuitive science in the terms of synthesis and analysis introduced in the third chapter. Since, as Mignini says, “To understand [...] the meaning of *procedit ab...ad...* it is necessary, above all, to know what is meant by *essentiae rerum*,”¹⁹ we turn, in the fourth part of the chapter, to questions regarding the knowledge of the essences of things. In particular, we will be concerned, first, to consider what meaning of essence Spinoza has in mind in the definition of intuitive science, and second, what kind of knowledge intuitive science promises regarding such *essentiae rerum*. To close the chapter, I have appended some reflections on Spinoza’s idea of God, which is of paramount importance for Spinoza’s way of ideas, not to mention his entire system.

In the conclusion, I recapitulate the two major movements of the study – the theory of adequacy, on one hand, and the application of the theory to the forms of knowing physical and real beings, on the other – and argue that together they represent two of Spinoza’s pre-eminent philosophical innovations to the new way of ideas. The

¹⁹ Filippo Mignini, “In Order to Interpret Spinoza’s Theory of the Third Kind of Knowledge: Should Intuitive Science Be Considered *Per Causam Proximam* Knowledge?” in *Spinoza: Issues and Directions*, ed. Edwin Curley and Pierre-François Moreau (Leiden: E.J. Brill, 1990), 143.

geometrical paradigm and the theory of adequacy that Spinoza elaborates on its basis is seen to provide a unique key for understanding Spinoza's theory of knowledge – both for what it reveals and for what it fails to account for, since the divergences trace the contours of the shift from the abstract to the physical and real.

Chapter 1

Spinoza's Theory of Adequacy

I. The Form of the True

The object of this chapter is to explore what Spinoza took to be the foundations of his theory of knowledge. Such foundations should answer such questions as, what is it to know something? What can we know? How do we know that we know? And so on. These questions strike at the heart of how philosophy – as an enterprise in understanding the world and one's place in it – can get off the ground at all. In other words, they relate to philosophical methodology. As we shall see, Spinoza's answers to these questions all revolve around his theory of adequacy.

In his methodological *Treatise on the Emendation of the Intellect*, Spinoza explains what he understands by philosophical method:

Method is not the reasoning itself by which we understand the causes of things; much less the understanding of the causes of things, it is the understanding what a true idea is by distinguishing it from the rest of the perceptions; by investigating its nature, so that from that we may come to know our power of understanding [...]

From this it may be inferred that Method is nothing but a reflexive knowledge, or an idea of an idea (*TIE* §37-8; G II 15).

Spinoza is making a distinction here, in general terms, between the form and the content of philosophical inquiry. Furthermore, he is advising that before we rush to paint a

philosophical picture, we have first to understand the brush. Several times in his notes to the *TIE* (as well as in *TIE* §51), Spinoza references tasks reserved for his “*Philosophia*,” as opposed to the *TIE* itself, which deals with the “*Methodus*,” and which, presumably, he took to be propaedeutic to the philosophy. What precisely Spinoza meant by his “Philosophy” when he composed the *TIE* in the early 1660s (possibly late 1650s) is not clear. Whether he had the *Short Treatise*, in particular, in mind, or some vaguer notion of a work that he intended to write is not important for our purposes, since, regardless, the *Ethics* obviously became the mature statement of his “Philosophy.” It is thus in the *Ethics* that we should expect to find “reasoning itself which leads to the understanding of the causes of things,” while the reflexive understanding of a true idea is developed in the *TIE*.

It might be thought that this distinction between method and philosophy runs parallel with that between epistemology and metaphysics. Even though the idea of epistemology as “first philosophy” has come under serious criticism in recent times, the Cartesian inheritance is still a tempting assumption, at the very least. Despite Spinoza’s obvious debt to Descartes, especially with respect to the methodological considerations of the *TIE*, Spinoza diverges from Descartes in interesting and important ways on precisely this question of “first philosophy.” I do not want to develop this notion any further right now (we take it up later) except to point out that we find a theory of knowledge embedded in the *Ethics*, the philosophy proper. This indicates that, even though Spinoza seems to prioritize certain questions of method that fall loosely in the domain of what we call “epistemology,” *knowledge*, for Spinoza, in particular *human* knowledge, is a part of nature like anything else, such that it is no surprise that the theory of knowledge follows,

along with everything else in the *Ethics*, from *metaphysical* first principles. Thus we need to distinguish between “theory of knowledge,” which Spinoza develops in Part 2 of the *Ethics*, and the methodological considerations that we find in the *TIE*, and which appear to undergird Spinoza’s entire philosophical enterprise. It is in this sense that we can talk of such methodological underpinnings as the foundations for Spinoza’s theory of knowledge – a thesis which might otherwise have a paradoxical ring about it. This also means that we cannot insist on any rigid substantive priority of the *TIE* vis-à-vis the *Ethics*, even if this were not already ruled out by the unfinished nature of the earlier work. In regards to epistemology, both works are mutually illuminating.

What, then, is a true idea? Spinoza’s reformulation of this question in terms of the idea of an idea in the passage we quoted above signals that Spinoza is asking about the form rather than the content of ideas, specifically, true ones. Recall he said that any inquiry into the causes of things is to be put off until this question is answered. His formulation of content in terms of “the causes of things” already lets the cat out of the bag, at least in part, since it presupposes a finding that can only issue from the methodological investigation, namely, that knowledge concerns the *causes* of things. In fact, Spinoza had already let the cat out of the bag in prefacing his discussion of methodology in the *TIE* with a catalog of four kinds of perception. The fourth mode of perception, which Spinoza insists is “what we must chiefly use” (*TIE* §29; G II 13), is described as follows: “the Perception we have when a thing is perceived through its essence alone, or through knowledge of its proximate cause [*per cognitionem suae proximae causae*]” (*TIE* §19; G II 10). The presence of this catalog of modes of perception, which is the counterpart in the *TIE* of the mature theory of knowledge we find

in the *Ethics*, serves to underscore the point made in the previous paragraph about the difficulty with assigning philosophical “priority.” The preferred mode of perception is identified before the method even gets underway. Spinoza is not unaware of the paradoxical appearance of his manner of proceeding, and addresses it head on in the *TIE*. Since it is impossible to take up all these important issues at once, I want to stay with Spinoza’s discussion of method for now (the inquiry into the nature of true ideas), returning later to higher-order issues of priority, and the various modes of perception.

Spinoza begins his inquiry into the nature of true ideas in a very Cartesian vein by cordoning off fictitious ideas, such as infinite flies and square souls (*TIE* §58; G II 22) on grounds of a lack of clarity and distinctness, remarking, “we ought not to fear in any way that we are feigning something, if only we perceive the thing clearly and distinctly” (*TIE* §62; G II 24). Also in line with Descartes, when it comes first to specifying the nature of a clear and distinct idea, Spinoza focuses on simplicity: “from this it follows, first, that if an idea is of some most simple thing, it can only be clear and distinct” (*TIE* §63; G II 24). Compare this, for instance, with Rule Two in Descartes’ *Rules for the Direction of the Mind*, which stipulates: “We should attend only to those objects of which our minds seem capable of having certain and indubitable cognition.”²⁰ In specifying paradigms for such cognition, Descartes explains, “[t]hese considerations make it obvious why arithmetic and geometry prove to be much more certain than other disciplines: they alone are concerned with an object so pure and simple that they make no assumptions that experience might render uncertain.”²¹ Descartes is never explicit about what it is precisely about mathematics and geometry that makes them so simple and clear, but there

²⁰ Descartes, Vol. 1, 10.

²¹ *Ibid.*, 12.

is some reason to believe that he thought it had to do with the fact that such things are reducible to ideal units, than which nothing could be simpler.²²

Despite these Cartesian resonances, Spinoza's arguments show him to be no mere disciple of Descartes. While Descartes, at best, merely gestures at what makes an idea clear and distinct, Spinoza digs deeper. First Spinoza isolates the question of what makes an idea clear and distinct, i.e. true:

As for what constitutes the form of the true, it is certain that a true thought is distinguishable from a false one not only by an extrinsic, but chiefly by an intrinsic denomination [*denominationem intrinsecam*] (*TIE* §69; G II 26).

As far as I am aware, Spinoza was the first to raise this question about the form, or nature, of the true in terms of intrinsic denominations. This is significant, and has not been sufficiently acknowledged by scholars. Spinoza's inquiry into "the form of the true" is already to go beyond Descartes. If the latter grasped the question at all, his appeal to the "light of nature" is not at all a satisfactory answer. Spinoza, for his part, is here acknowledging that if ideas are to be considered true merely through a consideration of their form, their form must have a distinguishing, intrinsic denomination. This notion of the intrinsic denomination of a true idea comes to define the concept of adequacy in the *Ethics*. *Ethics* 2d4 reads:

By adequate idea I understand an idea which, insofar as it is considered in itself, without relation to an object, has all the properties, *or* intrinsic denominations [*proprietas, sive denominationes intrinsecas*] of a true idea.

²² For an illuminating argument to this effect, see the sections on the *Regulae* in Stephen Gaukroger, *Descartes: An Intellectual Biography* (New York: Oxford University Press, 1995).

Exp.: I say intrinsic to exclude what is extrinsic, namely, the agreement of the idea with its object. (G II 85)

As already noted, Spinoza does not specify what the intrinsic denominations of truth look like in the *Ethics*. He does not do so explicitly in the *TIE* either, but he does provide some unmistakable clues.

To demonstrate that there are such intrinsic denominations of truth in the *TIE*, Spinoza provides two contrasting examples:

For if some architect [*faber*] conceives a building in an orderly fashion [*ordine*], then although such a building never existed, and even never will exist, still the thought of it is true, and the thought is the same, whether the building exists or not. On the other hand, if someone says, for example, that Peter exists, and nevertheless does not know that Peter exists, that thought, in respect to him is false, or, if you prefer, is not true, even though Peter really exists. Nor is this statement, Peter exists, true, except in respect to him who knows certainly that Peter exists (*TIE* §69; G II 26).

The example of the architect shows that intrinsic denominations are *sufficient* for truth, while that of the person who claims to know that Peter exists further demonstrates that they are also *necessary*. We still do not know what the intrinsic denominations are from these examples, although the qualification of the way in which the architect conceives the building, i.e. “in an orderly fashion” (*ordine*), points us in a certain direction.

Presumably Spinoza did not put this idea of a building in the mind of an architect, in particular, by accident. When an architect qua architect thinks of a building, she thinks of how the building shall or could be built. She thinks of what it would take to build the

building. So it looks like the relevant intrinsic denomination of the architect's idea in this case is the knowledge of how to produce the thing in question.²³ This knowledge is independent of whether or not the building is actually built. By comparison, if someone, say Paul, claims that Peter exists without having any reason for saying so, even if Peter does exist, the claim *in respect to Paul*, as Spinoza explains, is not true. This is because the claim to knowledge itself does not have the form of truth, which requires justification, for Spinoza.

Both examples indicate that the intrinsic denomination of a true idea involves some form of internal justification, i.e., a justification known to the subject; and the first example, in particular, suggests that such justification has to do with understanding the causes of something. However, when in the next paragraph Spinoza goes on to consider the criteria for distinguishing the true from the false idea, he denies, somewhat surprisingly, that the criterion is the causal one suggested by the first example:

Nor must we say that this difference arises from the fact that the true thought is knowing things through their first causes [*res cognoscere per primas suas causas*]. In this, indeed, it differs greatly from the false, as I have explained above. For that Thought is also called true which involves objectively the essence

²³ On the basis of examples such as this one, it is possible to consider Spinoza's theory of adequacy and knowledge in the context of the so-called "maker's knowledge tradition." On the latter, see Antonio Pérez-Ramos, *Francis Bacon's Idea of Science and the Maker's Knowledge Tradition*, (Oxford: Clarendon Press, 1988). I think such an endeavor, in the case of Spinoza's theory of adequacy and knowledge, would have such limitations as to render it a rather fruitless enterprise. Spinoza fits with the maker's knowledge tradition at only the most general level. Geometrical constructivism, or synthesis, which is Spinoza's definitive paradigm, is indeed a species of "maker's knowledge," as Hobbes' descriptions, in particular, bring out, but the essential distinction is the precise quantification that the new mathematical methods afford. This kind of knowledge is no longer that of the artisan, but rather that of the mathematician. Moreover, on the metaphysical, rather than geometrical level, Spinoza's God certainly does not "make" anything. This is precisely the sort of anthropomorphism that Spinoza rejects.

of some principle that does not have a cause, and is known through itself and in itself (*TIE* §70; G II 26).

This is a rather puzzling passage, for just as we were expecting Spinoza to say that the intrinsic denomination of a true idea is the inclusion of the knowledge of the cause of the thing in question, on the basis of the examples in the preceding paragraph, Spinoza insists that we must *not* draw that conclusion. His reasoning is that it is possible to have a true idea about something which does not have a cause, but is known “through itself and in itself.” By that which is known through and in itself, Spinoza is talking about God, or the necessary being. When Spinoza goes on in later sections of the *TIE* to outline the criteria of good definitions, this distinction is still at work, and manifests itself in a distinction between two kinds of definitions: one for a “created” thing, and one for “an uncreated thing” (*TIE* §96-7; G II 35).

This distinction in the *TIE* between that which has a cause and that which does not, or between the created and the uncreated, must be considered in light of later developments. In his more mature philosophy, Spinoza conceives God not as uncreated, but rather as *causa sui*. Definition 1 in Spinoza’s *Ethics* reads: “By cause of itself I understand that whose essence involves existence, *or* that whose nature cannot be conceived except as existing” (G II 45). Since God is that whose essence involves existence in the *Ethics*, God is no longer that which “does not have a cause,” as he was in the *TIE*, but rather that which is its own cause. An elaboration on this development in Spinoza’s thought is found in Letter 60 to Tschirnhaus, where Spinoza explains, “I understand the efficient cause to be both internal and external.”²⁴

²⁴ G IV 271, Curley’s working translation.

If it turns out that God in fact does have a cause, i.e., an internal one, then there is no reason to qualify the claim that what distinguishes the true idea is “knowing things through their first causes.” In fact, in one passage of the *TIE*, Spinoza already shows signs of embracing a conception of God as self-caused:

our ultimate end requires (as we have already said) that the thing be conceived either through its essence or through its proximate cause. If the thing is in itself, *or*, as is commonly said, is the cause of itself, then it must be understood through its essence alone; but if it is not in itself, but requires a cause to exist, then it must be understood through its proximate cause [*per proximam suam causam*]. For really, knowledge of the effect is nothing but acquiring a more perfect knowledge of its cause (*TIE* §92; G II 34).

Spinoza’s gesture in this passage to what “is commonly said” about a thing in itself, i.e., that it is the cause of itself, shows that he is already aware, at least, of the prospect of reducing even the knowledge of the essence of “an uncreated thing” to the knowledge of its cause. This tendency further manifests itself in the final statement that “really, knowledge of the effect is nothing but acquiring a more perfect knowledge of its cause.” This statement becomes in the *Ethics* the all-important “causal axiom,” *Ethics* 1a4, which reads, to quote it again: “The knowledge of an effect depends on, and involves, the knowledge of its cause.” Knowing things through their causes emerges as the pre-eminent intrinsic sign of the truth of an idea in the *TIE*. This is further borne out by the *TIE*’s important mathematical examples, which do much to clarify Spinoza’s method.

The most important mathematical example, for our purposes, compares contrasting definitions of a circle. Before we examine it, we need to say something about Spinoza's theory of definitions. The importance of good definitions, for Spinoza, is that they set and restrain the mind on a secure path of discovery. I imagine the claim that definitions are important for discovery sounds strange to most contemporary ears. This is because we have become accustomed to thinking of definitions only as nominal – important for keeping meanings straight, which facilitates communication, but not much else. However, in the early seventeenth century, the rediscovery of Euclid displayed a power of definitions that went beyond linguistic bookkeeping. On the basis of good definitions, Euclid *deduced* an abundance of geometrical truths. Early moderns, such as Hobbes and Spinoza, for whom the Euclidean model had great power and promise, did not, for all that, simply take it for granted that the method could be cleanly transplanted into other, non-abstract domains. It was at least a question of whether, and if so, how, this could be done. Hobbes, for his part, thought the geometrical method of deducing truths from correct definitions could be applied perfectly only to those spheres in which “we ourselves make the principles,”²⁵ i.e., politics and ethics. “On the other hand, since the causes of natural things are not in our power, but in the divine will, and since the greatest part of them, namely the ether, is invisible; we, that do not see them, cannot deduce their qualities from their causes.”²⁶ Hobbes thought that the geometrical method could be used to infer *possible* causes, or hypotheses about the workings of nature, but that ultimately, the application of the method would only ever be imperfect, even if far from useless. As we will see in subsequent chapters, Spinoza's thoughts on scientific

²⁵ Thomas Hobbes, *Man and Citizen* (Indianapolis: Hackett, 1991), 42.

²⁶ *Ibid.*

method were similar to these of Hobbes. Where Spinoza differed from Hobbes was in his optimism that the geometrical method could also be employed to discover the general structures of nature, in other words, metaphysical truths, in addition to truths about the objects of scientific inquiry.²⁷ On the basis of the right definitions, therefore, certain metaphysical truths could be deduced, providing a proper framework for the understanding of everything else. This is the general context in which the examples of defining mathematical entities should be considered.

Let us now look at Spinoza's example of defining a circle. Spinoza contrasts two ways of defining a circle: (1) "as a figure in which the lines drawn from the center to the circumference are equal" (*TIE* §95; G II 35); (this was essentially how Euclid defined the circle); and (2) as "the figure that is described by any line of which one end is fixed and the other movable" (*TIE* §96; G II 35); (this was Hobbes' genetic revision of the Euclidean definition²⁸). According to Spinoza, the latter definition is superior because it gives the cause of the circle, whereas the former just singles out a salient *property* (*TIE* §95-6; G II 35). I take it that the significance of this difference is a matter of logical priority: whereas the property that the Euclidean definition picks out can be deduced from the revised definition, the reverse is not possible. The reason, moreover, that the revised definition is able to provide a basis for the deduction of the property the Euclidean definition picks out is that it captures the generation of the circle from which "all the thing's properties can be deduced" (*TIE* §96; G II 35 emphasis added). The

²⁷ My account of the difference between Spinoza's and Hobbes's conceptions of the geometrical method and its use is virtually the same as that of Guérout, who claims that the two part ways on the method "lorsqu'il s'agit de son champ d'application." See Guérout 1974, 486-7.

²⁸ Hobbes's definition of the circle is found in *De Corpore*. See Thomas Hobbes, *The English Works of Thomas Hobbes of Malmesbury*, vol. 1, ed. William Molesworth (London: John Bonn, 1839; replica edition, Elbiron Classics, 2005), 180-1.

cause of a thing is pregnant with its properties insofar as the latter are effects of the thing's generation. Having the cause, therefore, provides a basis from which properties which were not previously noticed could be *discovered*. This was the power of Euclid's method.

It is worth noting that, despite Descartes' casting of some of his main arguments from the *Meditations* in geometrical fashion at the request of Mersenne et al., Descartes did not acknowledge the significance of the geometrical method in the sense sketched in the foregoing paragraphs. We already noted in the Introduction Descartes' dismissal of synthesis as a mere mode of presentation, and his avowed preference for analysis. For present purposes, we might also consider Descartes' own conception of adequacy. In reply to Arnauld, Descartes distinguishes between a "complete" and an "adequate knowledge" of a thing, explaining that "if a piece of knowledge is to be *adequate* it must contain absolutely all the properties which are in the thing which is the object of knowledge. Hence only God can know that he has adequate knowledge of all things."²⁹ The emphasis here appears to be on the term "absolutely" – if knowledge is to be adequate, it must contain *absolutely* all the properties of the thing in question. As Descartes goes on in the next paragraph to suggest, a created intellect can actually possess knowledge of all of a thing's properties, and so have what appears at first glance to amount to adequate knowledge of the thing. What makes the knowledge merely complete, however, and not adequate, is that "it can never know it has such knowledge unless God grants it a special revelation of the fact."³⁰ The reason the created intellect could only be sure of the adequacy of its knowledge on condition of special revelation

²⁹ Descartes, Vol. 2, 155.

³⁰ *Ibid.*

has to do with God's utter omnipotence. Just as God can make mathematical truths untrue, he can always change the nature of the thing such that it contains something beyond what the created intellect is aware of. Without divine revelation, in order for the created intellect to be secure in its knowledge of the properties of a thing, Descartes says, "its power of knowing would have to equal the infinite power of God."³¹

On the basis of these words to Arnauld, it appears somewhat doubtful that Descartes fully appreciated the implication of the Euclidean method for philosophy and natural science. The implication is that, given the right cause, there can be no doubt of the properties, since the latter are transparently deducible from the former. Whether such a cause can ever be known with respect to natural things is a question that remains to be answered; nevertheless, whether it can be known or not, surely *if* it were known, it would be known *adequately*, in the sense that it would be known completely *and* absolutely – a connotation that Descartes and Spinoza both seem to read into the concept of adequacy. Descartes apparently either failed to see this implication, or else refused to accept it.

At other points, Descartes seems alive to the significance of synthesis for producing knowledge. A passage from Part 3 of the *Principles of Philosophy* offers an example. There, Descartes writes,

The principles which we have so far discovered are so vast and so fertile, that their consequences are far more numerous than the entire observed contents of the visible world [...] But I shall now put forward for scrutiny a brief account of the principal phenomena of nature whose causes we must now examine. *Our purpose is not to use these phenomena as the basis for proving anything, for we aim to*

³¹ Ibid.

*deduce an account of effects from their causes, not to deduce an account of causes from their effects.*³²

It is not surprising that such a passage should be found in Descartes' *Principia*, since it is in this work that he sets out his system according to the more accessible synthetic method, rather than the order of discovery. (Descartes intended for his *Principia* to replace scholastic textbooks in schools. In this connection, it is worth noting Gaukroger's comment that "[t]he model for the deductive mode of presentation in the *Principia* does not derive from geometry [...] but rather, from the late scholastic textbooks from which Descartes learned his metaphysics at La Flèche."³³) Even if Descartes appears to acknowledge in this passage a more substantive application of synthesis than mere pedagogy, he never embraces it with the enthusiasm of Hobbes and Spinoza for the reasons already mentioned – the necessity of the connection between cause and effect is always undermined by the specter of God's absolute omnipotence. Descartes' rather conservative conception of synthesis and adequacy, and more generally, of the implications of the Euclidean method for philosophy, therefore, support the contention that the French philosopher was not Spinoza's primary inspiration in this regard – a more likely candidate is Hobbes, as Guérout held.³⁴

For Spinoza, what was especially exciting about the rediscovery of Euclidean mathematics and method, and the use to which such figures as Galileo and Hobbes put them – at least, if his employments of geometrical method and mathematical examples are anything to go by – were the implications for the human capacity to know the world,

³² Descartes, Vol. 1, 249, emphasis added.

³³ Gaukroger, 379.

³⁴ Guérout (1974), 480-7.

and all this means for human existence. Spinoza was an eminently practical philosopher. This is clear from the opening sections of the *TIE*, where Spinoza writes,

Everyone will now be able to see that I wish to direct all the sciences toward one end and goal, viz. that we should achieve, as we have said, the highest human perfection. So anything in the sciences which does nothing to advance us toward our goal must be rejected as useless – in a word, all our activities and thoughts are to be directed to this end (*TIE* §16; G II 9).

It is therefore no surprise that Spinoza never gets bogged down in the mathematical details of his examples. For him, mathematics serves for illustration. He is clearly fond of his mathematical illustration of the three kinds of knowledge, since he returns to it repeatedly, as he does also with the two definitions of the circle. But, for Spinoza, getting the definition right “does not matter much concerning figures and other beings of reason.” By contrast, “it matters a great deal concerning Physical and real beings, because the properties of things are not understood so long as their essences are not known” (*TIE* §95; G II 35). The question now is how the geometrical method, with all its power and promise can be harnessed so as to apply to the essences of these “Physical and real beings.” “If we neglect them,” Spinoza writes, “we shall necessarily overturn the connection of the intellect, which ought to reproduce the connection of Nature, and we shall completely miss our goal” (*ibid.*).

II. “Physical and real beings”

In Spinoza's metaphysical system, finite things are caused in two fundamentally distinct ways. This causal duality reflects an ontological division that runs right through the heart of Spinoza's system. We find clear, but under-developed, foreshadowings of the distinction already in the *TIE*: "But note that by the series of causes and of real beings I do not here understand the series of singular, changeable things, but only the series of fixed and eternal things" (*TIE* §100; G II 36). Spinoza sets up a dichotomy here between a series of singular and changeable things, on one hand, and a series of fixed and eternal things, on the other. Spinoza goes on to explain that "it would be impossible for human weakness to grasp the series of singular, changeable things, not only because there are innumerable many of them, but also because of the infinite circumstances in one and the same thing" (*ibid.*). Spinoza seems to mean, here, that not only is the series itself infinite, insofar as it comprises an infinite series of causes, but it is infinitely complex, too, insofar as the entire series is bound up with each member. The fact that this is impossible for human weakness, Spinoza continues, does not in itself exclude us from the "inmost essence of things," for all the series of singular, changeable things determines is the "order of existing," in other words, "nothing but extrinsic denominations, relations, or at most, circumstances, all of which are far from the inmost essence of things" (*TIE* §101; G II 36). Our unmistakable limits are not necessarily damning, for Spinoza, when it comes to knowing what is essential. Spinoza's ensuing statement has become somewhat renowned among commentators, due to the combination of its apparent importance along with its opacity:

That essence is to be sought only from the fixed and eternal things, and at the same time from the laws inscribed in these things, as in their true codes, according

to which all singular things come to be, and are ordered. Indeed, these singular, changeable things depend so intimately, and (so to speak) essentially, on the fixed things that they can neither be nor be conceived without them. So although these fixed and eternal things are singular, nevertheless, because of their presence everywhere, and most extensive power, they will be to us like universals, *or* genera of the definitions of singular, changeable things, and the proximate causes of all things (*ibid.*).

This is a very rich statement, and one that we will come back to later when we come to consider the place and role of laws of nature in Spinoza's theory of knowledge, for the fixed things have often been interpreted by commentators as infinite modes, or laws, or properties that all modes have by virtue of belonging to a given attribute. It is impossible to say much more on this particular aspect of the passage now without having introduced the basic elements of Spinoza's metaphysics.

For now, however, we can make two observations. First, a given singular thing is caused in two ways: on the one hand, by the infinite series of singular, changeable things; and on the other, by the fixed and eternal things. Yovel refers to the *Ethics*' analogues of these two causal pathways as "horizontal" and "vertical" lines of causality, respectively.³⁵ We will come to the *Ethics*' analogues shortly. Second, there appears to be a parallel between the dichotomy that Spinoza is articulating in these passages on real causes, on one hand, and those on the causes of abstract things, which we looked at above, on the other. With regard to the latter, we saw that Spinoza distinguishes between definitions which merely single out a salient property of the definiendum, as opposed to the true

³⁵ Yirmiyahu Yovel. "The Third Kind of Knowledge as Salvation" in *Spinoza: Issues and Directions*. Ed. Curley and Moreau (Leiden, New York, Copenhagen: E.J. Brill, 1990), 160.

definitions, which capture the proximate cause of the thing. In the passages which deal with real causes, Spinoza's distinction between mere "extrinsic denominations, relations, or at most, circumstances" as afforded by the series of singular, changeable things, on one hand, and the inmost essence, or proximate cause of the thing as afforded by the "fixed and eternal things," on the other, recalls the distinction between the properties of the circle, on one hand, and its true cause, on the other. Since the *TIE* breaks off unfinished shortly after this passage regarding the fixed and eternal things, and does not go further in explicating it, it is difficult to say much more about the fundamental dichotomy that Spinoza is driving at, beyond pointing out the structural similarity to the abstract example of the circle, as we have done. In order to get clearer on the nature of this causal duality, as is our aim, we must turn to the *Ethics*, which furnishes the missing metaphysical framework.

Spinoza does not directly contrast the "vertical" and "horizontal" lines of causality in the *Ethics*, as he does in the *TIE*. Nevertheless, the duality survives in the *Ethics* unchanged, though with some minor terminological shifts. In order to get at it, we need first to introduce some basic metaphysical underpinnings. Let us start with an unstated assumption: if something can be conceived through itself, it is also self-caused, and vice versa (if something is self-caused, it can be conceived through itself); by contrast, if something cannot be conceived through itself, but must be conceived through another, it is not self-caused, but rather exists through an external cause. Spinoza's conflation of logical and causal order is well known; it is what Jonathan Bennett calls his

“causal rationalism;”³⁶ according to Curley, it is “[o]ne thing every interpreter of Spinoza agrees on.”³⁷ We get a clear instance of it in 1p3 and its demonstration:

If things have nothing in common with one another, one of them cannot be the cause of the other.

Dem.: If they have nothing in common with one another, then (by a5) they cannot be understood through one another, and so (by a4) one cannot be the cause of the other, q.e.d. (G II 47).

The conflation, at least as it occurs in this demonstration, clearly revolves around 1a4, the causal axiom (“The knowledge of an effect depends on, and involves, the knowledge of its cause”), as well as Spinoza’s parallelism doctrine. We will come back to this in our discussion of parallelism below, when it will become clear *why* Spinoza thinks the order of knowing and the order of being map on to one another. What is important at this juncture is not the conflation of logical and causal order, but rather the dichotomy between that which is conceived through itself or self-caused, on one hand, and that which is conceived through another or externally caused, on the other.

The three fundamental ontological categories in Spinoza’s philosophy – substance, attribute, and mode – fit into this framework as follows: substance and

³⁶ Jonathan Bennett, *A Study of Spinoza’s Ethics* (Hackett, 1984), 29-32.

³⁷ Edwin Curley, “On Bennett’s Interpretation of Spinoza’s Monism,” in *God and Nature: Spinoza’s Metaphysics*, ed. Yirmiyahu Yovel (Leiden: E.J. Brill, 1991), 48. One potential exception to Curley’s claim is Richard Mason, “Concrete Logic,” in *Spinoza: Metaphysical Themes*, edited by Olli Koistinen and John Biro (Oxford: Oxford University Press, 2002), 73-88. Mason complains that interpreters’ focus on the connection between logical and causal order is “entirely unhelpful” (ibid., 74). However, Mason seems only to be worried about the connection if it is made anachronistically, as one involving *modern* logic, explaining, “Whatever Spinoza was doing, it was far more concrete than logic: though we can call it concrete logic if we like” (ibid.). When I say that Spinoza conflates logical and causal order (and I suspect this is what Curley, Bennett and others have in mind as well) I do not intend this to involve a conflation of *modern* logic and causal order, but the kind of logic that would have been familiar to Spinoza, which, as Mason points out, could be said to be more “concrete” than modern logic. Insofar as Spinoza speaks of “deduction,” “inference,” and “following,” he is engaged in a logical discourse, and it is to this that commentators refer when they point to Spinoza’s conflation of such logical relations and causal ones.

attribute are together in being conceived through themselves and self-caused, while modes are conceived through another and externally caused. In particular, modes are conceived through the substance or attributes which they modify, and are caused by substance or their respective attributes. At this point I need to say something about the difference between substance and attributes.

Spinoza defines substance as “what is in itself and is conceived through itself, that is, that whose concept does not require the concept of another thing, from which it must be formed” (1d3; G II 45). So far so good. Spinoza defines attribute as “what the intellect perceives of a substance, as constituting its essence” (1d4; G II 45). This is where the water gets muddy. Much debate has been generated around the question whether the attributes are something only the *human* intellect perceives of substance, and therefore a subjective limitation, or something the divine intellect perceives of substance and therefore an objective constituent of reality (on the grounds that the divine intellect is in no way limited). For our purposes, there is no need to get into the details of this question. Suffice it to say that a general consensus seems to have emerged that the latter interpretive option is superior on textual grounds, and I myself am persuaded by the consensus viewpoint.³⁸

Assuming that the attributes are real, however, by no means resolves the problems regarding substance and attributes. Of course, for Spinoza, there is only one substance, i.e. God. God is defined as “a being absolutely infinite, that is, a substance consisting of

³⁸ On the question of the interpretation of Spinoza’s attributes, see Martial Gu eroult, *Spinoza I – Dieu*. (Hildesheim, Georg Olms, 1968), 428-461; Francis Haserot, “Spinoza’s Definition of Attribute” in *Studies in Spinoza: Critical and Interpretive Essays*, ed. S. Paul Kashap (Berkeley: University of California Press, 1972); Charles Jarrett, “Some Remarks on the ‘Objective’ and ‘Subjective’ Interpretations of the Attributes,” *Inquiry* 20 (1977): 447-56; and Andreas Schmidt, “Substance Monism and Identity Theory in Spinoza” in *A Cambridge Companion to Spinoza’s Ethics*, ed. Koistinen (New York: Cambridge University Press, 2009).

an infinity of attributes, of which each one expresses an eternal and infinite essence” (1d6; G II 45). If the attributes are objective parts of reality, then this seems to imply that God is both one and yet comprised of infinite attributes. There is a deep problem of how to resolve this case of the many in the one. Take the example of thought and extension, which are the only attributes human beings know about (although there are infinitely many). It appears that thought and extension are two self-caused attributes, conceived through themselves, which yet comprise one substance. They are distinct and identical at once. As the definition of God just quoted suggests, the relation between attributes and substance seems to be one of *expression*. An analysis of this concept in Spinoza is beyond the scope of our topic.³⁹ For our purposes, we will equate substance and attributes as both self-caused and conceived through themselves with the qualification that there is only one substance, but infinite attributes.

The distinction that is important for us is not that between substance and attribute, but rather that between substance and attribute, on one hand, and modes, on the other. Spinoza introduces terminology expressly designed to articulate this fundamental metaphysical distinction, employing the term “*Natura naturans*” to denote “what is in itself and is conceived through itself, *or* such attributes of substance as express an eternal and infinite essence” (1p29s; G II 71); and “*Natura naturata*” to denote “whatever follows from the necessity of God’s nature, *or* from any of God’s attributes, that is, all the modes of God’s attributes insofar as they are considered as things which are in God, and can neither be nor be conceived without God” (ibid.). Having introduced this

³⁹ For an extended treatment of expression in Spinoza, see Gilles Deleuze, *Expressionism in Philosophy: Spinoza*, trans. Martin Joughin (New York: Zone Books, 1992).

metaphysical framework, we can now turn to an examination of how causation works within its confines.

The framework itself that we have just sketched already involves one fundamental causal relation: modes, as we have seen, are those things which are conceived through another, or externally caused. Is that other through which modes are conceived and by which they are caused their respective attributes? The passage just quoted from 1p29s would lead us to believe that the answer is yes insofar as it speaks of modes following from God's attributes. However, this is true only after a significant qualification is added. Attributes, for Spinoza, are infinite. Being infinite, that which directly follows from attributes must itself be infinite. At least, this is what 1p21 demands: "All the things which follow from the absolute nature of any of God's attributes have always had to exist and be infinite, *or are*, through the same attribute, eternal and infinite" (G II 65). The proof, which is, as Leibniz alleges,⁴⁰ perhaps more convoluted than necessary, turns on the fact that there is nothing in an attribute, which is infinite, to limit what it produces. Therefore, if something produced by the attribute were limited, this limitation would have to derive from something else of the same nature as it. But in this case, the finite thing in question could not be said to follow necessarily from the attribute, since it requires something in addition to the attribute to limit it. That which follows necessarily from the absolute nature of an attribute, then, is a mode, insofar as it is caused by, and conceived through, another (namely, the attribute); but it is an *infinite*, not a finite, mode.

The infinite modes are notorious constituents of Spinoza's ontology. They form a bridge between infinite attributes and finite modes, and as such, share properties of both *natura naturata* and *natura naturans*. They are infinite like *natura naturans*, but

⁴⁰ Leibniz, 202.

externally caused, and conceived through another, like *natura naturata*. To be sure, infinite modes are still modes, and as such, officially make up part of *natura naturata*. Unlike finite modes, however, they are directly caused by their respective attributes. The infinite modes are further complicated by the fact that there are two kinds. 1p23 makes it clear that an infinite mode follows either from the absolute nature of some attribute of God, in which case it follows immediately, or from some attribute, modified by a modification which exists necessarily and is infinite, in which case it follows from the attribute “by some mediating modification” (G II 66) i.e. it follows from the infinite *immediate* mode. Thus commentators have come to refer to two kinds of infinite mode – immediate and mediate. Before we go on to discuss the causation of finite modes, it behooves us to consider for a moment the nature of the elusive infinite modes.

In Letter 64, Spinoza answers a request for examples of “those things immediately produced by God, and of those things produced by the mediation of some infinite modification” (Letter 63), which amounts to a request for examples of the infinite modes. Spinoza explains:

examples of the first kind [i.e., of things produced immediately by God] are, in Thought, absolutely infinite intellect, and in Extension, motion and rest; an example of the second kind [i.e. of those produced by the mediation of some infinite modification] is the face of the whole Universe [*facies totius Universi*], which, although it varies in infinite ways, always remains the same. On this, see L7S before IIP14.⁴¹

Spinoza’s reference at the end of this passage to 2p14 17 makes it clear that “the face of the whole Universe” is the infinite mediate mode of the attribute of extension, for the

⁴¹ G IV 278, Curley’s working translation.

lemma in question is part of Spinoza's short excursus on bodies that he appends to 2p13.⁴² In the scholium to Lemma 7, Spinoza explains, "we shall easily conceive that the whole of nature is one individual, whose parts, that is, all bodies, vary in infinite ways, without any change of the whole individual". From this statement, we see that, at this level of "the whole of nature," particular things – in this case, bodies – are included. When Spinoza speaks of such particular things varying in infinite ways, "without any change of the whole individual" he likely has in mind the fact that infinite things can happen according to laws without the laws themselves changing. Thus, "the face of the whole universe" likely refers to the totality of bodies moving in infinite ways according to the fixed laws of nature.⁴³

Particular things, therefore, neither follow directly from the attribute, nor directly from any infinite modification of the attribute. What, then, do they follow from? If we have just dealt with the "vertical" line of causality (from attributes to infinite modes), then this question brings us to the "horizontal" line of causality to be found in Spinoza's *Ethics*. 1p28 states:

Every singular thing, or any thing which is finite and has a determinate existence, can neither exist nor be determined to produce an effect unless it is determined to exist and produce an effect by another cause, which is also finite and has a determinate existence; and again, this cause also can neither exist nor be determined to produce an effect unless it is determined to exist and produce an

⁴² We will leave to the side the question why Spinoza neglects to provide the infinite mediate mode for the attribute of thought, especially since he did provide the infinite immediate mode of thought.

⁴³ Cf. Yirmiyahu Yovel, "The Infinite Mode and Natural Laws in Spinoza," in *God and Nature: Spinoza's Metaphysics*, ed. Yovel (Leiden: E.J. Brill, 1991), 88.

effect by another, which is also finite and has a determinate existence, and so on, to infinity (G II 69).

This infinite series of finite things caused by other finite things contrasts with the finite series of infinite things caused by other infinite things. By this latter “finite series,” I mean, following Curley,⁴⁴ the series in which attributes cause immediate infinite modes, which in turn cause mediate infinite modes. This duality between an infinite series of finite causes and a finite series of infinite causes is the correlate in the *Ethics* of the duality we encountered in the *TIE* between a series of singular, changeable things and a series of fixed and eternal things. Thanks to the metaphysical frame of reference supplied by Part 1 of the *Ethics*, we are now in a position to develop a fuller picture of this causal dualism.

The *TIE* teaches that in order to understand a singular changeable thing it is neither possible nor necessary to attempt to discover the infinite series of singular causes, which account for its circumstances. The circumstances, recall, provide extrinsic denominations and relations, but not the inmost essence of the thing. For the latter, we must look to the fixed and eternal things, according to the laws inscribed in which singular things “come to be and are ordered.” Thus, according to the *TIE*, singular things are caused both by a series of singular, changeable things, as well as a series of fixed and eternal things. If our correlation of the schema in the *TIE* with that in the *Ethics* is not misguided, then it should be the case that singular things in the *Ethics* are likewise caused

⁴⁴ Edwin Curley. *Spinoza's Metaphysics: An Essay in Interpretation* (Cambridge, MA: Harvard University Press, 1969), 64: “What Spinoza's philosophy seems to require, for finite things, is both an infinite series of finite causes and a finite series of infinite causes terminating in God.”

both by the infinite series of finite things, as well as by the finite series of infinite things. Let us see if this is indeed the case.

There is an initial reason to be skeptical that the correlation will go through: did we not show how, for Spinoza, only infinite things follow from other infinite things? But the correlation would demand that finite things follow from other finite things, and also from infinite things too. In fact, I believe it is possible to satisfy this demand using resources provided by the *Ethics*. The first question we must answer is: what is the connection between finite and infinite modes in the *Ethics*? If there is going to be any connection between the infinite and the finite, it must be by way of the infinite modes. Our analysis of the mediate infinite mode of extension – the face of the whole universe – revealed the connection between the infinite and finite modes, namely, the mediate infinite mode is comprised of infinitely many finite modes. Moreover, we inferred on the basis of Letter 64 that the mediate infinite mode of extension, or face of the whole universe, is the totality of bodies moving in infinite ways according to the fixed laws of nature. The fixed laws of nature result from the finite series of infinite things, just as the correlation with the *TIE* would lead us to expect. Thus, it looks as if there might well be a causal relation between the finite and infinite modes as follows: *insofar as* the finite modes are *part* of the mediate infinite mode, they are caused by the immediate infinite mode, i.e., something infinite, a fixed and eternal thing. By contrast, *insofar as* they are considered *qua* singular things, they are caused by other singular things.

The structure of the *Ethics* differs from that of the *TIE* such that Spinoza does not immediately draw epistemological conclusions from this metaphysical, causal duality, as he does in the *TIE*. In Part 1 of the *Ethics*, epistemological considerations *per se* have yet

to be developed. Nevertheless, looking ahead, we can affirm that the *TIE*'s contention that the infinite series of singular, changeable things is "impossible for human weakness to grasp" does not change in the *Ethics*. It remains the case in the later work that perceiving the external circumstances of things is a defective form of perception. If, as our analysis of the intrinsic marks of truth suggested, the knowledge of an effect depends on the knowledge of the cause, this "direction" of causation, that is, the infinite series of finite causes, taken on its own, at least, holds no promise for human knowledge. It remains to be seen in later chapters how the other "direction" of causation, that is, the finite series of infinite things, might play a role in allowing for the development of adequate knowledge. For now, it suffices to have established the causal dualism that pertains in the domain of "Physical and real beings." This framework provides the foundation for the analysis of Spinoza's theory of knowledge that will ensue in subsequent chapters.

III. Truth and Parallelism

Before we cheerfully apply this framework to the interpretation of Spinoza's theory of knowledge, we need to address some skeptical questions, and the justification of the framework for founding a theory of knowledge. In the first section of this chapter, we examined the notion of adequacy, and saw that the genetic definition of geometric figures provides a model for affirming an idea's truth just on the grounds of its internal characteristics. We then said that, if this epistemic approach is to bear real and not just abstract fruits, then we will need to understand the causes of "Physical and real beings."

The infinity of real causes that is involved in the full singularity of any individual thing, however, is clearly beyond the scope of the human intellect. We showed, in the second section, that all is not lost, since effects are determined from another direction, one which *is* accessible to human finitude, according to Spinoza, and one, indeed, which yields a genuine understanding of the thing. In this way, we have paved the way for an understanding of how humans might develop adequate knowledge of the world. A skeptical interlocutor, however, would be justified in asking at this point what makes us so sure that these allegedly “physical and real” causes are any less abstract than the mathematical ones? In other words, what guarantees that our journey from the abstract to the concrete has in fact reached dry land? Such questions strike at the heart of the mind’s relation to the world, and must be faced, especially, by any practitioner of the “new way of ideas.”

Spinoza does in fact address skeptical concerns in the *TIE*, although his patience for such engagements has limits. He frames the question in terms of certainty, writing, certainty is nothing but the objective essence itself, i.e., the mode by which we are aware of the formal essence is certainty itself. And from this, again, it is clear that, for the certainty of truth, no other sign is needed than having a true idea. For as we have shown, in order for me to know, it is not necessary to know that I know. From which, once more, it is clear that no one can know what the highest certainty is unless he has an adequate idea or objective essence of some thing.

For certainty and an objective essence are the same thing (*TIE* §35; G II 15).

There are two points to stress about this passage. First, when Spinoza says that certainty is the objective essence itself, meaning an awareness of the formal essence, the emphasis

is on *essence*. As is clear from the penultimate sentence of the passage, Spinoza puts having an objective essence and having an adequate idea of something on a par. From our earlier discussion, we know that this is just to know the proximate cause of a thing, in the case of a created thing, or, in the case of God, to know him as self-caused. Thus, Spinoza is saying here that having an adequate idea is tantamount to certainty. The second thing to stress, which is just an elaboration on the first, is Spinoza's statement that "no other sign is needed than having a true idea." This gets echoed in Part 2 of the *Ethics*, where Spinoza asks rhetorically, "What can there be which is clearer and more certain than a true idea, to serve as a standard of truth?" (2p43s; G II 124). From this passage, it appears that Spinoza thinks that merely having the cause of something is proof enough of its certainty.⁴⁵

Being able to generate all of a thing's properties on the basis of its cause as a sign of certainty assuredly would seem to have an intuitive appeal, but this would not satisfy the skeptic, since the question is precisely what makes one think that this procedure is anything but abstract, or merely internally coherent. What makes it *true*? In fact,

⁴⁵ Pointing to the demonstration of 2p43, as opposed to its scholium, Diane Steinberg draws the opposite conclusion (see Steinberg, "Method and the Structure of Knowledge in Spinoza," *Pacific Philosophical Quarterly*, 79 (1998): 152-69), arguing that an adequate idea of an adequate idea is required for certainty, and that the adequate idea on its own is insufficient. In the demonstration, Spinoza explains the certainty of a true idea by appeal to the fact that all ideas are themselves objects of second-order ideas. But in the scholium, as we just saw, Spinoza reverts to the *TIE* position that second-order ideas do not add to the certainty already present in first-order true ideas. Clearly Spinoza equivocates on his doctrine of certainty, as Steinberg points out. For Steinberg, there is reason to think that Spinoza's mature view is in fact that reflectivity is required for certainty. While I acknowledge that the text is somewhat confused on the question, I think the evidence points in the other direction. When the idea of something is grasped through its cause, such that all its properties can be deduced, that, for Spinoza, constitutes certainty, as the doctrine of adequacy makes clear. Spinoza's account of how philosophy can get off the ground to begin with relies on this stance. Because of Spinoza's *idea ideae* doctrine, ideas are transparent, such that when they are true, the truth is also seen. The second-order idea does not add justification, *pace* Steinberg, but simply awareness. I take it that it is awareness that Spinoza is driving at in the demonstration of 2p43. This interpretation better accords also, I think, with Spinoza's (admittedly obscure) gloss on the *idea ideae* in 2p21s as "the form of the idea."

Spinoza has more to say on this point. His further response has a pragmatic bent, appearing to turn on the productivity of the allegedly true ideas. He explains,

Matters here stand as they do with corporeal tools [...] For to forge iron a hammer is needed; and to have a hammer, it must be made; for this another hammer, and other tools are needed; and to have these tools too, other tools will be needed, and so on to infinity; in this way someone might try, in vain, to prove that men have no power of forging iron.

But just as men, in the beginning, were able to make the easiest things with the tools they were born with (however laboriously and imperfectly), and once these had been made, made other, more difficult things with less labor and more perfectly, and so, proceeding gradually from the simplest works to tools, and from tools to other works and tools, reached the point where they accomplished so many and so difficult things with little labor, in the same way the intellect, by its inborn power, makes intellectual tools for itself, by which it works still other tools, or the power of searching further, and so proceeds by stages, until it reaches the pinnacle of wisdom” (*TIE* §30-1; *G II* 13-4).

Spinoza’s point here is twofold. First, there is no infinite regress of foundations. We do not need a second foundation to underwrite the first, etc. So long as we have something solid to work with in the beginning, such as human hands in Spinoza’s material tools analogy, we can build successfully from there. The second, pragmatic point is that the proof of the viability of the foundation is in what it enables – we built hammers, as is incontrovertible, so we must have had sufficiently firm foundations to start from, even though we did not have hammers, and even though it might seem like we would have

needed them. In application to knowledge, so long as we were in possession of ideas analogous to human hands to start with, there was no need for a second batch of ideas to guarantee the viability of the first. The latter were apparently sufficient, since we have successfully progressed on their basis. Spinoza does not seem to share Descartes' concern that the whole edifice could be ill-grounded. The reason why, for Spinoza, seems to be that it hangs together.⁴⁶ During his subsequent discussion of fictitious ideas, Spinoza articulates coherence as a signal feature of the construction of a true system of knowledge:

when the mind attends to a fictitious thing which is false by its very nature, so that it considers it carefully, and understands it, and deduces from it in good order the things to be deduced, it will easily bring its falsity to light. And if the fictitious thing is true by its nature, then when the mind attends to it, so that it understands it, it will proceed successfully, without any interruption – just as we have seen that, from the false fiction just mentioned, the intellect immediately applies itself to show its absurdity, and the other things deduced from that (*TIE* §61; G II 23-4).

This passage implies that, in fact, the sign of an idea's truth is its power to generate other ideas without running into contradiction. On the one hand, this seems to conflict with Spinoza's thesis that an adequate idea is the sign of its own truth, which we just looked at, for here Spinoza is implying that the truth of an idea receives further confirmation as it explains and coheres with more and more other ideas, rather like scientific theories are treated in more recent times. There seems to be a tension between a foundationalism

⁴⁶ Here one could make a connection to Davidson's contention that it is impossible for someone to be mostly, or globally, wrong in their beliefs. See Donald Davidson, *Subjective, Intersubjective, Objective* (Oxford: Clarendon Press, 2001), ch. 10. Several commentators have compared the epistemologies of Spinoza and Davidson. See Della Rocca (1996), ch. 4; and Mason, Ch. 8.

implied in the first response to skepticism we looked at, and what looks more like a coherentism in this second reply, to use terminology from recent epistemology.

On the other hand, perhaps there is more commonality between the two responses than first appears. After all, Spinoza's conception of an adequate idea is of an idea which includes the cause from which all the effects or properties of the thing in question can be deduced. This is just what Spinoza describes in the second response, except this time on a relatively macroscopic level. We might compare an adequate idea on the microscopic level with a unified theory of everything on the macroscopic level. A theory would be considered "unified," and a theory "of everything," presumably, if it were possible to deduce from the theory accurate predictions about any phenomenon whatever. Likewise, an idea is adequate if it involves the cause from which it is possible to deduce all properties and effects. In both cases, at both the macroscopic and microscopic levels, the dual criteria of foundation and coherence seem to be satisfied (to the extent that they are, in fact, satisfied) together: a foundation (a cause at the microscopic level; and a theory at the macroscopic level) is good if it allows for a full and coherent set of deductions; correlatively, the latter cannot be understood except in relation to some foundation (i.e. cause or theory).

We are not yet in a position to say whether the notion of a "unified theory of everything" is an exaggeration in this connection or not. We will have occasion to return to this question in Chapter 4. At this point, a full analysis of the coherence of Spinoza's response to the skeptic would take us off course, especially as the question of the compatibility of what I called the foundationalist and coherentist versions is beside the point – the latter would be no more acceptable to the skeptic than the former. Insofar as a

coherence theory of truth trades exclusively on *internal* coherence, it does not answer the skeptic's worry about *external* correspondence. Perhaps there is no satisfying the skeptic on this point – for Spinoza or any other philosopher for that matter. However, there is another aspect of Spinoza's theory of ideas that bears on this discussion of the relation between ideas and reality. Although Spinoza does not develop it explicitly in this connection, and although it would no more satisfy a true skeptic than the foregoing responses, Spinoza's commitment to what I will call the parity of ideas and objects represents a significant and distinctive feature of his general approach. In examining this commitment, we will proceed backwards, through a series of Spinozist denials.

The first denial that we will look at is articulated in the *Cogitata Metaphysica* appended to Spinoza's *Principles of Cartesian Philosophy*. In the first chapter of the first part of the *Cogitata Metaphysica*, entitled "Of Real Being, Fictitious Being, and Being of Reason," Spinoza seeks to undermine the scholastic division of being into real being and being of reason. Spinoza considers three things that might *prima facie* appear to be something, but in fact, according to him, are not beings: chimeras, fictitious beings, and beings of reason. We examine the three in turn: (1) Spinoza defines the chimera as "that whose nature involves an explicit contradiction,"⁴⁷ and provides the example of a square circle in Chapter 3. As thus defined, a chimera is "nothing but a word," which can be neither imagined nor understood. (2) A fictitious being can be imagined, but it "cannot be clearly and distinctly perceived."⁴⁸ In the *TIE*, Spinoza provides the example of the earth imagined as a hemisphere, "like half an orange on a plate" (*TIE* §56; G II 21) to

⁴⁷ *Collected Works*, Vol. 1, 299, Spinoza's footnote "a"; G I 233.

⁴⁸ *Ibid.*

illustrate what he means by fiction. Since the half orange on the plate can be imagined, the fiction is a kind of idea, but a confused and mutilated one. (3) Spinoza says that a being of reason “is nothing but a mode of thinking, which helps us to more easily *retain, explain, and imagine* the things we have understood.”⁴⁹ As an example of a being of reason used to “retain” something, Spinoza gives Plato’s definition of man as a featherless biped. “Featherless biped” is merely a grouping of words that is slightly more evocative, and therefore, useful in thinking of man than, for instance, the word “man” itself. As an example of a being of reason used to “explain” something, Spinoza gives (*inter alia*) time, which “serves to explicate duration.”⁵⁰ And finally, as an example of a being of reason used to imagine something, Spinoza gives (*inter alia*) blindness, which we imagine as something positive despite the fact that it is a negation, because some positive image (we might think of a closed eye) is easier for us to deal with in everyday mental calculations than negation.

For Spinoza, beings of reason are more akin to chimeras than to fictitious beings. While not open contradictions, like chimeras they are just words. No correspondent object can be understood for such things, and, unlike fictions, neither can any object even be imagined. Blindness, for example, cannot be imagined. Nor can darkness, or limit, or boundary. To think that such things not only can be imagined, but also have some existence outside the mind is, therefore, doubly wrong, according to Spinoza: “From this it is easy to see how improper is the division of being into real being and being of reason. For they divide being into being and nonbeing, or into being and mode of thinking.”⁵¹ What is most relevant in Spinoza’s discussion of beings of reason, for our purposes, is his

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid., 301; G I 235.

claim, “[s]o it is evident that these modes of thinking are not ideas of things, and can not in any way be classed as ideas. So they also have no object that exists necessarily, or can exist.”⁵² Consider the contrast again with fictitious beings: it is the context that makes fictitious beings fictitious. Taken in themselves, the terms of a fiction (in the above example, earth and hemisphere) are ideas with objects, but their juncture in the fiction produces nothing but a confusion, some muddling together of the constituent ideas. For this reason, Spinoza remarks upon a “great difference”⁵³ between fictitious beings, which are ideas, albeit confused ideas, and beings of reason, which, having no object, are not even to be classed as ideas. Spinoza’s denial that beings of reason are ideas underscores his position that in order for something to be an idea, it must have an object. Since fictions are comprised of objects, they are ideas, even though confused.

There cannot be an idea, then, without a corresponding object. But what to make of such objects? Can the object be possible, a mere figment of the imagination? Spinoza’s second denial is a denial of what are sometimes termed mere “possibles.” Spinoza airs the argument of some philosophers in favor of *possibilia* in God’s mind on the basis of a conception of God’s omnipotence in *Ethics* 1p17. As Spinoza recounts it, the argument runs as follows: “If he had created all the things in his intellect (they say), then he would have been able to create nothing more, which they believe to be incompatible with God’s omnipotence” (G II 62). Spinoza’s response to this argument is simply that, rather than safeguarding God’s omnipotence, its proponents undermine it in limiting God’s productivity:

⁵² Ibid., 300-1; G I 234.

⁵³ Ibid., 302; G I 236.

Indeed – to speak openly – my opponents seem to deny God’s omnipotence. For they are forced to confess that God understands infinitely many creatable things, which nevertheless he will never be able to create [...] Therefore to maintain that God is perfect, they are driven to maintain at the same time that he cannot bring about everything to which his power extends. I do not see what could be feigned which would be more absurd than this or more contrary to God’s omnipotence (1p17s1; G II 62).

The upshot of Spinoza’s argument – which stems from the fact that it is of the nature of God necessarily to produce “infinitely many things in infinitely many modes, (i.e., everything which can fall under an infinite intellect” (1p16; G II 60) – is that whatever exists in God qua idea (i.e. “can fall under an infinite intellect”) *also* necessarily exists in God qua thing (or, real object of idea). Spinoza’s denial of possibles, then, adds something further to his denial of the classification of beings of reason as ideas: it is not only that every idea has an object, but more specifically, every idea has a *real* object.

Spinoza’s third denial ensures the convertibility of the statement that every idea has a real object to the statement that every real object has a corresponding idea. A clear statement of the denial that there can be objects which do not have corresponding ideas can be found in the second appendix to the *Short Treatise*. There, Spinoza writes,

the most immediate mode of the attribute we call thought has objectively in itself the formal essence of all things, so that if one posited any formal things whose essence did not exist objectively in the above-named attribute, it would not be infinite or supremely perfect in its kind (contrary to P3).⁵⁴

⁵⁴ *Collected Works*, Vol. 1, 152-3; G I 117.

The third proposition to which Spinoza makes reference here is part of the first appendix to the *Short Treatise*, which presents a proof of God in the geometric fashion. It reads: “Every attribute, or substance, is by its nature infinite, and supremely perfect in its kind.”⁵⁵ Spinoza’s argument, then, for the second thesis that every object has its idea bases itself on the nature of the attributes, each of which is infinite in its kind. It is of the nature of thought to think objects, i.e., to comprehend objects in thought. Therefore, if there are objects that do not exist objectively in the attribute of thought, that attribute is not infinite in its kind, contrary to the hypothesis. Spinoza’s mature argument for the infinity of the attributes in their kind is given in Part 1 of the *Ethics*. Essentially, the argument runs as follows. Things that do not have anything in common with one another cannot affect one another (from Axiom 5), and therefore, cannot limit one another. Distinct attributes have nothing in common with one another. Therefore the only thing that could possibly limit any given attribute would have to be the attribute itself. Since nothing can limit the attribute from outside, nothing can cause it to exist, which means that it exists from itself. That is to say, the nature of an attribute is to exist. To limit itself would violate its nature, which is existence. Therefore, since the attribute does not limit itself, nor can it be limited by anything else, it is infinite in its kind.

The second and third denials are correlative. They both turn on the infinity of the attributes in their kind, which, as we briefly noted, directly follows from fundamental elements of Spinoza’s metaphysics. The third denial appeals to the infinity of the attribute of thought. Albeit not explicitly, the second denial (the denial that God has ideas of possibles which he does not realize) consists in an appeal to the infinity of all the other attributes in their kind besides the attribute of thought. It is never the case that God

⁵⁵ Ibid., 151; G I 115.

has more ideas than real objects of ideas.⁵⁶ Everything possible is produced from eternity. Thus everything that can be an object *is* a real object. Correlatively, everything that is produced is the object of an idea in God's infinite intellect. Through these denials, Spinoza establishes a parity between ideas and things which issues, respectively, from the equally infinite omniscience and omnipotence of God.

Our manner of exposition should not be taken to suggest that Spinoza himself proceeds on the basis of such denials. Spinoza's method geometrically deduces the infinity of the attributes in their kind, and their unification in the infinitely infinite substance, God, from the definitions and axioms provided at the outset of *Ethics* Part 1. Such geometrical deduction is Spinoza's definitive exposition of the matter. What these denials do serve to illustrate, however, is the fact that Spinoza's theory of ideas is tantamount to a paring down of what could otherwise be a much more involved, or at least asymmetrical, ontological framework. Moreover, even though these denials are not presented in the geometrical fashion, they demonstrate an underlying resistance in Spinoza to any *disparity* between ideas and things.

This resistance finds its positive expression in Spinoza's so-called doctrine of "parallelism." *Ethics* 2p7 reads: "The order and connection of ideas is the same as the order and connection of things" (G II 89). The demonstration of the proposition states, "This is clear from IA4. For the idea of each thing caused depends on the knowledge of the cause of which it is the effect". This demonstration is rather puzzling at first. 1a4 states, "The knowledge of an effect depends on, and involves, the knowledge of its

⁵⁶ One might object here that ideas of ideas, and ideas of ideas of ideas, etc. contradicts the statement that there are not more ideas than things. But the fact that ideas can also be considered things is why there are ideas of ideas. Thus, we could reply that Spinoza's motivation for ideas of ideas is to prevent things from outnumbering ideas. If ideas were of things, as well as being things themselves, then, were it not for ideas of ideas, things would outnumber ideas. Thus the parity is preserved through ideas of ideas, not violated.

cause”. What is puzzling is that, due to word order, this axiom evokes in the mind of its reader the idea of starting with effects and going backwards from effects towards causes to gain knowledge of the effects through the causes. Commentators have frequently read the axiom in this way.⁵⁷ But this order and connection is precisely the reverse of the order and connection of things, thus apparently speaking against the stated sameness of the order and connection. However, the demonstration should not be considered from the perspective of a finite mind’s acquisition of knowledge. It should be considered from the perspective of God’s infinite intellect, which knows things from causes to effects from eternity. Seen in this light, the correct reading of 1a4 emerges more clearly. 1a4 is not an injunction about how properly to deal with effects (namely, anchor them in causes). Rather, 1a4 is a claim about how knowledge of effects *begins* in knowledge of causes and issues *out of* knowledge of causes. Rather than imagining that one starts with the effect and proceeds backwards to the cause, one should begin from the cause (however one got there), which is where God’s intellect begins, and deduce effects from there. If there is any injunction in the axiom, it is the rational dictum that Guéroutl formulates: “Each man must conform the order of his ideas to that of causes or of things.”⁵⁸ On this interpretation, there is no mystery at all why Spinoza says that 2p7 “is clear from IA4”. Knowledge proceeds from cause to effect just as things proceed from cause to effect.⁵⁹

2p7 is related to another denial, which serves to highlight its significance by contrast. What is to be denied is presented as a counter-factual in a discussion of the *TIE*

⁵⁷ Cf. Michael Della Rocca, *Spinoza*, London: Routledge, 2008, 91: “One can see how the axiom is relevant: it states, in part, that if there is an idea of an effect, then that idea depends on the idea of the cause of that effect. But 1ax4 does not get us all the way to parallelism. One problem is that 1ax4 seems to be merely a conditional claim: if there is an idea of an effect, then it depends on the idea of the cause.”

⁵⁸ Guéroutl 1968, 96: “*Tout homme doit conformer l’ordre de ses idées à celui des causes ou des choses.*”

⁵⁹ Cf. Margaret Wilson, “Spinoza’s Theory of Knowledge,” in *A Cambridge Companion to Spinoza*, ed. Don Garrett (Cambridge, UK: Cambridge University Press, 1996), 97. Also Guéroutl 1968 (ibid.).

which is clearly an early draft of the doctrine that is elaborated in its mature form in 2p7.

The passage reads:

the idea is objectively in the same way as its object is really. *So if there were something in Nature that did not interact with other things*, and if there were an objective essence of that thing which would have to agree completely with its formal essence, then that objective essence would not interact with other ideas, i.e., we could not infer anything about it (*TIE* §41; G II 16, emphasis added).

The counter-factual proposition that there is “something in Nature that did not interact with other things” clashes with *Ethics* 1p15, which reads, “Whatever is, is in God, and nothing can be or be conceived without God” (G II 56). All things relate to the idea of God. And God, inversely, relates to infinite things (by *Ethics* 1p16, viewed above). This connection between everything and the idea of God, which, as we shall see in a later chapter, underwrites the third kind of knowledge, rules out the possibility of a completely isolated thing.

The inseparability of all things from God is sufficient to achieve the denial of the counter-factual, but more is needed to prove that all things in Nature are connected in the radical way that, say, Leibnizian monads express the whole universe. Spinoza does maintain such a radical interrelation of things, and his statement and proof of it are given in *Ethics* 1p28, which we already looked at, but which I quote here again:

Every singular thing, or any thing which is finite and has a determinate existence, can neither exist nor be determined to produce an effect unless it is determined to exist and produce an effect by another cause, which is also finite and has a determinate existence; and again, this cause also can neither exist nor be

determined to produce an effect unless it is determined to exist and produce an effect by another, which is also finite and has a determinate existence, and so on, to infinity.

The proof of this proposition has two parts. First, “Whatever has been determined to exist and produce an effect has been so determined by God” (first sentence of 1p28dem; G II 69). This rules out anything isolated from God, so the proof of this proposition involves the denial we just viewed. Second, no particular thing is caused immediately by God, “for whatever follows from the absolute nature of an attribute of God is eternal and infinite” (1p28dem). We saw above that only the immediate infinite mode follows directly from an attribute of God. Finite modes, or particular things, neither follow directly from the attribute, nor directly from any infinite modification of the attribute. When particular things are produced by an attribute, they are produced as constituent parts of the infinite mediate mode, which is itself produced by the infinite immediate mode. Particular things, as Spinoza explains in 1p28, are only caused directly by other particular things, and these by others, *ad infinitum*. Their necessary relation to God is ensured only insofar as they are considered qua part of an infinite mode. The infinite mode, or “the face of the whole universe” in the case of extension, – being infinite – can logically be understood to follow from the infinite immediate mode, which is itself directly related to the attribute.

Having explained the nature of the connection between particular things and other particular things, as well as between particular things and the attribute through which they must be conceived, we are in a position to see the impossibility of there being multiple regions of the infinite mediate mode which operate independently of one

another. It is important to rule this out, because it is at least *prima facie* conceivable that two such regions are related to God, and yet not to each other. Such a possibility would mean that particular things are not radically interrelated in the way suggested. Two such regions however are impossible on Spinoza's metaphysical scheme. They would have each to be infinite in order to be related directly to the infinite immediate mode. But the only way they could conceivably both be infinite without limiting each other is if they had nothing in common. But they are conceived under the same attribute, thus they do have that in common. As a result, the total interrelation of things follows, and this infinite, totally interrelated system (the infinite mediate mode) is produced as a "package," in Michael Della Rocca's terms,⁶⁰ by the infinite immediate mode.

Spinoza's denial of an absolutely isolated, or even a partially isolated thing or grouping of things enables us to see the significance of the "order and connection" to which Spinoza makes reference in 2p7 in a clearer light. For each attribute, it is impossible that there is more than one order and connection, since it is impossible that there are multiple causally connected regions. Does this leave the door open to a difference in the orders and connections between different attributes? It is true that a parity between the attributes was established above. However, it seems that there could still be a certain parity, or correspondence between attributes that had differing orders and connections among their respective modal parts. In order to rule out this possibility, we turn back to *TIE* §41, quoted above.

The passage in question helps to underscore another crucial aspect of 2p7, namely, that even though 2p7 is expressed in the language of ideas and *things*, it is just as much about ideas and their *objects*. Above, we considered Spinoza's equation of objects

⁶⁰ Michael Della Rocca, *Spinoza* (London: Routledge, 2008), 70.

and things in the second denial, which ruled out the possibility of “possibles” – ideas with merely ideal objects that are never realized. But it is important not to lose sight of the connection between ideas and things, which is ultimately one of ideas and objects, or in other words, one of representation. Spinoza’s statement in *TIE* §41 that “the idea is objectively in the same way as its object is really” serves to illuminate this aspect of 2p7. The connection between ideas and things is not merely one of parity, where parity means that for every thing there is a corresponding idea. What must be underlined is that for every thing there is an idea which is *of* that thing.⁶¹ For an idea to be *of* something is for the thing to exist *objectively* in the idea; it is for the thing to be the object of the idea. It was Descartes who introduced the language of ideas in this representational sense. It will be helpful briefly to sketch Descartes’ treatment of ideas, in order to see how Spinoza’s differs. The contrast illuminates a basis for Spinoza’s theory of adequacy.

Descartes’ theory of ideas was subject to debate in the seventeenth century and remains so to this day. The chief source of the ongoing disagreement is the equivocal manner in which Descartes treats ideas throughout his philosophical corpus. Sometimes Descartes speaks of ideas as though they are modes of thought through which the mind perceives extra-mental objects,⁶² and at other times, he speaks of them as the very objects of thought.⁶³ On the one hand, therefore, Descartes can be read as a “direct realist,” and on the other, he can be read as a “representationalist,” whereby ideas intervene between mind and world qua *tertium quid*, or the notorious “veil of perception.” A detailed

⁶¹ Della Rocca parses the distinction in question here as a distinction between what he terms “bare parallelism” and “representational parallelism” (Della Rocca (1996), 19).

⁶² Descartes, Vol. 2, 74.

⁶³ *Ibid.*, 127.

examination of Descartes' theory of ideas reveals a host of subordinate distinctions and equivocations that need to be ironed out if anything consistent is going to be attributed to Descartes. Such an examination is impossible here.⁶⁴ What follows, therefore, is a simplified account of Descartes' theory of ideas, which emphasizes those aspects of Descartes' theory most pertinent to that of Spinoza.

Descartes' central treatment of ideas occurs in his *Meditations*, as well as in the supplementary *Objections and Replies*.⁶⁵ In his first set of replies, Descartes explains what he means when he says "that an idea is the thing which is thought of in so far as it has objective being in the intellect."⁶⁶ Objective being in the intellect, Descartes says, "will signify the object's being in the intellect in the way in which its objects are normally there. By this I mean that the idea of the sun is the sun itself existing in the intellect – not of course formally existing, as it does in the heavens, but objectively existing, i.e. in the way in which objects normally are in the intellect."⁶⁷ The thing, therefore, in this case, the sun, has two types of being – objective being in the intellect, and formal being as it exists in the heavens. Ideas themselves also have formal being, according to Descartes, but their formal being is relatively unimportant compared to their objective being. As he notes in the third Meditation, "The nature of an idea is such that of itself it requires no formal reality except what it derives from my thought, of which it is a mode."⁶⁸ In other words, particular ideas are not nothing insofar as they are modes of

⁶⁴ For such an inquiry, see Clemenson, *Descartes' Theory of Ideas* (London: Continuum, 2007); and Andrew Pessin, "Descartes' Theory of Ideas," *The Stanford Encyclopedia of Philosophy*. For an excellent account of the divergent seventeenth-century theories of ideas to which Descartes' equivocations gave birth, see Robert McRae, "'Idea' as a Philosophical Term in the Seventeenth Century," *Journal of the History of Ideas*, Vol. 26, No.2 (Apr.-Jun., 1965): 175-190.

⁶⁵ There are also some important letters to Mersenne that touch upon ideas.

⁶⁶ Descartes, Vol. 2, 74.

⁶⁷ *Ibid.*, 75.

⁶⁸ *Ibid.*, 28.

thought, which is itself a substance. But particular ideas can be *of* substances, such that the objective being of a particular idea outstrips the formal being of the idea itself. Descartes continues: “But in order for a given idea to contain such and such objective reality, it must surely derive it from some cause which contains at least as much formal reality as there is objective reality in the idea.”⁶⁹ In the case of the idea of substance, this causal requirement poses no problem, for the thinking thing, according to Descartes, is itself a substance, thus the idea of substance can come from the thinking thing itself; in other words, there is enough formal reality in the thinking thing to account for the objective reality in the idea of substance. Descartes goes so far as to suggest that a mind’s ideas of corporeal things could be generated from the resources provided by the formal reality of the thinking thing’s idea of itself. Descartes’ first proof of God’s existence in the *Meditations* issues from the fact that the only idea the objective reality of which cannot be accounted for by the resources of the thinking thing’s formal reality is the idea of God. Although the thinking thing in question is a substance, it is not infinite, while the idea of God contains the objective being of an infinite substance. Such an idea implies “that I am not alone in the world, but that some other thing which is the cause of this idea also exists.”⁷⁰

Descartes’ vision of a finite thinking substance that has ideas results in a gap between the objective reality of ideas and the formal reality of things. As we have seen, the mind’s ideas of corporeal things are explicable on the basis of the mind’s formal reality, since the mind, on Descartes’ account, is a substance. This gap produces the problem of skepticism we considered above, since it is possible that even the mind’s

⁶⁹ Ibid.

⁷⁰ Ibid., 29.

clearest and most distinct ideas of corporeal things are in fact products of the mind itself, bearing no relation to anything outside of the mind; alternatively, as we noted in our discussion of Descartes' conception of adequacy, a clear and distinct idea of a thing is always subject to *incompleteness*, since God can always alter the scorebooks without our knowing. In consequence, Descartes must establish the correspondence between the mind's ideas of corporeal things and corporeal things themselves by appeal to God's benevolence.

Descartes' conception of a thinking substance whose ideas are modifications of its thought also contains an ambiguity. In short, it is unclear whether at any given moment the thinking substance *is* its ideas, or rather *has* its ideas. On one hand, Descartes says "when I will, or am afraid, or affirm, or deny, there is always a particular thing which I take as the object of my thought, but my thought includes something more than the likeness of that thing. Some thoughts in this category are called volitions or emotions, while others are called judgments."⁷¹ This passage suggests that all modes of thought are ideas, but that some ideas are volitional, some are emotional, and others judgmental. On the other hand, when Descartes provides his account of human error, he speaks as if the will were a faculty completely distinct from the faculty of perception, i.e., the intellect, or understanding. For example, in the fourth Meditation Descartes writes, "the will simply consists in our ability to do or not do something (that is, to affirm or deny, to pursue or avoid); or rather, it consists simply in the fact that when the intellect puts something forward for affirmation or denial or for pursuit or avoidance, our inclinations are such that we do not feel we are determined by any external force."⁷² In this case, it no longer

⁷¹ Ibid., 26.

⁷² Ibid., 40.

appears that all modes of thought are ideas, but rather that some modes are ideas – namely, those belonging to the faculty of understanding – and some modes are volitions – namely, those belonging to the faculty of volition. On the latter account, it is not simply the case that the mind *is* its ideas, rather the mind *has* ideas which it can then choose to accept or not by means of an additional faculty.

Spinoza accepts and adopts the part of Descartes' theory of ideas which holds ideas to be modifications of thought, which represent objects *in* thought. Thus, when Spinoza defines ideas in 2d3 as concepts "of the mind which the mind forms because it is a thinking thing" (G II 84), his definition has a distinctively Cartesian flavor, especially with its appeal to the mind's being a "thinking thing" (*res cogitans*). Spinoza also assimilates Descartes' employment of the Scholastic language of "objective" and "formal being," as we have seen. However, Spinoza rejects the aspects of Descartes' theory that follow upon the notion of the mind as a finite substance, and in particular, the distinction between intellect and will. Thus, he rejects the notion that there could ever be a part of the mind behind the idea, as it were, in a position to pass free judgment upon it. When Spinoza exclaims, in 2p49s, "They look on ideas, therefore, as mute pictures on a panel, and preoccupied with this prejudice, do not see that an idea, insofar as it is an idea, involves an affirmation and negation" (G II 88), he does not explicitly identify to whom this "they" refers. It is possible that "they" includes any exponent of the "Peripatetic" strain of thought, which says that all knowledge passes first through the imagination, only subsequently to be processed by the active intellect. Nevertheless, the direct statement in the corollary of the same proposition that "The will and the intellect are one and the

same” (G II 131), as well as the assault on the notion that the will is more extensive than the intellect (Descartes’ account of error) later in the scholium of the proposition, among still other signals, indicate a more specifically anti-Cartesian focus.

Thus Spinoza takes Descartes’ description of the idea-object relation, but strips any connection to a finite thinking substance out of it, such that all that is left is the idea-object relation itself. Instead of ideas being anchored in a finite substantial mind, ideas are part of an infinite network, and the entire network, or order and connection, to use Spinoza’s language, has a direct representational relation with a network of things in the same order and connection as the network of ideas. Since there is no mind behind the ideas, as it were, to which the correspondence of ideas to things could be a question, Spinoza does not face the same skeptical objection that Descartes faces.⁷³ Spinoza has no need to bring in a transcendent benefactor to ensure the correspondence. Instead, Spinoza is able to focus on the ideas themselves to evaluate correspondence.

This consequence follows from what we have seen: Spinoza argues that *because* “the idea is objectively in the same way as its object is really,” “*if* there were something in Nature that did not interact with other things, and *if* there were an objective essence of that thing *which would have to agree completely with its formal essence*, then that objective essence would not interact with other ideas” (*TIE* §41 emphases added). In other words, because of the tight relation that we have seen Spinoza is committed to establishing between ideas and their objects, *if* the object is mutilated or isolated, *then* the idea is *likewise* mutilated or isolated. Correlatively, *if* the idea is mutilated or isolated,

⁷³ This does not mean that Spinoza does not open himself up to other objections, especially those which charge him with losing a recognizable theory of mind, and by that, throwing the baby out with the bathwater. See Margaret Wilson, “Objects, Ideas, and ‘Minds’: Comments on Spinoza’s Theory of Mind,” in *The Philosophy of Baruch Spinoza, Studies in Philosophy and the History of Philosophy*, vol. 7, edited by R. Kennington (Washington D.C.: Catholic University of America Press, 1980), 103-20.

then its object is *likewise* mutilated or isolated. The crucial implication of this is: *if* the idea is *not* mutilated or isolated, *then* the object is not mutilated or isolated. In other words, if the idea is properly formed, its correspondence with the thing is assured. We have already seen what it is for an idea to be properly formed: an adequate idea includes the cause of the thing from which all the thing's properties can be deduced. The foregoing is another angle from which to approach the question of the relation that ideas bear to real things in Spinoza's system.⁷⁴ I am less interested in whether or not this approach will in fact satisfy the skeptic than I am in the light it sheds on Spinoza's theory of adequacy, which I take to be one of his most original contributions to the "new way of ideas." Before we turn to Spinoza's theory of the scope of human knowledge, we need to discuss a formulation of adequacy that appears in *Ethics* Part 2 and how it relates to what we have said in this chapter about adequacy.

IV. 2p11c

The formulation I have in mind appears in the corollary to 2p11, and reads:

From this it follows that the human mind is a part of the infinite intellect of God.

Therefore, when we say that the human mind perceives this or that, we are saying

⁷⁴ Yet another, quicker response is found in Stuart Hampshire, *Spinoza and Spinozism* (New York: Oxford University Press, 2005), 59-60: "if God is rightly conceived as the unique substance, the problem which confronted Descartes – how can we be certain that our clear and distinct ideas correspond to reality? – cannot even arise; there can be no question of guaranteeing the correspondence between the order of thought or ideas and the order of things, because there are not two orders to correspond. So the doctrine of the two Infinite attributes of God or Nature leads to what is the most economical and complete of all the many philosopher's proofs that the real is the rational, or, in Spinoza's terminology, that *ideata* and ideas coincide." I am sympathetic to Hampshire's appeal to parallelism, as should be clear. The only problem I have with this response so formulated is that it leaves out the question of false ideas which do not agree with their objects. It is the presence of false ideas that raises the skeptical problem to begin with, hence I think it is important to see the theory of adequacy as intimately bound up with the appeal to parallelism.

nothing but that God, not insofar as he is infinite, but insofar as he is explained through the nature of the human mind, *or* insofar as he constitutes the essence of the human mind, has this or that idea; and when we say that God has this or that idea, not only insofar as he constitutes the nature of the human mind, but insofar as he also has the idea of another thing together with the human mind, then we say that the human mind perceives the thing only partially, *or* inadequately (G II 94-5).

Guérout calls this corollary the “*clef de voûte*” of Spinoza’s entire theory of knowledge.⁷⁵ Della Rocca says, “[t]his claim (and not, as it turns out, Spinoza’s explicit definition of ‘adequate idea’ in 2def4) provides the specification of the notion of adequacy that is most explicitly at work in Spinoza.”⁷⁶ In fact, the corollary does not specify the notion of adequacy at work in Spinoza, but rather that of inadequacy. However, a simple negation of the specification of the notion of inadequacy yields a specification of adequacy. If, as the corollary states, the human mind perceives a thing *inadequately* when “God has this or that idea, *not only* insofar as he constitutes the nature of the human mind [...],” by inference, the human mind perceives a thing *adequately* when God has this or that idea *only* insofar as he constitutes the nature of the human mind, and does *not* require the idea of another thing together with the idea of the human mind. Of course, Della Rocca is right to contrast the specification involved in this corollary with Spinoza’s definition of an adequate idea in 2d4, for, as we saw, Spinoza’s definition of an adequate idea leaves the intrinsic characteristics of truth completely *unspecified*. It is therefore not surprising that commentators have looked to 2p11c for the

⁷⁵ Guérout (1974), 119.

⁷⁶ Della Rocca (1996), 54.

conception of adequacy operative in the *Ethics*, since it is the only place in that work where Spinoza gives even an implicit specification of the intrinsic characteristics of truth, which are definitive of the adequate idea. Moreover, Della Rocca is right to say that the corollary's conception of adequacy is the one most *explicitly* at work in Spinoza, at least in the *Ethics*. Spinoza references 2p11c in several key demonstrations of the inadequacy and adequacy of different kinds of human perception throughout the latter half of *Ethics* Part 2. Nevertheless, when we take a closer look at the intrinsic characteristics of truth specified in the corollary, we find much left to be desired.

The first sentence of 2p11c ("From this it follows that the human mind is a part of the infinite intellect of God") issues from the proposition itself (2p11) as well as the previous proposition. Combined, 2p10 and 2p11 deny that the human mind is a substance, and affirm that it is constituted by a mode of the attribute of thought, i.e., an idea. The corollary is also explained by the fact that Spinoza refers infinite intellect, along with finite intellect, to *natura naturata*, in *Ethics* Part 1, which means that the infinite intellect is an infinite mode. When Spinoza says, then, in 2p11c that the human mind is a part of the infinite intellect of God, he means quite literally that any given human mind comprises one (a complex one) of the infinite ideas that constitute the infinite intellect, or what Spinoza sometimes calls the *idea Dei* (2p4). Clearly, Spinoza thought that this was an outcome of some significance. He goes on to say in the scholium directly following the corollary of 2p11, "Here, no doubt, my readers will come to a halt, and think of many things which will give them pause. For this reason I ask them to continue on with me slowly, step by step, and to make no judgment on these matters until they have read through them all." It is not entirely clear what exactly Spinoza thinks will

give his readers pause, but it is most likely the fact that it is only in 2p11 and its corollary that Spinoza's claim that the human being and God are somehow one becomes fully apparent. As we know, this notion did not sit well with many of Spinoza's contemporaries, to say the least. But what does this relation between the human mind and God reveal about the intrinsic marks of truth?

The answer, I believe, is nothing. Spinoza's silence in the *Ethics* on the criteria for adequacy is not mitigated by 2p11c. The fact that God would not require another idea beyond some given idea in some given human mind does not reveal what it is about that idea that makes it adequate. Rather it presumes that we know what features the *idea Dei* has that make it adequate. One might respond here: of course we know what features the *idea Dei* has that make it adequate – it is infinite! My rejoinder would be: but the human mind is clearly *not* infinite! Thus whatever it is about the *idea Dei* that is adequate in the case where all it needs is a human perception cannot be its infinite scope. It will be easier to see the shortcomings of 2p11c's specification of adequacy by means of an example of Spinoza's use of it. Consider 2p38: "Those things which are common to all, and which are equally in the part and in the whole, can only be conceived adequately." The demonstration runs as follows, leaning on 2p11c:

Let A be something which is common to all bodies, and which is equally in the part of each body and in the whole. I say that A can only be conceived adequately. For its idea (by P7C) will necessarily be adequate in God, both insofar as he has the idea of a human body and insofar as he has ideas of its affections, which (by P16, P25, and P27) involve in part both the nature of the human body and that of the external bodies. That is (by P12 and P13), this idea

will necessarily be adequate in God insofar as he constitutes the human mind, *or* insofar as he has ideas that are in the human mind. The mind, therefore (by P11C), necessarily perceives A adequately, and does so both insofar as it perceives itself and insofar as it perceives its own or any external body. Nor can A be conceived in another way, q.e.d. (2p38dem; G II 118-9).

This demonstration proves *that* common notions are adequate ideas, not *why* they are adequate. *Why* common notions are adequate is explained in the proposition itself – they are equally in the part and in the whole. This is not the time to go any further into the adequacy of common notions. We do so later. What 2p38dem brings out is the fact that when Spinoza references 2p11c, it is just to say *whether* something is adequate or not. The usage never does anything to explain what makes the idea adequate or inadequate.

In a recent article,⁷⁷ Eugene Marshall offers an interpretation that attempts to draw explanatory power from 2p11c. Marshall identifies two criteria for adequacy. One is what he calls the “causal requirement.” This matches up with what we have said about knowledge *per causam*. The other is what he calls the “containment sense of adequacy,” which he infers from 2p11c. Marshall articulates it thusly: “Idea *x* as it exists in God’s mind is adequate in human mind *y*, itself a complex idea, iff *x* as a whole is a part of *y*,” explaining “in EIIP11C, Spinoza seems to equate an idea’s being adequate in a human mind with its being completely contained in that mind. Functionally, this would be the same as saying that an idea is adequate in a mind just when the mind *has* that idea in its entirety.”⁷⁸ *Prima facie* it is not entirely clear what it would mean for an idea to be, or not to be, “completely contained” in a mind. Marshall appears to interpret the meaning in

⁷⁷ Eugene Marshall, “Adequacy and Innateness in Spinoza” in *Oxford Studies in Early Modern Philosophy Vol. 4*, eds. Daniel Garber and Steven Nadler, New York: Oxford University Press, 2008.

⁷⁸ *Ibid*, 58.

terms of simplicity, writing, “if something is conceptually simple, one cannot grasp it only in part, for it is not so composed. Instead, one must grasp it completely, that is, adequately, or not at all. For example, self-evident notions are said to display this characteristic of simplicity.”⁷⁹ Marshall’s appeal to simplicity indeed echoes remarks that Spinoza makes in the *TIE*. We already quoted above from the sections on fictitious ideas in the *TIE*, where Spinoza’s remarks about simplicity, clarity and distinctness are reminiscent of passages from Descartes’ *Regulae*. In those sections, recall, Spinoza claims that if an idea is absolutely simple, there can be no confusion in it. This criterion of simplicity, therefore, is just another perspective on Marshall’s “containment criterion.”

The question we just asked about what it could mean for an idea to be “completely contained” in the mind applies equally to the notion of something “conceptually simple.” It may well be the case that nothing could be simpler than Descartes’ ideal units, as suggested above, but these are abstract entities, and in any case, they are not the examples that Spinoza uses. Spinoza implicitly gives the nature of circles and squares as examples of simple ideas: “For example, once we know the nature of the circle, and also the nature of the square, we cannot then compound these two and make a square circle, or a square soul, and the like” (*TIE* §64; G II 25), the reason being that such ideas are simple, and clear and distinct. But we know that the circle is *not* a simple idea in the sense of an ideal unit. Moreover, if the circle were conceived, according to at least one sense of simplicity, as a brute image of a circle, it would lack precisely the ingredient that makes an idea adequate, namely, the cause. It would have, as we saw already, just a property. An idea is grasped “in its entirety” *only* when it is thought through its cause such that *all* its properties can be deduced. Otherwise, one is

⁷⁹ Ibid. 70.

apt to mistake a property for the essence of the thing. When an idea is not “entire,” what it lacks, in particular, is the cause of the thing. So while it is true that Spinoza speaks of simplicity as a criterion for adequacy in the *TIE*, this criterion ultimately reduces to that of knowledge *per causam*. There are not really multiple criteria of adequacy, just one.

What then is the point of 2p11c? The *TIE* contains a version of 2p11c, the context of which is illuminating. Following the discussion of fictitious and simple ideas that we just mentioned, Spinoza explains, “It only remains, then, to ask by what power our mind can form these [simple ideas] and how far this power extends” (*TIE* §73; G II 27). Spinoza’s answer to this question comes quickly as follows: “if it is – as it seems at first – of the nature of a thinking being to form true, *or* adequate, thoughts, it is certain that inadequate ideas arise in us only from the fact that we are a part of a thinking being, of which some thoughts constitute our mind, while others do so only in part” (*TIE* §73; G II 28). This answer, and the question that prompts it, do not concern the intrinsic marks of truth, but rather what makes it possible for the human mind to have ideas with intrinsic marks of truth (and ones which lack them), in other words, what makes it possible for the human mind to have true ideas (and false ones). This is very different from explaining what makes an idea adequate.

2p11c and its *TIE* forerunner are not designed to explain the adequacy of ideas in the human mind, but rather to establish their *truth* by way of showing that the idea is the same in God’s mind. The identification of human and divine ideas certainly establishes truth, since 2p32 claims to prove that “All ideas, insofar as they are related to God, are true” (G II 116). Truth, moreover, is a definitive feature of adequate ideas, which are defined as having all the properties, or intrinsic denominations of a true idea. But the

agreement of the idea with its object, i.e., truth, is precisely what Spinoza says in his definition of adequate ideas (2d4) is excluded by his focus on *intrinsic* denominations.

The identification of a human perception with a divine one is *not* an intrinsic denomination, unless the intrinsic denomination were just agreement with the object, which, as we see, it is not. Therefore, 2p1 1c does not, in the end, provide a specification of Spinoza's conception of adequacy that can compete in any way with what one learns in the *TIE* concerning knowledge *per causam*. Wolfgang Bartuschat assesses the significance of 2p1 1c astutely, in my view, as follows:

To define human intellect as part of the infinite intellect means to identify the relationship of our knowledge to the things as a form of objectification, whereby knowledge really grasps the thing, which is therefore known for what it is. Thus the objectification of things claimed by the human intellect is justified on the basis of the infinite intellect.⁸⁰

This amounts to the claim we have been making: 2p1 1c is indeed about truth (or “objectification,” in Bartuschat's language), but it is not about adequacy.

Bartuschat also remarks, “The mind's forming a part of the infinite intellect results not from the ‘what’ of knowledge, but from the ‘that.’”⁸¹ This chapter has been both about the “what” of knowledge, insofar as we looked at the intrinsic denominations of true ideas, as well as the “that,” insofar as we have also examined the justification for Spinoza's claim that adequate ideas are also true ones. The findings in this chapter form a basis upon which it is possible to turn to the *Ethics*' epistemology, with its three kinds of knowledge.

⁸⁰ Wolfgang Bartuschat, “The Infinite Intellect and Human Knowledge,” in *Spinoza on Knowledge and the Human Mind*, edited by Yirmiyahu Yovel and Gideon Segal (Leiden: E.J. Brill, 1994), 197.

⁸¹ *Ibid.*

Chapter 2

Imagination, or The First Kind of Knowledge

Before we turn from general epistemological foundations to an analysis of the three kinds of human knowledge, we still need to set forth those foundations specific to human knowledge, namely, Spinoza's theory of the human mind, and how it relates to the human body, and the world beyond. Accordingly, in the first section of this chapter, we look at Spinoza's account of the union of mind and body, turning in the following section to the perception of external things. On the basis of the first two sections, we will be in a position to turn to the first kind of human knowledge, and its inadequacy, in the third section, concluding the chapter with a look at Spinoza's theory of error.

I. The Human Mind as the Idea of the Body

Spinoza's account of the mind-body relation is a specification of his more general doctrine of the parallelism of attributes. As we saw in the last chapter, Spinoza's parallelism doctrine states that "the order and connection of ideas is the same as the order and connection of things" (2p7; G II, 89). For every circle existing in Nature, there is in God also an idea of that circle. Both the circle existing in extension and the circle existing in thought are the same circle just "expressed" in different ways. For Spinoza, since God's essence is expressed in infinite ways by infinite attributes, the circle, or any other mode, is also expressed in infinite ways other than by thought and extension.

Moreover, just as the same circle, or any other mode, is expressed in infinite attributes, so any given train of events is expressed with the same order and connection in all attributes.

The human being instantiates parallelism under the attributes of thought and extension. Any given human being is constituted by modes of the attribute of thought, as well as the parallel modes of extension. While each mode of thought and extension which constitutes a human being is also expressed in infinite other attributes in God, human beings have ideas of only thought and extension. “[M]an consists of a mind and a body,” says Spinoza, “and [...] the human body exists, as we are aware of it” (2p13c; G II, 96). It is not merely that we are aware of the human body *inter alia*. According to Spinoza’s definitive statement of the mind-body relation, “[t]he object of the idea constituting the human mind is the body or a certain mode of extension which actually exists *and nothing else* [*et nihil aliud*]” (2p13 emphasis added; G II 96). The “*et nihil aliud*” seems to imply that the object of the idea constituting the human mind is *only* the body. Spinoza also says: “Whatever happens in the object of the idea constituting the human mind must be perceived by the human mind” (2p12; G II, 95). These statements have stood out to commentators as *prima facie* implausible, and therefore in need of attention. How could Spinoza say that the human mind perceives everything that happens in the body? We will be in a better position to answer this question when we have a better grasp of the *relata* comprising the Spinozian mind-body relation.

A body, for Spinoza, is an individual under the attribute of extension. An individual body is comprised of constituent bodies, which “communicate their motions to one another in a fixed manner” (excursus following 2p13; G II, 100) such that “together they are all the cause of one effect” (2d7; G II, 85). Spinoza is not an atomist, so the

parts of any given individual are themselves individuals comprised of constituent parts, and so on *ad infinitum*. Like any other body, the human body is composite. In particular, Spinoza emphasizes the highly complex nature of the human body.⁸² It is precisely this high degree of complexity commonly associated with the human body that commentators often find at odds with Spinoza's claim that the human mind perceives everything in its object, but more on this shortly.

Per Spinoza's doctrine of parallelism, the human mind is identical to the human body except that it is expressed under the attribute of thought rather than extension. Like the body, the mind is a composite organization of parts, the individuality of which is defined by the mutual communication of said parts in the service of a single effect at any given moment. The only difference is that instead of bodily parts, the "idea that constitutes the formal being of the human mind," as Spinoza says, is "composed of a great many ideas" (2p15). As Spinoza explains in the demonstration to 2p15, it is not simply that the mind and body are parallel qua individual wholes: "[b]ut of each individual composing the body, there is necessarily (by P8C) an idea in God. Therefore (by P7), the idea of the human body is composed of these many ideas of the parts composing the body, q.e.d" (G II 103). In other words, there is a parallelism between mind and body that extends right down to their respective smallest constituent parts.

We are now in a position to address the matter of how Spinoza can say that the mind perceives everything in its object, the body. There are two possible responses to the question. The first response emphasizes that Spinoza's *principium individuationis* is an organization of parts all conspiring to produce a single effect. One plausible account of

⁸² See the postulates at the end of the excursus on bodies after 2p13 (G II, 102-3).

the Spinozian mind-body relation would then be that the mind perceives only the net effect constitutive of the individuality of its body. Just as the body is defined as the coordination of parts conspiring to yield a single effect, so the mind, in its conscious awareness, is just the idea of this effect. On this reading, the mind's constituent ideas contribute to, but do not reach, conscious awareness. The mind is properly said to perceive everything only insofar as every constituent part contributes to the definitive effect which is the object of conscious awareness.⁸³

The second response takes a more Leibnizian tack, such that the mind's constituent ideas do not merely contribute to the net effect constitutive of conscious awareness, but bleed into the mind's awareness, such that the latter is a confusion of its parts, as the murmur of the sea is a confusion of the sound of individual waves in Leibniz's famous illustration of his "*petites perceptions*." On this reading, the mind is more literally aware of everything in its body, albeit in a confused manner. The difference between these two responses to the question of the mind's perception of the body, then, turns on the relation of the mind's constituent parts to conscious awareness. I do not think there is sufficient evidence to decide which of these two alternatives Spinoza would have preferred. In any case, the mind is still the idea of the body only, and that is the important point for present purposes.

⁸³ My presentation of this first interpretive possibility is similar to, although I think somewhat more precise than, that of Parkinson. Where I speak of the mind's object as the one effect caused by the concurrence of a number of individuals, Parkinson speaks similarly of the "organism as a whole": "As to our failure to 'perceive' some of our reflexes, this can be explained if the word 'perceive' in Eii.12 is taken to mean a mental correlate. Spinoza will thus be saying that a man's thoughts are the correlate to the functioning of his organism as a whole (and in this sense all that happens in his body is 'perceived'), but this does not imply that he attends to all that happens in his body" (Parkinson, 111). Bennett would also have to be placed in this first interpretive camp. In reference to 2p12, he writes, "If this is not to collapse in the face of obvious facts of introspection, Spinoza must say that many events in my body are reflected in my mind but not so that I am aware of them" (Bennett, 174). Margaret Wilson echoes Bennett in Wilson (1996), 100.

II. The Perception of External Things

If the human mind is the idea of a singular existing thing, i.e., the human body, how does the human mind have continually changing perceptions? An even more important question is: why does the human mind seem to perceive things *external* to its body? The answer to the first question is rather simple: the mind has continually changing perceptions corresponding to the continually changing configuration of the body. Spinoza explains in his excursus on bodies how a complex body can undergo change while maintaining its individual identity.⁸⁴ We saw above that the essence of individuality for Spinoza is a certain organization of bodies which together produce a single effect. This conception of individuality is largely formal in nature, which is to say that parts of the individual may be substituted for other parts, and the individual may grow, and move as a whole, so long as the same relation of motion and rest between the parts is maintained to produce a net effect. Thus an array of bodily changes is compatible with the maintenance of individuality. The second question, however, concerning the perception of external things, is more complicated. We can offer a preliminary analysis in the following way.

We have just said that the body can change while maintaining its individuality. It is not just that the human body changes once in a while. The human body, as highly complex as it is, is constantly changing. In the first place, Spinoza explains, “The human body, to be preserved, requires a great many other bodies, by which it is, as it were, continually regenerated” (*Ethics* 2 Postulate 4; G II 102). We can simply think here for

⁸⁴ The relevant parts of the excursus are Lemmas 4-7.

example, of the constant need to breathe, drink water, and ingest nutrients. Some bodily changes, therefore, are a product of the body's own nature and its needs. A great number of changes besides have their source outside of the physical body, in the external relations between the body and surrounding bodies. *Ethics* Part 2 Postulate 3 reads: "The individuals composing the human body, and consequently, the human body itself, are affected by external bodies in very many ways" (G II 102). When the human body is impacted by external bodies, the nature of the human body is altered to a certain extent according to the nature of the human body part affected (as well as according to the nature of the affecting external body). The softer the part of the body affected, the greater is the effect of the external body on the part affected.

The human body, then, undergoes myriad subtle modifications on the basis of its relations with surrounding bodies. As the idea of the body, the human mind perceives all such changes, according to 2p12. Spinoza explains that when the human mind has the idea of these modifications, the human mind is having an idea of the body *qua* modified by external things. Hence, Spinoza says importantly in 2p16: "The idea of any mode in which the human body is affected by external bodies must involve the nature of the human body and at the same time the nature of the external body" (G II 103). From this proposition Spinoza draws the following corollary: "From this it follows, first, that the human mind perceives the nature of a great many bodies together with the nature of its own body" (G II 104). So our preliminary analysis of how the human mind can perceive external things while being the idea of the body suggests that the body is affected in various ways by external things, and the human mind, by virtue of having the ideas of these bodily affections, also has the ideas of external things.

This analysis is only preliminary since, as can be easily shown, it raises as many questions as it answers. The main issue has to do with the duality of objects of perception that seem to emerge from the analysis. On the one hand, the human mind has the idea of the body in all of its changing modifications. In addition, Spinoza seems to be saying that, on the other hand, the human mind, in having these ideas of the body's modifications, *also* has ideas of the causes of these modifications, namely, external things. How can we make sense of this duality in perception? At first it would seem that perception can only be of one or the other – either the human mind has an idea of the body qua modified in some way, say, by light reflecting off a tree, or it has an idea of the tree. It does not seem that there is any way of having both “together,” as Spinoza seems to want.

Several commentators have weighed in on this problem, which we might call the problem of mental, or perceptual, representation in Spinoza. Working in the first half of the twentieth century, H. Barker and A.E. Taylor charged Spinoza with oversight and unconscious equivocation, alleging that Spinoza confused a correspondence relation between mind and body (in particular, between mind and brain) with a cognitive relation between the mind and its perceptual object.⁸⁵ According to this interpretation, while it is reasonable to suggest that there is something in the brain that *corresponds* with a mental representation, say, that of the sun, there is *cognition* not of the corresponding brain state, but of the sun. Spinoza's thesis that the mind is the idea of the body, which implies a

⁸⁵ H. Barker, “Notes on the Second Part of the Spinoza's *Ethics*,” Part III, in *Studies in Spinoza: Critical and Interpretive Essays*, ed. S. Paul Kashap (Berkeley: University of California Press, 1972); and A. E. Taylor, “Some Incoherencies in Spinozism (I)” in *Studies in Spinoza: Critical and Interpretive Essays*, ed. S. Paul Kashap (Berkeley: University of California Press, 1972).

cognitive relation between mind and body, rather than between mind and external object, therefore confuses correspondence and cognition. Della Rocca dismisses the Barker/Taylor interpretation as seeming “to underestimate Spinoza’s intelligence.”⁸⁶ Commentators since Barker and Taylor have generally attempted to reconcile the duality on Spinoza’s behalf.

Daisie Radner, for example, suggested that Spinoza intentionally distinguished between a correspondence and a cognitive relation so that a resemblance relation would hold between two bodily entities (the human body and the external body, respectively) instead of between entirely different sorts of entity (human mind and external body), as on Descartes’s analysis.⁸⁷ On an alternative reading, Bennett claimed, on textual grounds, that both relations are cognitive, or representative, but that the mind-body relation is *directly* representative, whereas the mind-external body relation is *indirectly* representative.⁸⁸ Radner’s and Bennett’s interpretations represent different attempts to rescue Spinoza from the charge of confusion and incoherence by explaining how a duality can be made sense of within the confines of Spinoza’s framework.

There are both philosophical and textual difficulties with both Radner’s and Bennett’s interpretations. Without needing to get into the former, it is sufficient to point out that neither offers any real evidence that Spinoza *did* in fact distinguish between two senses of “idea of” as proposed. This is the criticism that Della Rocca takes up vis-à-vis Radner and Bennett. For Della Rocca, there is simply one object of the idea – a confusion between the effect *qua* affection, i.e., the bodily modification, on the one hand, and the cause of the affection, i.e., the external thing, on the other. Della Rocca writes,

⁸⁶ Della Rocca (1996), 50.

⁸⁷ Daisie Radner, “Spinoza’s Theory of Ideas,” *The Philosophical Review* 80 (Jul., 1971): 338-359.

⁸⁸ Bennett, 153-9.

Why, however, can't an idea be unconfused even if its causal history at some point runs outside the mind? Spinoza's answer, I contend, is that each such idea is confused simply *because* it is both of e and of c, that is, because it is both of its extended counterpart and of the cause of that counterpart.⁸⁹

Della Rocca speaks of the bodily modification as the effect, e, and the external affecting thing as the cause, c. Thus, when the mind has an idea of a bodily modification which is externally caused, it actually has an idea of both e and c. Unlike previous interpretations, Della Rocca does not want to attribute two distinct senses to the way in which e and c are represented in the mind. Rather, for Della Rocca, there is only one representation. The reason there is only one representation has to do not with the nature of the object, which is a duality, but rather with the limitations of the mind. Della Rocca contends that *because* the idea is of two objects simultaneously, it is confused.⁹⁰

Della Rocca's reading has the appeal of showing how what some commentators thought to be an intractable confusion in Spinoza's system in fact *is* a confusion, but, far from being a confusion of oversight on Spinoza's part, is bound up with the philosophical conception of confusion that Spinoza purposely develops as a part of his theory of sense perception and inadequate ideas. Moreover, Della Rocca's interpretation can be seen to work rather well with 2p16, which is central to Spinoza's account of sense perception, and which, to quote it again, reads, "The idea of any mode in which the human body is affected by external bodies must involve the nature of the human body *and at the same time* the nature of the external body" (emphasis added). Della Rocca's reading of

⁸⁹ Della Rocca (1996), 59; Della Rocca (2008), 112-3.

⁹⁰ An earlier formulation of the same line of interpretation can be found in Marcelo Dascal, "Unfolding the One: 'Abstract Relations' in Spinoza's Theory of Knowledge," in *Spinoza on Knowledge and the Human Mind*, eds. Yirmiyahu Yovel and Gideon Segal (Leiden: E.J. Brill, 1994), 179.

confusion as a literal blending of two things into one resonates with 2p16's simultaneous conjunction of objects which the idea of an externally caused bodily modification "must involve."

Although Della Rocca is right to insist, contrary to other interpretations, that there is only one sense of representation, not two, involved in the idea of externally caused bodily modifications, his reading of confusion is too literal. Restricted to being the idea of the human body, the only way the human mind can have any indication of an external world is through the affections that its object-body undergoes. Were it the idea of the external causes in addition to being the idea of its body *qua* effect, its body would effectively include those causes in its constitution. Thus, the idea of externally caused bodily modifications is not an idea of two objects which are blended confusedly together, but an idea of one, mutilated object, i.e., the body *qua* modified by an external cause absent the external cause itself. When Spinoza says that the idea "must involve the nature of the human body and at the same time the nature of the external body" (2p16; G II, 103), I suggest that this does not mean that the idea is actually *of* both the nature of the human body *and* the external body at the same time, but rather the idea is *of* the human body only, but *involves* the external body insofar as the latter causes the configuration of the human body which is the sole object of the idea.

Spinoza openly claims that the presence of an external body is not a necessary condition for perceiving said body. In most cases,⁹¹ the external body must have at some time affected the human body, but it is not necessary that it continue to do so for the human mind to perceive it as if it were present, as 2p17 explains:

⁹¹ The exception I have in mind is the case of innate ideas, which I touch on below. I present this case merely as a possibility that is not inconsistent with Spinoza's system; in fact, Spinoza does not, in general, speak about innate ideas, and his stance one way or the other is somewhat ambiguous, in my view.

[i]f the human body is affected with a mode that involves the nature of an external body, the human mind will regard the same external body as actually existing, or as present to it, until the body is affected by an affect that excludes the existence or presence of that body (2p17; G II, 104).

The corollary goes on to draw the inference: “[a]lthough the external bodies by which the human body has once been affected neither exist nor are present, the mind will still be able to regard them as if they were present.” The phenomenon that 2p17 highlights – that perception of a thing continues undiminished by the absence of an external body until that body’s presence is excluded by that of another – implies that perception of external things is not dependent upon the literal, physical presence of the external thing. The only element requisite is a given modification of the body. Indeed, on this model, there would be nothing contradictory in the human mind’s having innate ideas of external things by virtue of innate bodily predispositions – without ever having encountered said things. Thus the confusion that obtains in all such instances of perceiving a thing as present, i.e., in all “images,” as Spinoza calls them, is not caused by the literal co-presence of the external body and the human body. The perception continues just the same even when the external body is no longer present, and becomes, assuredly, no less confused when the external body departs. As a result, it is not the piling up of objects of ideas that makes them confused and inadequate, but rather their mutilation, the fact that, as Spinoza says, they “are like conclusions without premises” (2p28dem; G II, 113).⁹²

⁹² It should be noted that none of this means that Spinoza is not talking about a literal, physical blending of objects in 2p40 when he discusses the formation of universals by the imagination. Della Rocca aligns the kind of confusion he sees as involved in the perception of external things, on one hand, with the kind of confusion that yields inadequate universals, on the other (Della Rocca (1996), 59-64; Della Rocca (2008), 113). Spinoza is indeed talking about a literal, physical blending of objects in 2p40s, but the confusion in question in that regard is a confusion of resembling bodily affections, not a confusion of the affecting

What is more problematic, even if Della Rocca were right, and the object of the idea constituting the human mind were a confusion of human and external body, we are still at a loss to understand how this object could yield the idea of an external object. If, as Della Rocca insists, the relationship between the idea and its object is a representational one, and if, as Della Rocca maintains, the object is a confusion of human and external body, then the mind should represent to itself a confused idea of its body and the external body. As Descartes notes,

most Philosophers maintain that sound is nothing but a certain trembling (vibration) of air which comes to strike our ears; so that if the sense of hearing conveyed to our thought the true image of its object, it would have to be the case that, instead of making us conceive sound, it made us conceive the movement of the parts of air which tremble against our ears at the time.⁹³

In that case, why, if my mind represents my body, even a confusion of body and external body, do I have an idea of a chair?

Della Rocca recognizes that not everything is explained on his reading, admitting that he does not know how Spinoza is justified in inferring that the human mind “perceives the nature of a great many bodies” (2p16c1) from the fact that sense perception *involves* the nature of an external body.⁹⁴ We still have a duality between my idea of the sun and my idea of my body qua modified by the sun. Those two ideas still

external body with the affected human body. I do not see any reason to assume, as Della Rocca appears to, that the same kind of confusion is operative in the two cases.

⁹³ Quoted in Margaret Wilson, “Descartes on Sense and ‘Resemblance,’” in *Reason, Will, and Sensation: Studies in Cartesian Metaphysics*, edited by John Cottingham (Oxford, UK: Clarendon Press, 1994), reprinted in Margaret Wilson, *Ideas and Mechanism* (Princeton, NJ: Princeton University Press, 1999), 20; AT XI 5.

⁹⁴ Della Rocca (1996), 65.

seem in need of reconciliation even after Della Rocca's analysis, and the question persists how, for Spinoza, the two relate.

Is it ultimately possible to get a coherent reading out of the text? As we have seen, the text itself suggests relatively clearly that the mind is the idea of the body in the literal sense that it represents given configurations of the body. On this score, both Bennett and Della Rocca appear to be right. To the question, why then does the mind represent chairs, tables, and trees, instead of its body?, consider a response along the following lines: for some reason, the mind *takes* a given configuration of its body for a tree – it sees it *as* a tree. To think that the question presents a problem is to presuppose that our naïve “intentions,” to employ a term from phenomenology, are somehow naturally veridical. There is no reason that my perception of a tree should not in fact be a perception of my body which I take for a tree. One of the implications of the mechanical revolution in the seventeenth century was the need to radically reformulate philosophical accounts of sense perception. If our perceptions, say our visual perceptions, are the products of light impacting our retinas in certain ways, then there can no longer be any naïve resemblance between the ideas in our minds and the things we take them to be. I say “naïve” resemblance to make room for theories of perception which argue for some level of resemblance, for example, on the basis of a Cartesian divine guarantee, or on an evolutionary, adaptive basis. In any case, the underlying point, which follows from the mechanical revolution, is that our ideas of external objects do not in and of themselves take us straight to the things they represent. Thus the claim that there is some conflict between Spinoza's thesis that the mind is the idea of the body and our naïve “intentions” of the external world begs the question. This is not to say that Spinoza could not give an

account for why, if our ideas are of our bodies, we *take them to be* of things external to our bodies. As indicated above, were Spinoza to pursue this question, he might appeal to the survival value of the erroneous perception. Descartes does this himself in the sixth Meditation, though not, of course, on evolutionary grounds, but on grounds of divine providence.⁹⁵ In any case, if, as we now believe, there are evolutionary reasons for brain states to represent the external world in thought, the exact details are a matter of natural history, not first philosophy.⁹⁶

Does the above response constitute a viable resolution of the problem of representation in Spinoza? Can Spinoza legitimately pass the question off to brain scientists and natural historians? To assume that the problem is one for scientists to pursue is to assume that the phenomenon of conscious awareness or perceptual representation can, in theory, be explained in material terms. Of course, Spinoza's theory of human nature lends itself to scientific analysis insofar as it affirms the identity and independence of the attributes. Any human phenomenon (or any phenomenon whatsoever for that matter) can be studied under the attribute of extension. Hence, Spinoza famously declares that he "shall consider human actions and appetites just as if it were a question of lines, planes, and bodies" (3 preface; G II 94). Spinoza has been accordingly embraced by "naturalists." Unfortunately, matters are not quite so simple.

⁹⁵ Descartes, Vol. 2, 60: "My final observation is that any given movement occurring in the part of the brain that immediately affects the mind produces just one corresponding sensation; and hence the best system that could be devised is that it should produce the one sensation which, of all possible sensations, is most especially and most frequently conducive to the preservation of the healthy man. And experience shows that the sensations which nature has given us are all of this kind; and so there is absolutely nothing to be found in them that does not bear witness to the power and goodness of God."

⁹⁶ Connecting the points in this chapter about the human mind's relation to the external world via the body with the general framework of Spinoza's theory of ideas and their relations to objects that we elaborated in the third section of the first chapter, I would like to defend a naturalistic interpretation of Spinoza's theory of ideas and perception, but this is a project for another time. For a fascinating naturalistic interpretation of seventeenth-century theory of ideas (against the dismissals of Rorty et. al.), with a focus on Descartes and Locke, see Yasuhiko Tomida, *The Lost Paradigm of the Theory of Ideas* (Hildesheim: Georg Olms, 2007).

In order to see why even the apparently innocent response sketched in preceding paragraphs involves Spinoza in difficulty, first consider this schematic account of the perceptual process on the purely materialistic level. Perception begins when the sensory organs are excited – the eyes by light, the ears by sound, etc. The excited sensory organs relay signals to the brain and an image of the environment – whether visual, auditory, or what have you – is somehow formed on the basis of the input received in the brain. Now, of course, we have yet no real clue how to understand perception on the purely materialistic level, and I take it to be an open question whether we ever will be able to do so. For Spinoza, unlike for, say, Hobbes, the perceptual process is best understood under the attribute of thought rather than extension. Spinoza denied that thought is a corporeal activity,⁹⁷ and his philosophy is structured to accommodate this denial. However, even if Spinoza denied that thought is a corporeal activity, his doctrine of parallelism commits him to a *materialist counterpart* of the perceptual process in thought, as already noted. The question is, then, for Spinoza, what is the relation between the processes of perception as considered under the respective attributes of thought and extension?

According to Spinoza's parallelism doctrine, the respective perceptual processes are just the same thing conceived in two ways, according to two distinct attributes. Meanwhile, thought consists in ideas of extended objects. *If* the respective processes were genuinely identical, save for their respective attributes, then the thought process would have to behave just like the material process in extension, but this is impossible, since, unlike thought, extension has no object outside itself; extension does not have another attribute as its object as thought has extension for its object. We can imagine thought behaving just like extension. Barker calls ideas conceived in this way “mental

⁹⁷ *Collected Works*, Vol. 1, 171; G IV 13.

stuff.”⁹⁸ In this case, thoughts are in causal relation with other thoughts just as bodies are in relation with other bodies on the materialist model, and thought and extension are independent, closed systems. But, as we have seen, for Spinoza, thoughts are *of* bodies – clearly not part of an independent, closed system. We return here to the muddle attributed to Spinoza by Barker and Taylor. On the one hand, we have an identity or correspondence relation between thought and extension. On the other, we have a cognitive relation.

An alternative formulation of the difficulty runs as follows: if thought and extension were identical, why would we need thought? On the other hand, if we do need thought for explanatory purposes, and it actually contributes something of explanatory value to the materialist picture, then how could thought be identical with extension?

Let me sum up the difficulty with attributing the naturalistic response to Spinoza. The naturalistic response seems to rely on some version of an identity theory of mind and body, or even perhaps Churchlandian eliminativism. Passing the question of the phenomenon of perception off to brain science and natural history suggests that the phenomenon is properly explained in scientific terms. Thus pain on the identity theory of mind and body turns out to be no more than the activation of C-fibers. Why do we then *feel* pain? The physical reductionist would answer that this feeling simply *is* the activation of the C-fibers – we just don’t realize that. According to eliminativism, the pain is actually nothing at all, and, once clarified, is seen to be nothing at all. Of course, Spinoza agrees that sense perceptions are just confusions, and that they can become unconfused when understood according to their causes – (whether that means they are seen to be nothing at all, or not, is a question I will not pursue here). Moreover, Spinoza

⁹⁸ Barker, 121.

has, at times, been read as some sort of proto-identity theorist, and at others, as some sort of proto-eliminativist.⁹⁹ In either case, he is read along the naturalist lines just sketched.

What then, is the problem with attributing the naturalistic response to Spinoza?

It is true that there are some passages in Spinoza that appear to lean in the direction of contemporary identity theory. Consider for instance the brilliant 3p2s, where Spinoza makes his well-known pronouncement that “no one has yet determined what the body can do” (G II 98). These passages indicate that Spinoza was, at least at times, open to the idea that mental phenomena could eventually receive physical explanation.

Undoubtedly, it is difficult to pin down Spinoza’s philosophy of mind, and attempts to fit him into one of the contemporary camps are anachronistic and bound to something far less than success. We can say, at the very least, however, that there are also resounding indications that Spinoza would refuse the reduction of mind to body, for reasons already mentioned. In this regard, it is a mistake to take Spinoza as a proto-identity theorist. It makes much more sense to read him into the camp of “dual aspect theory,” which differs from identity theory. If Spinoza would, in the end, refuse reductionism, as I think there is good reason to believe, then it is for this reason that it is problematic to foist the naturalistic response onto him: a scientific explanation could not be the whole picture.

We are faced with two possible conclusions: (1) if Spinoza wants ideas to be identical with bodies, then bodies cannot be the objects of ideas, and Spinoza is not really any different from a materialist in the Hobbesian style; conversely (2) if Spinoza wants bodies to be the objects of ideas, then ideas cannot be identical to bodies, and Spinoza is

⁹⁹ For an account of Spinoza’s connection with identity theory, see Andreas Schmidt, ‘Substance Monism and Identity Theory in Spinoza,’ in *The Cambridge Companion to Spinoza’s Ethics*. J. Thomas Cook provides an eliminativist reading of inadequate ideas in “Spinoza and the Plasticity of Mind,” in *Studia Spinozana 14: Spinoza on Mind and Body*, edited by J. Thomas Cook and Lee Rice (Würzburg: Königshausen & Neumann, 2004) 111-33.

not a materialist, but a dualist in the Cartesian style, or, if not in the Cartesian style, then at least in the style of “dual aspect theory.” Jaegwon Kim explains dual aspect theory as follows, using Spinoza, in fact, as a case in point: “Spinoza claimed that mind and body were simply two correlated aspects of a single underlying substance that is in itself neither mental nor material [...] The observed correlations are there because they are two distinguishable aspects of one underlying reality.”¹⁰⁰ For a philosopher as committed to the principle of sufficient reason as Spinoza, dual aspect theory seems a rather *ad hoc* recourse. Of course, Spinoza’s way around any arbitrariness in the proliferation of attributes was to make them infinite, deriving their infinity from the infinity of God whose essence they all express. In this sense, it is perhaps more appropriate to describe him as an “infinite aspect theorist.” This move hardly appears any less *ad hoc*, however. Without delving into the intricacies of the contemporary debate, we can see that, at least as far as Spinoza is concerned, the thesis of the identity of the attributes tries to have it both ways in a manner that is understandably difficult to swallow for many like Barker, Taylor, and others.

Attempting to account for why there is a tension in Spinoza’s thought on the matter of the relation between mind and body could easily slip into speculation. But we do not need to speculate to understand the tension that is still felt by those who grapple with the issue today. On the one hand, the materialist thesis that the mind is the brain is extremely compelling on a variety of counts, chief among which is that it would mean that we could, at least theoretically, fit our understanding of the mind into the broader framework of our understanding of physical laws. There is a strong temptation simply to wash our hands of metaphysical dualisms of mind and matter. On the other hand, there is

¹⁰⁰ Jaegwon Kim, *Philosophy of Mind*, (Boulder, Colorado: Westview Press, 1996), 51.

an equally compelling sense that however advanced our science of the brain becomes, it will never be able to explain consciousness in any satisfactory way, and to pretend that it will requires wishful thinking.

I suggest that the tension in Spinoza is best explained, albeit not explained away, by recalling the same tension that philosophers of the mind still grapple with. Spinoza was clearly attracted to the kinds of materialistic explanation that Hobbes embraced wholeheartedly. It is for this reason that Spinoza drew as intimate a connection as possible, i.e., an identity, between mind and body. At the same time, he could not admit to understanding how matter could think, and as a result, could not subscribe to Hobbes's full-fledged materialism. Apparently, he attempted to marry these conflictual convictions in the celebrated thesis that the mind is the idea of the body. If Spinoza was not confused about the matter, if he was more intelligent than that, then it is at least strange, and regrettable, that he does not appear to have acknowledged the tension transecting his account.

Bewilderment concerning the ultimate status of a Spinozian account of the mechanism of perceptual representation need not derail our efforts to understand Spinoza's epistemology. Whether it will ultimately be explicable in material terms or not (Spinoza's system, as we have seen, is, in some way, compatible with either outcome), we can still speak meaningfully of a mind that is the idea of its body.¹⁰¹ Whatever the mechanism, the implication of the mechanical revolution that Spinoza is concerned to examine, along with most members of the philosophical vanguard in the seventeenth

¹⁰¹ Neuroscientist Antonio Damasio provides an indication of how this might be done in a contemporary scientific context, yet in a way which is sympathetic with, and draws inspiration from, Spinoza's parallelist approach, in his book, *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* (Orlando, FL: Harcourt, 2003).

century, is the gulf opened up between a true conception, and the conception that the human mind as the idea of the body is granted through the affections of its body.

Descartes offered the following articulation of the distinction:

there are two different ideas of the sun which I find within me. One of them, which is acquired as it were from the senses [...] makes the sun appear very small. The other idea is based on astronomical reasoning [...] and this idea shows the sun to be several times larger than the earth. Obviously both these ideas cannot resemble the sun which exists outside me; and reason persuades me that the idea which seems to have emanated most directly from the sun itself has in fact no resemblance to it at all.¹⁰²

The gulf between these two conceptions is expressed by Spinoza as the difference between adequate and inadequate ideas. I now want to relate this discussion of the mechanics of sense perception for Spinoza back to the fundamental epistemological distinction between adequate and inadequate ideas.

III. The Inadequacy of Imagination

I have been using the term “sense perception” as a way of talking about Spinoza’s theory about how we perceive objects as external to our bodies. In Spinoza’s primary terminology, the perception of external things falls under the wider rubric of “imagination,” which also includes the perception of one’s own body, as well as one’s own mind. Up to now, I have opted for the more contemporary equivalent for purposes of clarity, since “imagination” has different connotations today than it did in the

¹⁰² Descartes, Vol. 2, 27.

seventeenth century. With that in mind, we proceed to examine the definitive inadequacy of imagination.

Perceiving or imagining external bodies in the way that we have outlined lies at the root of what Spinoza calls the first kind of knowledge. I say that it lies at the root rather than constitutes the first kind of knowledge, because, for Spinoza, a single image or sense perception does not in itself constitute a form of knowledge. Imagination as a kind of knowledge is born when multiple related images combine to form a universal notion in our mind, in particular, an *inadequate* universal notion. Spinoza outlines three kinds of knowledge in 2p40s2. The first of these kinds, imagination, is described as follows:

we perceive many things and form universal notions:

I. from singular things which have been represented to us through the senses in a way which is mutilated, confused, and without order for the intellect (see p29c); for that reason I have been accustomed to call such perceptions knowledge from random experience;

II. from signs, for example, from the fact that, having heard or read certain words, we recollect things, and form certain ideas of them, like those through which we imagine things (p18s); these two ways of regarding things I shall henceforth call knowledge of the first kind, opinion or imagination (G II 122).

The two subdivisions of imagination outlined here, namely, direct sense perception, and the imagination of something on the basis of mediating signs or words, really amount to the same thing. The point is simply that an association can be made between non-resembling things like words and the things they refer to just as much as between

resembling things. In 2p18s, which Spinoza references in the passage just quoted, he gives the example of the connection between the word *pomum* and an apple, pointing out that a Roman will think of an apple upon hearing the word simply because “the body of the same man has often been affected by these two, that is, that the man often heard the word *pomum* while he saw the fruit” (G II 107). Naturally, an association can also be made between two distinct apples. What both kinds of association (thing with thing, and sign with thing) have in common is that they are based on the affections of the body.

Spinoza explains the formation of universal notions, such as “man” and “dog,” on the basis of bodily affections in 2p40s1. Whatever trait or group of traits has most affected the body will come to characterize the universal. So, for example, the impression of man’s typically erect stature might serve to define the universal “man.” But since this trait was picked out on the basis of what most affected the body, and since bodies are differently constituted, different people will think of different traits when they think of the universal “man,” according to whatever trait they have been most affected by: “those who have been accustomed to consider something else, will form another common image of men – for example, that man is an animal capable of laughter, or a featherless biped, or a rational animal” (2p40s1; G II 121). (What would the world be like if we were all constituted to be especially struck by man’s risibility?) It is easy to see how stories of men’s qualities and features would serve to reinforce or mitigate the predominance of certain traits in the same way that direct experience does. Thus, whether it is through direct experience or mediated by signs, this way of forming universal notions on the basis of what trait has most commonly affected the body is constitutive of Spinoza’s first kind of knowledge, or imagination.

Imagination is an inadequate form of knowledge. The universal notions that are formed in this kind of knowledge are built up from sense perceptions which are “mutilated, confused, and without order for the intellect.” To understand this point, Spinoza refers us to 2p29c, which reads:

so long as the human mind perceives things from the common order of Nature, it does not have an adequate, but only a confused and mutilated knowledge of itself, of its own body, and of external bodies. For the mind does not know itself except insofar as it perceives ideas of the affections of its own body (by p23). But it does not perceive its own body (by p19) except through the very ideas themselves of the affections of the body, and it is also through them alone that it perceives external bodies (by p26). And so, insofar as it has these ideas, then neither of itself (by p29), nor of its own body (by p27), nor of external bodies (by p25) does it have an adequate, but only (by p28 and p28s) a mutilated and confused knowledge, q.e.d (G II 114).

In this passage, Spinoza makes reference to many propositions proving the inadequacy of various perceptions, including the mind’s perception of itself, its own body, and external bodies, which it is not necessary for our purposes to analyze separately. As Spinoza indicates in the passage just quoted, the inadequacy of all such perceptions boils down to the fact that they are all based in the mind’s ideas of the affections of its body, which Spinoza also calls perceiving things “from the common order of Nature.”

The inadequacy of perceiving things “from the common order of Nature,” which is the basis of the first kind of knowledge, is not difficult to grasp. In the first chapter we discussed the *TIE*’s distinction between a series of fixed and eternal things and a series of

singular, changeable things. We argued that this distinction survives in Spinoza's *Ethics* as a distinction between a finite series of infinite things and an infinite series of finite things. We saw how in the *TIE* Spinoza placed any promise for human knowledge in getting to know the series of fixed and eternal things, dismissing its counterpart as "impossible for human weakness to grasp." We argued that the same epistemological evaluation applies to the parallel terms of the *Ethics*. What Spinoza calls the "common order of Nature" is another way of referring to the infinite series of finite things. We saw in our discussion of perception that the human body is not only extremely complex in itself, but that it is involved in infinitely complex causal relationships with external things as well. Each idea we have of a bodily affection is, as already suggested, the tip of an iceberg, the net effect of an extraordinarily complex coincidence of causes, or, in Spinoza's terminology, like a conclusion without premises. In short, we have effects absent their causes. If, as we said in the first chapter, an idea must involve knowledge of the cause of its object in order to be adequate, knowledge which is based in ideas of bodily affections, being effects absent their causes, must be inadequate.

Having made this point about the inadequacy of imagination, we should note that the fact that images (or sense perceptions) are inadequate does not mean that they are intrinsically false in the way that adequate ideas are intrinsically true. Falsity and inadequacy must be differentiated. Spinoza's theory of error, to which we turn in the last section of this chapter, attributes falsity to privation, rather than to any feature of inadequate ideas *per se*. As we shall see, far from being defective, inadequate ideas provide the raw material on the basis of which substantive knowledge about the world is developed, so long as they are underwritten by adequate ones.

IV. Error

Dating back at least to his early work, *Treatise on the Emendation of the Intellect*, is Spinoza's desire to "correct" or "emend" the intellect. In the opening paragraphs of the *TIE*, Spinoza indicates what he means by *emendatio*: "before anything else we must devise a way of healing the intellect, and purifying it, as much as we can in the beginning, so that it understands things successfully, without error and as well as possible" (*TIE* §16; G II 9). By "emend" or "correct," Spinoza seems to have in mind the removal of error. It is tempting to imagine that Spinoza thought of his work in philosophy rather like his work in lens grinding, the goal being to shape the intellect in such a way that it focuses in on the truth. Any erroneous thoughts, no less than miscalculated cuttings, or material impurities, could be obstructive. Thus the removal of such imperfections is prerequisite to achieving the perfection of thought. Does this mean that we must strive to remove inadequate ideas from the mind? Assuredly, the concept of inadequacy has a connotation of imperfection. However, the imperfection is not, for Spinoza, in the images *per se*. Spinoza explains,

And here, in order to begin to indicate what error is, I should like you to note that the imaginations of the mind, considered in themselves contain no error, *or* that the mind does not err from the fact that it imagines, but only insofar as it is considered to lack an idea which excludes the existence of those things which it imagines to be present to it. For if the mind, while it imagined nonexistent things as present to it, at the same time knew that those things did not exist, it would, of

course, attribute this power of imagining to a virtue of its nature, not to a vice (2p17s; G II 106).

The difference between an inadequate idea that is erroneous and one that is not, therefore, is the presence or absence of another idea. Hence, an inadequate idea is only potentially erroneous, or in other words, false – it is false if it turns out that there is not another idea to rule out its truth. And in the case that there is another, overriding idea,¹⁰³ Spinoza explains, it could turn out that the inadequate idea, far from being erroneous, is in fact a virtue. For instance, the image of a geometrical figure, say, a circle, can aid in the comprehension or discovery of mathematical truths, despite the inadequacy of any image of a circle.

The difference therefore between the wise man and the unwise, for Spinoza, is not measured by the number of inadequate ideas, but rather by the number of adequate ideas. Inadequate ideas result from the fact that we are a part of Nature, and cannot in themselves be avoided; nor need they be; nor should they be. Whether the inadequate ideas that we do have by virtue of our nature lead to falsity or not depends on the adequate ideas that we may or may not have. Consider Spinoza's example of our perception of the sun in 2p35. He explains that whether or not we know its true distance, we imagine the sun to be 200ft away. This is because the way the sun appears to us is a function of the effect that the sun's rays have on our bodies, not the propositional knowledge that we may or may not have. Thus the difference between someone who knows that the sun is "more than six hundred diameters of the earth away from us," as Spinoza says, and the person who thinks the sun is 200ft away is not the condition of

¹⁰³ For an interesting discussion of the role of the *conatus* doctrine in determining whether one idea is able to override or rule out a mutually incompatible one, see Diane Steinberg, "Belief, Affirmation, and the Doctrine of *Conatus* in Spinoza" in *The Southern Journal of Philosophy*, Vol. 43 (2005): 147-158.

their bodily affections, but rather the presence or absence of other ideas which rule out the validity of the appearance of the sun's distance. In particular, the person who knows the true distance of the sun knows that the sun only appears 200ft away because of how the body responds to certain manners of being affected.

Spinoza's theory is striking not in his claim that inadequate ideas or images are not in themselves alone the explanation for error. Descartes held an equivalent position. Descartes proposed before Spinoza that the difference between the wise and the unwise does not consist in the images themselves, but in something besides the images. For Descartes, that other thing was the will, which, he maintained, is free to assent to, or withhold assent from, images.¹⁰⁴ The wise man, for Descartes, will assent only to that which is clear and distinct and withhold assent from whatever is confused. For Spinoza, the difference between the wise and the unwise is not their respective employments of free will. Spinoza denies that there is a free will, contending that what philosophers like Descartes call the will's affirmation is in reality the affirmation involved in all of the mind's ideas.¹⁰⁵ The difference, for Spinoza, consists rather in the nature of the other (non-inadequate) kinds of ideas contained in the mind. In short, it consists in the presence or absence of adequate ideas.

In *Ethics* Part 5, Spinoza writes,

From this it follows that that mind is most acted on, of which inadequate ideas constitute the greatest part, so that it is distinguished more by what it undergoes than by what it does. On the other hand, that mind acts most, of which adequate ideas constitute the greatest part, so that though it may have as many inadequate

¹⁰⁴ See Meditation 4 (Descartes, Vol. 2, 37-43).

¹⁰⁵ See 2p49, particularly the Proposition, Demonstration, and Corollary.

ideas as the other, it is still distinguished more by those which are attributed to human virtue than by those which betray man's lack of power (5p20s; G II 293).

We can conclude from this that Spinoza's project of removing error, as announced in the *TIE*, is achieved not by purging the mind of inadequate ideas – an impossible and baseless project – but rather through cultivating adequate ideas. By virtue of the presence of adequate ideas, inadequate ideas that would otherwise be false are embraced as components of an accurate conception of things. As J. Thomas Cook aptly puts it, “[s]ince our minds consist of ideas, our minds are changed as we acquire ideas – for Spinoza, as for [Paul] Churchland, there is plasticity of mind.”¹⁰⁶ We turn in the next chapter, then, to human capacity for adequate knowledge.

¹⁰⁶ Cook, 111-136. Cook's essay includes a useful discussion of how inadequate ideas are transformed in the context of relevant adequate ideas.

Chapter 3

Reason, or The Second Kind of Knowledge

I. The Foundations of our Reasoning

In Spinoza's taxonomy of kinds of knowledge in 2p40s2, the first two kinds of knowledge are ways that "we perceive many things and form universal notions [*notiones universales*] (2p40s2; G II 122). The first way belongs to the first kind of knowledge, or imagination, and it produces exclusively inadequate universal notions, as we saw in the last chapter. Spinoza goes on to articulate another way of forming universal notions that belongs to the second kind of knowledge, or reason. Spinoza defines reason as the formation of universal notions (and the perception of many things) "from the fact that we have common notions and adequate ideas of the properties of things" (ibid.). Unlike the formation of universal notions by the imagination, Spinoza does not say much to illustrate further what he has in mind in his definition of reason. He does go on to provide the well-known example of the fourth proportional in illustration of the three kinds of knowledge, and there is a further illuminating comparison of reason and intuitive science in *Ethics* Part 5. We will analyze these important texts in due course. At this point, the first thing we must examine is the common notions, which, as we gather from the definition, and as is stated unequivocally at the outset of 2p40s1, provide "the foundations of our reasoning" (G II 120). First we will determine what they are. On that basis, we will then attempt to understand Spinoza's definition of reason.

What are common notions? Spinoza's only sustained discussion of common notions occurs in *Ethics* 2p37-40. There are allusions to them in other works, but such occurrences of the term are subordinate, and we will take them up further below. The discussion in the *Ethics* starts at 2p37, where Spinoza states, "What is common to all things (on this see L2, above) and is equally in the part and in the whole, does not constitute the essence of any singular thing." Spinoza's definition of essence is of something without which the thing cannot be thought, and which cannot be thought without the thing (2d2). As he points out in 2p37dem, if a common notion were the essence of any singular thing, then, according to his definition of essence, the common notion could not be thought without the singular thing, but then it would be peculiar to the thing, and not common to all things, which contradicts the hypothesis. Spinoza's reference to l2 from the excursus on bodies is helpful for understanding what he means by that which is "common to all things." L2 states, "All bodies agree in certain things" (G II 98). Since this does not add much to what we can glean from the phrase "common to all things," Spinoza likely intended his reference to l2 to encompass the demonstration of the lemma as well, which reads: "For all bodies agree in that they involve the concept of one and the same attribute (by d1), and in that they can move now more slowly, now more quickly, and absolutely, that now they move, now they are at rest" (G II 98). Spinoza's reference to l2, then, indicates that "what is common to all things" includes such things as extension, motion, and rest. This trio evokes two of the "infinite things" we considered in Chapter 1. Extension evokes, of course, the attribute of extension; moreover, recall that in Letter 64 Spinoza said that the immediate infinite mode of

extension (that infinite mode produced immediately by the attribute) is characterized by motion and rest.

We must distinguish between what is “common to all things” – for example, extension, motion and rest – and common notions. Common notions are not such things as extension, motion and rest, but rather *ideas*, as Spinoza makes clear in the corollary to 2p38, which we will look at shortly. Spinoza does not say so directly, but it looks, at least at first, as if the common notions are the ideas in the attribute of thought which correspond to what is common to all things, equally in the part and in the whole, in the attribute of extension, i.e., as we have said, extension, motion, and rest. According to Spinoza’s doctrine of parallelism, there should also be features equally in the part and in the whole of the attribute of thought, and the ideas of those ideas would presumably represent another set of corresponding common notions, but Spinoza restricts his discussion to common properties of the attribute of extension, and we shall follow suit in this analysis. So common notions, then, appear to be ideas of extension, motion and rest.

Now that we have a basic sense of what the common notions are, we turn to their most important feature: they “can only be conceived adequately” (2p38). As a corollary to this claim, Spinoza adds, ““From this it follows that there are certain ideas, *or* notions, common to all men. For (by L2) all bodies agree in certain things, which (by p38) must be perceived adequately, *or* clearly and distinctly, by all” (2p38c; G II 119). What accounts for this striking feature of common notions – that they *can* only be conceived adequately, and *are* only conceived adequately by all human beings?

We highlighted in Chapter 1 Spinoza’s demonstration of his claim that what is common to all things can only be conceived adequately for its unhelpful reliance on the

conception of adequacy involved in 2p11c. To reiterate the complaint that we aired, Spinoza's appeal to 2p11c in his demonstration of 2p38 may well show *that* the common notions in question are objectively true, but it does not illuminate the *internal* denominations which are supposed to be the sign of that objectivity. The adequacy of common notions is not understood by pointing out that God does not need any ideas beyond his idea which constitutes the human mind to have the idea of common notions. As we said in our discussion of 2p11c, that just pushes back the question to one of why *God* only needs the idea constituting the human mind. As with Spinoza's other invocations of the internal denominations of truth, we are left to interpret the content for ourselves.

Fortunately, the characteristic of being "equally in the part and in the whole" is suggestive, despite Spinoza's unhelpful demonstration of 2p38. Recall our discussion of inadequacy from the last chapter for the sake of contrast. There, we saw that the idea of a bodily affection is inadequate when the causes of the affection run outside the mind such that the idea is like a conclusion without premises. One classic Spinozian example of an inadequate idea is the illusion of free will. "So the infant believes he freely wants milk" (3p2s; G II 143) because the infant perceives the desire but not the cause of the desire. Mistakenly positing the effect for the cause, the infant believes that the cause is its own free will, which is just another way of saying that it does not know why it wants milk – the causes of its desire run outside its mind. Moreover, just as Spinoza says that we will always perceive the sun as 200ft away regardless whether we know its true distance,¹⁰⁷

¹⁰⁷ Cook challenges the notion that the sun *will* in fact always appear 200ft away regardless whether or not we know the true distance, noting that he does not understand why Spinoza claims that we "nevertheless imagine it as near" (2p35s) even when we come to know the true distance. Cook suggests that adequate ideas of the sun's nature and distance, as well as of how the body is affected by the sun, should transform

we will presumably perceive our desires as free regardless whether or not we know them to be determined, because the causes of the desires are not encompassed in our ideas of our bodily affections. The causal scenario is very different in the case of common notions. Insofar as common notions are ideas of things which are “equally in the part and in the whole,” the idea of *anything* whatsoever will include such common properties. It is fairly easy to see with the examples of motion and rest. No matter what level of analysis – whether looking through a microscope or peering at the sun – bodies will always have the properties of motion and rest.¹⁰⁸ The cause of this property is the nature of the attribute itself, rather than an infinitely complex series of finite causes. The idea of a bodily affection qua common property is not lacking causes, since everything is contained in the bodily affection itself. The idea is un-mutilated, and therefore adequate.

A different, but related and complementary way to think about the adequacy of common notions involves the distinction between primary and secondary qualities. In a letter to Oldenburg, which addresses specific scientific claims of Robert Boyle, and

the experience itself of the sun’s distance (Cook, 124-5). The key point here is the knowledge of *why* the sun appears close, and not so much the knowledge *that* it is not. Even if Cook is right that our inadequate ideas would be transformed by adequate ones, until we know *why* the sun appears close, it will still appear close even if we know *that* it is not close. At least, I think that this is probably Spinoza’s position.

¹⁰⁸ It may seem strange to speak of motion and rest as equivalent properties of bodies, for, in one sense of rest, rest is the absence of motion. But Spinoza did not conceive rest as a negation. Rest implies as much force or *conatus* as motion. In one of his final letters (Letter 81), Spinoza criticizes some fundamentals of Descartes’ physics: “Next, from Extension, as Descartes conceives it, i.e., as a mass at rest, it is not only difficult to demonstrate the existence of bodies, as you say, but completely impossible. For matter at rest, insofar as it is in itself, will persevere in its rest, and will not be set in motion unless by a more powerful external cause. For this reason I did not hesitate, previously, to affirm that Descartes’ principles of natural things are useless, not to say absurd” (G IV 332, Curley’s working translation). Spinoza’s rejection of the Cartesian conception of extension as “an inert mass” implies that Spinoza embraces a dynamic conception of extension. Such criticisms of Descartes are more often associated with Leibniz, and it is certainly possible that the two discussed the issue when Leibniz visited Spinoza in 1676. On this possibility, see Ursula Goldenbaum, “‘qui ex conceptu Extensionis secundum tuas meditationes varietas rerum a priori possit ostendi?’ Noch einmal zu Leibniz, Spinoza und Tschirnhaus” in *Leibniz und Europa: VI. Internationaler Leibniz-Kongress*, Vol. 1, (Hannover, 1994), 266-75. For the dynamism in Spinoza’s physics, see A. Wolf, “Spinoza’s Conception of the Attributes of Substance” reprinted in *Studies in Spinoza: Critical and Interpretive Essays*, ed. S. Paul Kashap (Berkeley: University of California Press, 1972), 16-27; and Stuart Hampshire, *Spinoza and Spinozism* (New York: Oxford University Press, 2005), 62-70.

critiques elements of the scientific method implicit therein, Spinoza articulates a version of the primary/secondary quality distinction:

I would think that notions derived from ordinary usage, or which explain Nature, not as it is in itself, but as it is related to human sense perception, ought neither to be counted among the chief kinds, nor to be mixed (not to say confused) with pure notions, which explain Nature as it is in itself. Of the latter kind are motion, rest, and their laws; of the former are visible, invisible, hot, cold, and as I will say at once, also fluid and solid, etc.¹⁰⁹

Spinoza's distinction between those notions "which explain Nature, not as it is in itself, but as it is related to human sense perception," on one hand, and those "which explain Nature as it is in itself," on the other, captures well what is normally taken to be significant about the primary/secondary quality distinction, namely, an isomorphic objectivity/subjectivity distinction. Primary notions, which Spinoza glosses as "motion, rest, and their laws," do not depend on the peculiarities of the observer. Thus, all observers have full and equal access to them. They are not like color or sound, perception of which is lost in blindness or deafness. In order to have ideas of the common properties, it is sufficient merely to have a mind and a body.

Let us sum up our account of the adequacy of common notions. We have said, first, that by virtue of the fact that all human beings have a body of which they always have an idea, all human beings perceive common notions, since common notions are contained in every idea of a bodily affection. As a result, we added, the common notions are not subjective, but rather pick out objective properties of nature. Since everyone has

¹⁰⁹ *Collected Works*, Vol. 1, 181; G IV 28.

full and equal access to these objective properties, we understand Spinoza's claim that they can only be conceived adequately, and that they are common to all.

At this stage, one might raise a potent objection: are not "extension," "motion" and "rest" rather vague concepts subject to interpretation? Is not the range of interpretations of these concepts evident throughout history proof of this? Just consider the vivacity of the seventeenth-century debates around the following such questions: is extension infinite? Is a vacuum possible? Are atoms possible? Is extension a geometrical abstraction or something real? From 1p15, where Spinoza critiques the Epicurean (or Gassendist) notion of the finite divisibility of substance, we know that Spinoza clearly thinks there are *inadequate* ways of conceiving extension. Thus, in response to Spinoza's claim that common notions "*must* be perceived adequately, *or* clearly and distinctly, by all," Curley remarks, "How Spinoza might have reconciled this view with the fact that, people did, for many centuries, have inadequate ideas about motion, I do not know."¹¹⁰

This is a difficult objection, which Spinoza himself never addressed, and, like Curley, I am not sure how he would have responded. One way he might have responded involves an appeal to the pitfalls of language. That is to say, he might have replied that it is one thing what people have said, and another, what they perceived. Thus regardless how various thinkers throughout history have expounded on the natures of extension, motion, and rest, they all have the same thing in mind. This interpretation finds support from a passage from 2p47, where Spinoza explains,

And indeed, most errors consist only in our not rightly applying names to things.

For when someone says that the lines which are drawn from the center of a circle

¹¹⁰ Curley (1973), 54.

to its circumference are unequal, he surely understands (then at least) by a circle something different from what mathematicians understand. Similarly, when men err in calculating, they have certain numbers in their mind and different ones on the paper. So if you consider what they have in mind, they really do not err, though they seem to err because we think they have in their mind the numbers which are on paper. If this were not so, we would not believe that they were erring, just as I did not believe that he was erring whom I recently heard cry out that his courtyard had flown into his neighbor's hen, because what he had in mind seemed sufficiently clear to me (G II 128-9).

Spinoza might apply this same type of response to the objection about the history of ideas about extension, motion and rest. So, when Gassendi speaks of atoms moving through a void, either he understands something different from Spinoza, or they understand the same thing, but Gassendi articulates it improperly. In either case, the error does not lie in the perceptions themselves.

Another related, and this time more pressing, question about our ideas of extension, motion and rest is how they are able to serve as foundations for reasoning, as Spinoza claims the common notions do, even if they can only be perceived adequately by all. Once again, Spinoza provides only elliptical clues as to the answer of this question, and much interpretive work is left to the reader. One particularly suggestive passage in this regard occurs, somewhat unexpectedly, in the *Theological Political Treatise (TTP)*, where Spinoza uses the study of nature as an analogy for biblical interpretation:

In examining natural things we strive first to investigate the things most universal and common to the whole of nature: motion and rest, and their laws and rules,

which nature always observes and through which it continuously acts. From these we proceed gradually to other, less universal things.¹¹¹

This passage resonates clearly with the discussion of common notions in the *Ethics*. The passage's identification of the most universal and common features of nature with motion and rest echoes Spinoza's reference to I2 in the *Ethics*, while the notion of advancing gradually from such universal and common features to less universal features evokes the role assigned to common notions as foundations of reason in the *Ethics*. Significantly, the passage goes further in associating "motion and rest" with "their laws and rules, which nature always observes and through which it continuously acts." In fact, we already encountered this association in Letter 6 where Spinoza described notions which explicate nature as it is in itself with "motion, rest, and their laws." Let us assume that the laws of motion and rest to which Spinoza refers in these passages include, for example, the principle of inertia. What then is the relation between the common notions, which we said are ideas of extension, motion and rest, on one hand, and such laws as the principle of inertia, on the other? Clearly, Spinoza portrays the relation as an intimate one.

For two reasons, I do not think that we should conflate the laws of motion with the common notions themselves. In the first place, we have already examined the passages on the nature of common notions, and concluded that they were the ideas of extension, motion and rest. The conjunction of these ideas with laws of motion is not enough to warrant the modification of our original findings. Secondly, if there was a difficulty seeing how the ideas of extension, motion and rest are in fact common to all, that difficulty would be magnified several times if we now had to defend the notion that

¹¹¹ G III 102, Curley's working translation.

the principle of inertia, for instance, is in fact common to all. It seems much more likely that the laws of motion are formulated on the basis of the ideas of extension, motion and rest. Just as there are inadequate conclusions to be drawn about extension, motion and rest, as we have seen, there are also adequate ones. The principle of inertia is an example of an adequate conclusion drawn on the basis of the ideas of motion and rest.

Although we should not conflate the common notions with the laws of motion, we can see why Spinoza speaks of them in the same breath. While it is difficult to see how the notions of extension, motion and rest could, on their own, be very useful as foundations of reasoning, that is not at all the case with laws of motion, such as the principle of inertia. We will explore the role of laws of motion as foundations of reasoning later in this chapter. For now we can conclude that when Spinoza says that common notions provide the foundations of our reasoning, they do so insofar as universal laws of motion can be drawn from them. But how are the laws of motion drawn from the common notions? If, as we are claiming, it is the laws of motion rather than the ideas of extension, motion and rest on their own, which are actually efficacious as foundations of reasoning, understanding how the laws are derived is a crucial part of understanding how adequate knowledge works in Spinoza. In one sense the common notions are foundational, and in another the universal laws are. This brings us to some fundamental aspects of Spinoza's methodology.

Since there are so few passages in Spinoza devoted to the common notions, before we turn, in the next section, to aspects of Spinoza's methodology, we should address 2p39, even though its meaning is obscure, and its consistency with other Spinozian

doctrines open to question. The proposition reads: “If something is common to, and peculiar to, [*commune est, et proprium*] the human body and certain external bodies [*et quibusdam corporibus externis*] by which the human body is usually affected [*solet affici*], and is equally in the part and in the whole of each of them, its idea will also be adequate in the mind.” What does Spinoza have in mind here when he speaks of something common and *peculiar to* the human body and *certain* external bodies by which it is *usually* affected? Unfortunately, unlike in the case of the common notions of 2p37 and 2p38, which we might call “universal common notions” to distinguish them from the “proper” or “peculiar” common notions of 2p39, Spinoza provides no illustration of what he means by the latter. The characteristic which makes common notions adequate in 2p37 and 2p38, namely, the fact that they are common to all things, and equally in the part and in the whole, appears to be attenuated in 2p39. Instead of being common to all things, and equally in the part and in the whole of all things, the proper common notions are common to only “certain” things which “usually” affect the human body.

Guérout interprets the proper common notions (somewhat Thomistically) in terms of what is proper to a given species at a given level in the hierarchy of being. According to his reading, the complexity of human beings gives them access to notions which are out of reach of less complex species of individual. Whereas all beings have an idea of motion and rest, since motion and rest are common to all things, only beings of a certain complexity can have ideas of a certain complexity. These latter are the proper common notions, according to Guérout. While it is possible to imagine that certain individuals inferior to the human being might be able to do a kind of rudimentary physics

and mathematics, Guérout conjectures, they could not raise themselves up to the level of the biological sciences, for example.¹¹²

Guérout's reading works well with the corollary to 2p39, which reads: "From this it follows that the mind is the more capable of perceiving many things adequately as its body has many things in common with other bodies." It does not, however, seem to fit with Spinoza's claim that the proper common notions concern those bodies "by which the human body is *usually* affected" (emphasis added). While it is certainly true that organisms of less complexity than humans do not have such biological concepts as "brain" and "cell," these are surely not things by which the human body is "usually" affected. It is true that the human body is usually affected by things *with* cells and brains, namely, other human beings, but biological concepts *per se* are the result of a peculiar brand of inquiry, namely, biology, which is not a part of everyday human life. What Spinoza is talking about, however, does seem to be the sort of knowledge involved in everyday affairs.

The salient type of body by which the human body is usually affected would appear to be other human bodies, and it is possible that the 2p39 doctrine of common notions serves to prepare what Spinoza will go on to say in *Ethics* Parts 3 and 4 about human relations.¹¹³ Even this, however, is highly speculative, and Spinoza simply does not give us enough to go on here. In addition, there would seem to be a problem for the adequacy of the "proper" common notions however they are interpreted. The proper

¹¹² Guérout. Vol. 2. p.349.

¹¹³ Consider, in this connection, 3p27, which introduces Spinoza's concept of *imitatio affectuum* (imitation of the affects, which functions like our notions of sympathy and empathy): "If we imagine a thing like us, toward which we have had no affect, to be affected with some affect, we are thereby affected with a like affect" (G II 160). Insofar as this affect stems from what we have in common with certain other bodies (i.e. other human beings), it may be based in 2p39's doctrine of "proper" common notions. However, Spinoza does not refer back to 2p39 in the demonstration of 3p27, so this connection is merely speculative.

common notions seem to pick out some feature of a limited *region* of bodies which is equally in the part and in the whole of that region. Moreover, this region consists in those bodies “by which the human body is usually affected,” and is therefore relative to human bodies. However, the whole point of the criterion of being equally in the part and in the whole is that it signals a feature which is not relative to a subject, and thereby serves as an internal marker of truth. Thus the qualification of the group of bodies among which the proper common notions are in the part and in the whole as those “by which the human body is usually affected” seems to introduce a relativity alien to Spinoza’s concept of adequacy. In the end, all we can conclude is that this concept of “proper” common notions is not sufficiently developed in Spinoza.

II. Synthesis and Analysis in Spinoza’s Method

The relationship between common notions and laws of motion is analogous to the relationship in the *TIE* between “a given true idea” (*TIE* §38; G II 16) and “the idea of the most perfect Being” (*TIE* §49; G II 19). In the first chapter, we saw that method for Spinoza consists in reflection upon the nature of a true idea, and we said that the nature of a true idea was to be thought through its cause. A “given true idea” could be, as in the example we looked at in Chapter 1, an architect’s idea of a building; alternatively, it could be a mathematician’s idea of a circle. In either case, the idea is true, or adequate, insofar as it is thought on the basis of its cause. In order for the method to be most perfect, however, Spinoza explains, we have to gain the idea of the most perfect being. Why? Because, “for our mind to reproduce completely the likeness of Nature, it must

bring all of its ideas forth from that idea which represents the source and origin of the whole of Nature, so that that idea is also the source of the other ideas” (*TIE* §42; G II 17). For Spinoza, we do not begin with the idea of a most perfect being, although “in the beginning we must take the greatest care that we arrive at knowledge of such a Being as quickly as possible” (*TIE* §49; G II 19). What we begin with are true ideas, such as the ones we have considered of the building and the circle, which are our “inborn tools” (*innata instrumenta*) (G II 14), so to speak.¹¹⁴ From these we perfect our method, which means that we perfect our starting point in order that we have an idea which “is also the source of the other ideas.” We can see the analogy to the common notions and the laws of motion. We start with the common notions, as inborn tools, and proceed from them to the laws of motion. At that stage our foundation is perfect, because we can deduce everything else from that point, just as with the idea of God.

Spinoza’s methodology involves, then, two movements: first, from the inborn tools to the most perfect foundation, and, then, from there to the deduction of everything else. In a sense, then, there are two foundations, since the inborn tools are themselves the foundations for the idea of the most perfect being. We saw that this was also the case with the common notions and laws of motion. The common notions are foundations for the laws of motion, and the laws of motion are the foundation for all other reasoning. So, there is a reasoning process involved in securing the foundation for reasoning. This might seem paradoxical, but Spinoza warns against trying “to reject these things as false because of Paradoxes that occur here and there” (*TIE* §46; G II 18). We already looked at Spinoza’s response to the skeptic in the first chapter, where Spinoza appeals to the productivity of the foundation.

¹¹⁴ Curley renders this phrase from *TIE* §31 as “the tools they were born with.”

How should we interpret these two fundamental “movements” in Spinoza’s methodology? We already indicated in the Introduction that one option is to consider them in terms of the distinction between synthesis and analysis as two methods of demonstration. Recall that, for Descartes, synthesis is merely a mode of presenting an argument, while the argument is actually conceived and discovered via analysis. For Hobbes, by contrast, analysis and synthesis are complementary procedures, both of which involve discovery: analysis discovers causes on the basis of given effects, and synthesis discovers effects (not necessarily given beforehand) by way of deduction on the basis of causes.

It looks as if the movement of synthesis is more than a mere mode of presentation, for Spinoza. We saw that Spinoza’s theory of adequacy is predicated upon the ability to find causes from which all the properties of a thing can be deduced. Obviously, those properties are not all given beforehand, implying that the deduction involves a productive process of discovery. Tschirnhaus wrote to Spinoza that his method of proceeding from causes to deduce the properties of a thing was “very excellent” “for finding truths not yet known,” and claims to have made “great progress in Mathematics” on its basis.¹¹⁵ Spinoza is generally more often associated with synthesis because of his penchant for presenting his philosophy in geometrical order. There has been debate over whether the geometrical order is a mere method of presentation à la Descartes, or has a more substantive function. On the basis of what we have said regarding adequacy, it seems clear that synthesis has substantive import, and that tends to be the general consensus among scholars. This does not mean that Spinoza employs synthesis exclusively, or that his method is primarily synthetic. It is important not to be led astray by the *ordo*

¹¹⁵ G IV 268-9, Curley’s working translation.

geometricus, which *is* a mode of presentation, after all, even if it is not merely that. The fact that it is the chosen mode of presentation might make it look like it is the only mode of demonstration operative at a methodological level, but that would be to overlook what goes on behind the *ordo*. As we have just been indicating, there are important reasoning processes in the setting up of foundations for the discovery of new truths. These processes are analytic in orientation, in the Hobbesian sense, insofar as they begin with what is given, and proceed from thence to seek out more solid foundations. In this sense, Spinoza is more in line with the Hobbesian version of the synthesis/analysis distinction than the Cartesian, although, like Descartes, Spinoza clearly thinks that the *ordo geometricus* provides a powerful mode of presentation as well.

In the Introduction, we connected the complementary operation of synthesis and analysis in Hobbes with the hypothetico-deductive method familiar to science and philosophy of science. Should we make a parallel association between the operation of synthesis and analysis in Spinoza with the hypothetico-deductive method? Bennett claims that we should, suggesting that we read Spinoza's definitions and axioms as so many hypotheses that receive confirmation or refutation depending upon whether what is deduced from them can be accepted as sound.¹¹⁶ Endorsing Bennett's hypothetico-deductive interpretation, Curley points to the procedure for discovering good definitions as outlined in the *TIE*, whereby one starts with the properties of something, working to find "something common from which these properties necessarily follow" (*TIE* §110; G

¹¹⁶ Bennett, 20-8.

II 40). Curley claims that Spinoza “is treating the definition as a theory and the known properties of the thing as the phenomena which the theory is supposed to explain.”¹¹⁷

Harris voices a barrage of objections to the hypothetico-deductive interpretation. His first complaint is that while scientific hypotheses are conjectural, to a greater or lesser extent arbitrary, and only refuted by experimental contradictions, Spinoza’s hypotheses are not arbitrary, but result from his conception of God, which is proved *a priori* by an ontological argument. Harris’ claim that the hypotheses of science are to some extent arbitrary seems wrong, since hypotheses in science have to be able to explain given data, just as in Hobbes’ account of analysis and synthesis. However, Harris’ point about the *a priori* nature of Spinoza’s foundations is important, and relates to his ensuing objections to the hypothetico-deductive interpretation. Harris’ underlying point is that empirical evidence cannot be taken at face value, but must be “incorporated into a systematic structure as demanded by the intellect.”¹¹⁸ This means, for Harris, that hypotheses are not simply confirmed or disconfirmed by experience, but rather there is a dialectical interplay between the whole (i.e., the idea of God, in the case of Spinoza) and the implications that follow from the whole. Harris says, “What matters is whether the implications of the idea are coherent and mutually supportive, and whether they can be traced back to the ultimate norm.”¹¹⁹

Harris sets up his own “crypto-dialectical” interpretation (as he styles it) as a coherentism with a coherence theory of truth, in contrast with the foundationalism and correspondence theory of truth of the hypothetico-deductive reading. This contrast,

¹¹⁷ Curley. “Spinoza’s Geometric Method” in *Studia Spinozana: Volume 2*. (Walther and Walther, 1986), 163.

¹¹⁸ Errol E. Harris. “Method and Metaphysics in Spinoza” in *Studia Spinozana: Volume 2*. (Walther and Walther, 1986), 142-3.

¹¹⁹ *Ibid.*, 143.

however, is an exaggeration, if not a distortion, of the hypothetico-deductive method, which can accommodate coherentism as well as foundationalism. As science evolves, theory affects the interpretation of data, and the data, by turn, influence theory. There is a foundationalistic orientation from theory to data, but this foundationalism is not absolute, and may evolve to accommodate new data in a more coherent explanatory framework. Thus, the hypothetico-deductive reading, as Bennett and Curley understand it, need not be saddled with the shortcomings of logico-empiricist assumptions. Nevertheless, Harris' dichotomy raises some important questions concerning the role of experience and empirical evidence for the operation of the movements of synthesis and analysis in Spinoza.

To be sure, it would be misleading to portray Spinoza's definition of God as open to disconfirmation by what follows in the *Ethics*. Again, we must distinguish between the order of presentation we find in the *Ethics* and the order of discovery, the path by which Spinoza himself came to formulate the definitions and axioms and deductions of his *Ethics*. The deductions in the *Ethics* are not analogous to experimental confirmation; rather the *Ethics* is the presentation of the result of analytical and synthetic procedures that went on in Spinoza's construction of his system. Although once presented in the *Ethics*, the definition of God is set, Spinoza does not conceive of his definition of God as an innate idea. In a letter to Tschirnhaus (Letter 60), Spinoza explains that he defines God the way he does in the *Ethics* (as "a being absolutely infinite, that is, a substance consisting of an infinity of attributes, of which each one expresses an eternal and infinite essence" (1d6)) because he can extract all the properties of God from it, unlike from competing definitions. This shows that Spinoza thought of his definition of God on the

basis of the properties it needed to explain, as Curley's version of the hypothetico-deductive reading would have one expect. Admittedly, this raises the question of the nature of the properties to be accounted for – are they culled from the data of experience, or some other way? This question gets to the heart of the matter, since, in one important sense, the scientific model necessarily involves sense data – that is what distinguishes science from purely speculative exercises. So, if Spinoza's method is to be aligned with the scientific method in any substantive way, it must be the case that an important source of the properties that Spinoza's definitions, and foundational framework, must account for is got through the senses.

Spinoza addresses this matter in Letter 10 in response to de Vries's query about the need for experience. Spinoza explains,

we need experience only for those things which cannot be inferred from the definition of a thing, as, for example, the existence of Modes (for this cannot be inferred from the definition of the thing); but not for those things whose existence is not distinguished from their essence, and therefore is inferred from their definition. Indeed no experience will ever be able to teach us this, for experience does not teach any essences of things. The most it can do is to determine our mind to think only of certain essences of things. So since the existence of the attributes does not differ from their essence, we will not be able to grasp it by any experience.¹²⁰

This passage suggests a dichotomy between things which require experience, such as the existence of modes, and those which do not, such as the existence of attributes. Spinoza says that the existence of the latter are inferred not from experience but from their

¹²⁰ *Collected Works*, Vol. 1, 196; G IV 47.

definition. The assertion of the existence of something on the grounds of its definition recalls the ontological argument that Harris points out lies at the root of Spinoza's foundation, rather than any inference from given properties to an explanatory cause for them. But this assumes that the definition is already given, and neglects the formation of the definition itself. If the definition itself is formed through a consideration of properties, then it *is* inferred from something else. Clearly Spinoza allows a role for experience in determining the particulars of the modifications of God's attributes, and at such lower levels, Spinoza advocates something resembling the standard scientific, hypothetico-deductive method. The question now is to what extent this method is an apt illustration of what is going on at the level of Spinoza's foundational definitions, such as those of God, and substance.

We saw that in Letter 60, Spinoza explains that his definition of God is formulated on the basis of the properties that a definition of God must be able to account for. On the other hand, God's existence is not inferred on the basis of any properties, but rather from his definition, according to Letter 10. Curley makes the point that the properties of God in question are just those which Spinoza claims at the outset of the appendix to *Ethics* Part 1 to have proven,¹²¹ namely:

that he exists necessarily; that he is unique; that he is and acts from the necessity alone of his nature; that (and how) he is the free cause of all things; that all things are in God and so depend on him that without him they can neither be nor be conceived; and finally, that all things have been predetermined by God, not from freedom of the will *or* absolute good pleasure, but from God's absolute nature, *or* infinite power (G II 77).

¹²¹ Curley (1986), 162.

The fact that Spinoza derives God's existence from his definition is not quite to the point. Ultimately, when it is realized that, for Spinoza, God is just nature, the well-known fallacies involved in the ontological argument seem to lose their edge, since, presumably, there is no need to prove that nature exists – if anything exists, nature does. The point is more about the properties that Spinoza's definition of God is designed to account for. A brief examination of the list just quoted from the appendix to Part 1 reveals them to be the linchpins of naturalism. If the scientific method is to reveal anything about the world, then events cannot depend on the constant intervention of a voluntaristic deity, but must follow necessary laws, whereby everything has a reason. The brilliant appendix to Part 1 is designed expressly to undercut what Spinoza calls the "prejudices" that are "a great obstacle to men's understanding *the connection of things* in the way I have explained it" (emphasis added), in particular, the prejudice of a voluntaristic deity.¹²² Thus, while it is true that Spinoza's fundamental definitions and framework are not susceptible to experimental confirmation or disconfirmation, that is not because they constitute sheer speculation, but rather because they provide the framework *for* the hypothetico-deductive method.

Thus, if Spinoza's foundations are unlike scientific hypotheses in that they cannot receive confirmation or disconfirmation from experiment and experience, they are not, for all that, merely stipulated, as we have seen. They serve to define and frame the properties of a naturalistic world. It is best, then, to consider them in the terms of synthesis and analysis, since these methods are neutral as to whether a proof is *a priori* or *a posteriori*. There should be no doubt that, as with Hobbes, the two methods of

¹²² See the appendix to Chapter 4 below for elaboration on these points about the appendix to *Ethics* Part 1 and Spinoza's conception of God.

demonstration work together in Spinoza in the construction of the foundations of his philosophical system.¹²³

The movement of analysis in Spinoza from the less foundational to the more foundational is worth pointing out for three reasons. In the first place, it would be hard to understand how the foundational ideas were arrived at to begin with. Spinoza does not avail himself of Descartes' appeal to the stamp of the Maker in His creations. Secondly, as noted in the Introduction, Spinoza is frequently misinterpreted as a pure practitioner of the synthetic method. One gets that impression from looking only at the *Ethics*, but as the *TIE* makes clear, and as I have tried to show, there is more to it than that. Finally, the movement of analysis towards causes which set up synthetic movements in the opposite "direction" displays a commitment to *per causam* knowledge at every level of Spinoza's system from the most basic methodological strategies to specific knowledge claims. Not only do ideas need to be thought through causes; the entire system is to orient itself around a causal fountainhead; for Spinoza, as we have seen, that ultimate cause is the idea of God. Once that is in place, Spinoza is able to transition from his method to his philosophy proper. This is not to suggest that once the framework is set up, the work of analysis is finished with. We will have occasion to return to methodological considerations in the next chapter, where we will see how analysis and synthesis work together throughout the *Ethics*. Having taken this brief detour through Spinoza's

¹²³ Compare the interpretation I have just offered of the operation of synthesis and analysis in Spinoza with Herman De Dijn, "Conceptions of Philosophical Method in Spinoza: Logica and Mos Geometricus," *The Review of Metaphysics*, Vol. 1, No. 1 (Sept., 1986): 55-78. De Dijn has reservations about talking about analysis in Spinoza, especially with regard to the definition of God, since, for De Dijn, analysis has the connotation of beginning with sense data, which De Dijn rightly says could never, for Spinoza, lead back to the idea of God. But the properties that I am arguing lead back in an analytic movement to the definition of God are not simple sense data, but rather general features requisite for a scientific understanding of the world. Thus, it is reflection upon the truths of mathematics, for instance, that leads to the definition of God, and not images *per se*. De Dijn does speak of "upward" and "downward" movements of thought in Spinoza, however, and I think, ultimately, our interpretations are not in conflict.

methodology, we are in a better position to appreciate the role of laws of nature as foundations of reasoning. As we have shown, for Spinoza, they were not born fully formed from the head of Zeus, but rather arrived at through an analysis of the common notions of extension, motion and rest.

III. Our Reasoning

We saw in the passage quoted earlier from the *TTP* that Spinoza envisions a gradual advance from the common notions to “less universal features” of nature. We can join to this the statement of 2p40: “Whatever follows [*sequuntur*] in the mind from ideas which are adequate in the mind are also adequate” (G II 120). This last statement is put in general terms. Spinoza does not specify that ideas which follow from *common notions* are also adequate, but rather that ideas which follow from *adequate ideas* are adequate. Of course, this must include the common notions, which can only be conceived adequately, and, presumably, the common notions are the starting point, as the scholium to the proposition indicates (“With this I have explained the cause of those notions which are called *common*, and which are the foundations of our reasoning”). So Spinoza speaks of an “advance” to less universal features on the basis of common notions, and he also refers to what “follows” from the common notions. These notions are rather vague taken at face value, but in Spinoza “follow” (*sequor*) is something of a technical term. We encounter the term in 1a3 – “From a given determinate cause the effect follows [*sequitur*] necessarily; and conversely, if there is no determinate cause, it is impossible for an effect to follow [*sequatur*]” – and also in 1p16 – “From the necessity of the divine nature there

must follow [*sequi*] infinitely many things in infinitely many modes, (i.e., everything which can fall under an infinite intellect”). In both of these important passages, the verb “to follow” (*sequi*) connotes the unique combination of causal and logical order that we highlighted in the first chapter. The combination is revealed in 1p16 in the juxtaposition of what follows from the divine nature (causal) with what can fall under an infinite intellect (logical). Since the verb is used in the context of ideas in the mind in 2p40, we should interpret its force as primarily *logical*, although the parallel correlates in extension, i.e., the objects of common notions, would, of course, be causally ordered. Recall that logical and causal order, in Spinoza, are two ways of referring to the same order and connection, the difference in terminology demarcating only the difference in attributes. Thus, when Spinoza speaks of an “advance” from common notions, and of what “follows” from them, he is referring to a logical proceeding, specifically, logical deduction.

I interpret the logical proceeding as a deduction since Spinoza is describing a movement from the more to the less universal. Thus, if, as we have seen, mechanical principles such as that of inertia exemplify common notions, then the principle serves as a foundation for other, less universal principles, by application to a specific region of nature. Curley interprets reason in this way, drawing an example from Spinoza’s early epistemological taxonomy in the *TIE*. There are significant substantive discontinuities from the *TIE*’s taxonomy to that of the *Ethics*, but Curley argues that one of the examples given of the third kind of knowledge in the *TIE*, which corresponds very roughly to reason in the *Ethics*, is still viable with respect to Spinoza’s mature theory of knowledge. The *TIE* example runs as follows:

Or after we have come to know the nature of vision, and that it has the property that we see one and the same thing as smaller when we look at it from a great distance than when we look at it from close up, we infer that the sun is larger than it appears to be, and other things of the same kind (*TIE* §21; G II 11).

Curley writes the following in analysis of this example:

although vision is not a property common to all bodies, and our idea of it, therefore, is not a common notion, our knowledge of the nature of vision does presuppose our knowledge of the common notions. For on the Cartesian account of vision, to know how vision works requires knowing the laws of motion. It is an essential part of the Cartesian hypothesis about the nature of vision that light be thought of as an action or tendency toward movement which ‘follows the same laws as does movement.’ E.g. by construing the situation in which a ray of light strikes a smooth, flat surface as analogous to that in which a body traveling at a constant velocity strikes a flat and perfectly hard surface, Descartes purports to explain the law of reflection. We know how a moving body would behave under these admittedly ideal conditions. Knowing this, and assuming light to be a tendency toward movement, we come to understand a law of optics.¹²⁴

We see in Spinoza’s example, and Curley’s analysis of it, then, a series of adequate ideas which proceed from the more universal to the less universal. Behind the nature of vision, which is the most universal feature of Spinoza’s example, are the laws of motion, as Curley points out. These latter, such as the principle of inertia, are the most universal. Proceeding thence, we have the nature of vision, or optical laws, then “the property that we see one and the same thing as smaller when we look at it from a great distance than

¹²⁴ Curley (1973), 51.

when we look at it from close up,” and finally, the specific conclusion, “the sun is larger than it appears.” The “advance” from more universal to less universal features is achieved in each case by taking a more universal feature of nature, i.e., a law, and introducing limiting conditions in order to derive a more specific, i.e., less universal, law to govern those more limited conditions. The passage from Curley explains how Descartes derived optical laws from more general mechanical ones by introducing a flat and perfectly hard surface as a limiting condition. We can witness Spinoza himself in various letters using mechanical principles to deduce things about optics, chemistry and hydraulics, both on the basis of mathematical calculation as well as on the basis of experiment.¹²⁵

An examination of the example of the fourth proportional as it concerns reason sheds further light on the details of the deduction from axiomatic foundations that defines reason. In some ways, the example we just looked at from the *TIE* is a superior illustration of reason than the mathematical example we are about to look at because it is not abstract, and as we know already, Spinoza’s ultimate goal was “for our mind to reproduce completely the likeness of Nature,” which consists in what Spinoza called “Physical and real beings.” Perhaps Spinoza liked the example of the fourth proportional for its economy. Whatever his reasons, Spinoza uses the example repeatedly throughout his writings, indicating that he thought it fit the case quite well, despite being numerical. The example runs as follows:

Suppose there are three numbers, and the problem is to find a fourth which is to the third as the second is to the first. Merchants do not hesitate to multiply the second by the third, and divide the product by the first, because they have not yet

¹²⁵ See Letters 6, 36, 39, 40, 41.

forgotten what they heard from their teacher without any demonstration, or because they have often found this in the simplest numbers, or from the force of the demonstration of P19 in Book VII of Euclid, namely, from the common property of proportionals. But in the simplest numbers none of this is necessary. Given the numbers 1, 2, and 3, no one fails to see that the fourth proportional number is 6 – and we see this much more clearly because we infer the fourth number from the ratio which, in one glance, we see the first number to have to the second (2p40s2; G II 122).

In this example, Spinoza limns four possible approaches to the problem of finding the fourth proportional number. The first two correspond to the sub-categories of imagination that Spinoza outlines in his taxonomy, namely, sense data and sense data mediated by signs. On the level of adequacy, the solution “from the force of the demonstration of P19 in Book VII of Euclid” corresponds to the second kind of knowledge. And the solution which is seen “in one glance” (*uno intuitu*), having no need of external aids, corresponds to the third, intuitive kind of knowledge, which we will examine in the next chapter.

The first two procedures, like the two sub-categories of imagination to which they correspond, are easily seen to amount to the same thing, since sense data mediated by signs reduces to sense data. In both cases, the knowledge is haphazard, “without order for the intellect” (2p40s2; G II 122). It is fairly easy to see how repeating a procedure on the basis of external authority is to follow the order of the affections of the body, rather than that of the intellect. Even the findings of trial and error remain on the inadequate level of imagination, since, without a principle for understanding the mathematical

phenomenon, there is nothing to say the procedure will or will not work with future examples.

In the case of reason, if the example is successful, then it will help to illustrate what Spinoza means in the taxonomy when he says, “we perceive many things and form universal notions [...] from the fact that we have common notions and adequate ideas of the properties of things.” Presumably, something in the example corresponds to the “common notions and adequate ideas of the properties of things” which form the foundation of reason. It seems quite clear that what corresponds to this foundation in the example is “the force of the demonstration of P19 in Book VII of Euclid, namely, from the common property of proportionals [*communi proprietate proportionalium*].” Spinoza’s language of common properties even seems designed expressly to facilitate the connection in the reader’s mind.¹²⁶ Now, P19 in Book VII of Euclid gives what Spinoza refers to elsewhere as the “Rule of Three,” namely the rule that shows that the product of the first and fourth numbers in a series of four proportional numbers will equal that of the second and third. If the fourth proportional number = x , as in the example, the rule dictates that one should simply multiply the second number by the third and divide the product by the first. This is what Spinoza says some merchants do simply because they remember having been taught it by their teachers “without any demonstration.” In the case of reason, of course, the rule must be known “from the force of the demonstration.” Since the rule is demonstrated, it is analogous not to the common notions themselves, but to the laws governing the nature of vision that we discussed in the example of knowing that the sun appears closer than it is, since those laws were themselves deduced from the

¹²⁶ It is worth noting that in the other instances where the example is presented in Spinoza’s writing, this language does not appear – presumably, because Spinoza had not developed his theory of the common notions yet.

more general laws of motion. As with the example of vision, all that is required to make use of the law is to introduce limiting conditions. In the example of the fourth proportional, those conditions are the specific number set – 1, 2, 3, x . The result is then generated by means of a simple calculation. As we saw in the vision example, this advance from more universal laws to less universal via limiting conditions is what Spinoza means by forming universal notions from the fact that we have common notions and adequate ideas of the properties of things. Thus we have an idea of what Spinoza means by reason. I take it that by “adequate ideas of the properties of things,” Spinoza likely has in mind less universal features of nature derived from the common notions, such as the nature of vision. Recall that 2p40 specifies that ideas which follow from adequate ideas are also adequate, leaving it open whether the foundational adequate ideas are common notions or not. Ultimately, such subordinate laws must be traced back to the common notions, but in practice, such as the practice of optics, such subordinate laws are used as foundations of reason themselves.

IV. Conclusions *with* Premises

We have now analyzed both components of Spinoza’s theory of reason – the common notions, which play the role of the foundations of reason, and the deduction to less universal features of nature, which completes the definition. In the remainder of this chapter, we must consider our findings in light of the broader framework we constructed in the first chapter for understanding Spinoza’s theory of knowledge. That means that we have to look at what place, if any, knowledge *per causam* has in Spinoza’s theory of

reason. On the basis of our examination of Spinoza's theory of adequacy, we were led to believe that any form of adequate knowledge, as reason purports to be, would have to include a knowledge of causes at its base.

At first glance, at least, the second kind of knowledge is somewhat recalcitrant with respect to our framework. What role do causes play in inferring optical laws from laws of motion, or proportions from the common property of proportionals? It seems that these are rather straightforward matters of deductive logic. Of course, we have already commented on the lock step of causal and logical order. But to what extent is that applicable in this case? It seems like something of a stretch to say that optical laws are *caused* by laws of motion. Assuredly, the former are *constrained* by more general laws, but does such constraint constitute a causal relationship? There are, I suggest, two reasons that one might be reluctant to see the relationship between more and less universal laws as causal, both of which are defeasible, at least on Spinozian grounds. First, we often think of natural laws as abstractions; and second, we often think of causal relationships as pertaining between finite things. Both of these reservations are related, and center on the fact that the common paradigm of causality is the impact of billiard balls. Let us see how we might respond to these rationales in turn, using Spinozian resources.

In the first place, it is not true that natural laws are abstractions, at least according to Spinoza. We saw that common notions are ideas of "the things most universal and common to the whole of nature: motion and rest, and their laws and rules, which nature always observes and through which it continuously acts." For Spinoza, these features are not abstracted in a Humean fashion from a series of constant conjunctions; rather, they

are part of the fabric of reality; they are actually there. Spinoza fits such universal features of Nature into his ontology via the infinite things we spoke of in the first chapter, namely, the attributes and infinite modes. Motion and rest, recall, were given by Spinoza as examples of the immediate infinite mode in the case of extension in Letter 64.

Moreover, in the *TIE*, Spinoza described “the laws inscribed” in the fixed and eternal things, “as in their true codes, according to which all singular things come to be, and are ordered.”

This leads into addressing the second point. To chase after the causes of something as if it were a matter of a trail of billiard balls, or dominoes, is precisely to become ensnared in the series of singular, changeable things that Spinoza pointed out “would be impossible for human weakness to grasp” (*TIE* §100). Such singular causes, moreover, offer “nothing but extrinsic denominations, relations, or at most, circumstances” (*ibid.*). For Spinoza, the key to understanding lies with another series, i.e., the finite series of infinite things, or the fixed and eternal things, which is no less *causal* than the infinite series of finite things:

So although these fixed and eternal things are singular, nevertheless, because of their presence everywhere, and most extensive power, they will be to us like universals, *or* genera of the definitions of singular, changeable things, and the *proximate causes* [my emphasis] of all things (*TIE* §101; G II 37).

This does not mean that a consideration of particular billiard balls is an illegitimate model of causality; it just means that it is not the end of the story. The individual billiard balls and their circumstances are the types of things that provide the kinds of limiting conditions that we said are necessary for the operation of reason. Such particulars,

however, require a more universal framework within which to be understood. Moreover, it is necessary to abstract from the infinite circumstances in which particular things, such as billiard balls, find themselves in order that they can be understood within the more general framework. Hence, in determining the direction in which a billiard ball is expected to go, we abstract from such things as its color and country of origin. The only properties that are relevant are the ones explained by the more general theory, such as, in this case, motion, rest, mass, figure, etc. One of the features of reason is that it leads to the formation of “universal notions,” in particular *less* universal notions, but *not* the essences of particular things. We will see later that this is a point on which reason and intuitive science differ.

Thus, it is neither the case for Spinoza that laws of nature are mere abstractions, nor that causality is a relationship that pertains only between finite things. As a result, we have defused the two objections to thinking of the deduction of less universal laws on the basis of more universal laws as a causal relationship. Since this deductive relationship is constitutive of reason, for Spinoza, we have also shown how reason instantiates a progression from causes to their effects, and hence fits neatly within the *per causam* framework.

V: The Origins of Reason in Spinoza

Before turning to the next chapter, and an examination of the third kind of knowledge, I would like to add a brief discussion of the transition from the first kind of knowledge to the second, from inadequate to adequate ideas. Having developed an

account of both the first and second kinds of knowledge, what is the nature of the transition from the former to the latter? How does it come about?

The interest and bite of this question is its resemblance to the ancient learner's paradox, which runs something like this: beginning in a state of ignorance, how could we ever come to know, if we do not already know what it is to know? On the other hand, if we do already know what it is to know, then we never in fact *come* to know, i.e., we never in fact *learn*. In general, for seventeenth-century rationalists, as also for Plato, the answer involved some version of a doctrine of innate ideas. According to a generic version of that doctrine, we learn to the extent that we uncover truths already contained in our minds – whether this process of uncovering is framed in terms of recollection, as for Plato, or in terms of the awakening of a capacity, as for Leibniz. In short, human minds have a predisposition to sort out the true from the false.

Part of the rationalist's motivation for locating a source of veritable knowledge within the human mind stems back to Plato's contention that mathematical forms cannot be apprehended in their pure state via the senses. Equality, for instance, is an "idea," not a sense perception. We can certainly see how Spinoza might fit, at least roughly, within this rationalist schema – for him, all images received purely through the senses are inadequate; for adequate knowledge, another kind of cognition is required. We have seen in this chapter that common notions provide foundations for adequate knowledge (reasoning). How might we more precisely characterize Spinoza's position within the rationalist innate ideas tradition?

We have already in fact supplied the elements of an answer to this question in our discussions of common notions qua foundations (this chapter) and Spinoza's response to

skepticism (first chapter). We said that common notions *per se* were only foundations of reasoning in one of two senses. Insofar as every human mind necessarily has ideas of bodies, every mind has equal access to objective features of nature, namely, the common properties, extension, motion and rest. In order to serve as foundations for reasoning in the other sense (whereby they may serve as general rules from which subordinate ones may be derived), however, these objective features must in fact be isolated from subjective contributions, and grasped explicitly *as* objective properties, or laws of nature. Spinoza describes (but does not explain) this transition as follows:

I say expressly that the mind has, not an adequate, but only a confused knowledge, of itself, of its own body, and of external bodies, so long as it perceives things from the common order of nature, i.e., so long as it is determined externally, from fortuitous encounters with things, to regard this or that, and not so long as it is determined internally, from the fact that it regards a number of things at once, to understand their agreements, differences, and oppositions. For so often as it is disposed internally, in this or another way, then it regards things clearly and distinctly [...] (2p29s; G II 114).

What then *explains* this shift from perceiving things from the common order of nature to regarding a number of things at once, to understand agreements, differences, and oppositions? Since this regarding “a number of things at once” foreshadows Spinoza’s doctrine of common notions, this question is roughly the same as that of how the mind turns the common notions into the general laws of nature that are able to serve as viable foundations for reasoning.

Spinoza's reply here would have to be similar to the one he gives to the skeptic: we start with certain "inborn tools" and proceed on their basis. To the question how we know whether we have the right tools, we examined two related responses in the first chapter. The first appeals to the transparency of knowledge when an effect is deduced from its cause; and the second, which we characterized as relatively macroscopic, appeals to the productivity of the tools in producing further knowledge. Spinoza makes a related point in the appendix to *Ethics* Part 1 in the midst of his catalog of salient human prejudices. Explaining how it is that human beings were ever able even to entertain an alternative to their teleological conceptions of things, Spinoza writes,

So they maintained it as certain that the judgments of the Gods far surpass man's grasp. This alone, of course, would have caused the truth to be hidden from the human race to eternity, if Mathematics, which is concerned not with ends, but only with essences and properties of figures, had not shown men another standard of truth. And besides Mathematics, we can assign other causes also (which it is unnecessary to enumerate here), which were able to bring it about that men would notice these common prejudices and be led to the true knowledge of things (G II 79).

Both in this passage and in the "inborn tools" passage from the *TIE* that we have already looked at, Spinoza treats the human capacity for true ideas as a historical, one would like to say evolutionary, fact. He does not get immersed in questions of how these ideas are "recollected" or somehow naturally inhabit the recesses of the mind, relegating such questions to the province of natural history. Thus I think it is a mistake to attempt to fit

Spinoza neatly into the innate ideas tradition, as some commentators have.¹²⁷ Clearly we have the raw materials for adequate knowledge in the ideas of extension that define the human mind. How it is that we were able to extract from this raw material the objective properties of things that enabled us to make further progress is not presently clear, but we know that we *did* extract such properties, and we can trace the innovation back to the flourishing of mathematical thinking, for example.

Spinoza's answer to the question of learning is brilliantly forward thinking in that he refrains from metaphysical assumptions about the innate contents of human minds, while avoiding the opposite pitfall of the *tabula rasa*. His answer is thoroughly naturalistic, leaving the door open to a scientific understanding of the mind's contribution to its own process of discovery, while refusing to give in to the skeptic.

¹²⁷ Eugene Marshall, 85-7. I agree that innate ideas are not formed or created at some point in history, and that they are, for Spinoza, eternal. In some sense then, they are already there. Does this mean that they are somehow already in the human mind? Spinoza's somewhat opaque discussion in 2p8 of the infinitely many equal rectangles comprehended in a circle does have Leibnizian resonances, but whereas Leibniz is clear that all ideas are implicit in the monad, Spinoza's main point is that they are comprehended in God's attributes, not necessarily in the human mind. Spinoza's position, I believe, is compatible with humans having begun to do mathematics at some point in history without mathematical ideas having been already somehow "comprehended" in the human mind, even if they were (eternally) comprehended in the divine intellect of which the human mind is a part. Another Leibnizian interpretation of Spinoza's adequate ideas appears in A. Garrett, 112-3.

Chapter 4

Intuitive Science, or The Third Kind of Knowledge

I. *Scientia Intuitiva*: The Terms of the Definition

In analyzing the second kind of knowledge in the last chapter, we began by examining the definition of reason in the epistemological taxonomy of 2p40s2, first breaking down the definition into its constituent parts, and then looking at the relationship between them. In analyzing the third kind of knowledge in this chapter, we will proceed along similar lines, beginning with the definition of intuitive science as it appears in *Ethics* 2p40s2.

In the taxonomy of 2p40s2, Spinoza concludes his list of kinds of knowledge as follows:

In addition to these two kinds of knowledge, there is (as I shall show in what follows) another, third kind, which we shall call intuitive knowledge [*Scientiam Intuitivam*]. And this kind of knowing proceeds [*procedit*] from an adequate idea of the formal essence of certain [*quorundam*] attributes of God to the adequate knowledge of the essence of things (G II 122).

We can see already that, in at least one respect, our interpretive task with respect to the definition of the third kind of knowledge is somewhat more straightforward than it was with respect to the definition of the second. In the case of the latter, we were faced with the task of translating the terms of reason (common notions, adequate properties of things, and universal notions) into the terms of Spinoza's ontology, so that we could see

in what way reason applies to physical and real beings. In the case of the definition of the third kind of knowledge, the terms are already conveniently among those of Spinoza's ontology. This does not mean that there is no interpretive work to do with respect to the terms of the definition. However concrete Spinoza means the referents of his terms to be, and his definitions of them notwithstanding, until we have arrived at a solid interpretation of said referents in the context of the definition, such concepts as "attribute" and "thing" remain vaguely subject to a variety of interpretations. We turn now to this preliminary interpretive task, beginning with the first term, "an adequate idea of the formal essence of certain attributes of God," and proceeding thereafter to the second, "the adequate knowledge of the essence of things."

We already discussed Spinoza's conception of "attribute" in the first chapter. Presumably, Spinoza uses the qualifier "certain" (*quorundam*) for the attributes of God to reflect the fact that human beings only have access to two of God's attributes: thought and extension. Next, Spinoza most likely specifies the essence of certain attributes of God as "formal" in contradistinction to something which exists only in the mind, i.e., *objectively*, thereby underscoring the fact that he is referring to an idea of something that exists outside the mind.¹²⁸ However, we encounter a minor problem when we come to the term "essence." As we saw in Chapter 1, attributes are just ways in which God's essence can be conceived. They are not relative to the human intellect, so they must be in some sense objective. As noted in the first chapter, an investigation of the meaning of this difficult aspect of Spinoza's philosophy is beyond the scope of this dissertation, so we must rest content with accepting a working conception of attributes as ways in which

¹²⁸ For an alternative interpretation of Spinoza's qualification of the essence as "formal," see A. Garrett, 213.

God's essence can be conceived (objectively). Given this conception, talk of the essence of attributes is strange, in that it appears to involve a doubling of essence: if attributes are ways of conceiving God's essence, then the essence of attributes of God looks to be equivalent to the essence of ways of conceiving God's essence. I suspect that Spinoza did not have any such doubling of the work of the term "essence" in mind. I suggest that the most natural way of dealing with this issue is to interpret Spinoza to be talking about the essence of God conceived under an attribute. This makes sense if God must be conceived under an attribute, as is suggested by Spinoza's definition of attribute as "what the intellect perceives of a substance, as constituting its essence." So our task now is to understand what is meant by "essence of God," regardless what particular attribute it is conceived under.

One way to approach this question would be to look at Spinoza's definition of essence (2d2) and see what results when it is combined with Spinoza's definition of God (1d6). Commentators have noticed that although Spinoza uses the term "essence" in many absolutely central places in *Ethics* Part 1, such as the proofs of God's existence, and the definition of God, he does not actually define "essence" until Part 2. I do not think this was a simple oversight on Spinoza's part. The meanings of "essence" as it is used in Parts 1 and 2, respectively, appear to be different. Spinoza explains in 2p10s why he introduces a modified version of the traditional definition of essence. He is worried that on the traditional definition of essence as that without which a thing can neither be nor be conceived, either the nature of God would pertain to the essence of created things, or created things would be conceivable without God. So his definition of essence in Part 2 (that without which something can neither be nor be conceived *and* which can neither

be nor be conceived without the thing) seems expressly formulated to make sense of the term as it relates to created things (or modes, in Spinoza's preferred terminology). This would explain why he delays defining the term until Part 2. I submit that Spinoza does *not* define essence in Part 1, because it is only on the basis of what Part 1 shows about substance that essence can be understood. This is all by way of arguing that combining the definition of essence from Part 2 with the definition of God from Part 1 is not a viable approach to interpreting what Spinoza means by "the essence of God."

Fortunately, Spinoza explains what he takes God's essence to mean in a very direct way in 1p34: "God's power is his essence itself." In demonstration of this proposition, Spinoza writes, "from the necessity of God's essence it follows that God is the cause of himself (by p11) and (by p16 and p16c) of all things" (1p34dem; G II 77). So, when Spinoza says that God's essence is his power, he means his power to cause himself, and, in doing so, all things (i.e., everything which can fall under an infinite intellect). God's essence is his *causal* power, specifically. Thus, we can interpret "an adequate idea of the formal essence of certain attributes of God," provisionally, as an adequate idea of God's causal power under a certain attribute. An adequate idea of God's causal power under the attribute of extension, for example, would mean an adequate idea of God's causal power as it relates to anything conceived under the attribute of extension, including both the infinite and finite modes of extension.

Let us now inquire into what it means to have an *adequate idea* of God's causal power under a certain attribute. The key proposition in understanding this aspect of the definition is 2p46, which states: "The knowledge of God's eternal and infinite essence which each idea involves is adequate and perfect." We encounter an issue here similar to

what we saw with the knowledge of common notions. Spinoza appears to be stipulating that any idea of God's eternal and infinite essence is adequate just as he did with the common notions. But just as with the common notions, this thesis seems implausible when the range of conceptions that human beings have entertained of divinity throughout history is considered. Spinoza's disdain of anthropomorphic conceptions of God, for example, is well known. We already noted in the last chapter that human beings have entertained a range of inadequate conceptions of motion and rest. Spinoza himself admits that in the case of the idea of God, the situation is even worse:

But that men do not have so clear a knowledge of God as they do of the common notions comes from the fact that they cannot imagine God, as they can bodies, and that they have joined the name *God* to the images of things which they are used to seeing. Men can hardly avoid this, because they are continually affected by external bodies (2p47s; G II 128).

It should be pointed out that Spinoza is *not* saying in this passage, although it might appear that way at first, that the common notions are the images of bodies. Images can be used to represent common notions just as the image of a circle can serve as an aid in geometry without a geometrical circle being identical to the pictorial representation. Our point still holds from the last chapter that this gap between an inadequate imagination of bodies and an adequate conception of common notions has fueled inadequate conceptions of extension, motion and rest. Spinoza's point in this passage is that, unlike in geometry where pictorial representations can be an important aid to understanding, albeit a potentially misleading one, the understanding of God cannot be aided but only hindered by means of material representation.

In fact, Spinoza makes it clear that the idea of God's eternal and infinite essence is adequate for the same reason that common notions are perceived adequately by all. In the demonstration to 2p46, Spinoza writes, "what gives knowledge of an eternal and infinite essence of God is common to all, and is equally in the part and in the whole. And so (by p38) this knowledge will be adequate, q.e.d." (G II 127-8). Spinoza's proof relies on 2p45, the claim that each idea of any singular thing involves an eternal and infinite essence of God. We will examine this proposition along with its important demonstration and scholium further below. For now it is sufficient to have established that the idea of God is adequate for the same reasons that the common notions are perceived adequately by all. Just as in the case of the common notions, it is not that people do not often misconceive God, but rather that God's eternal and infinite essence is objective, and all human beings have equal access to it, insofar as it is equally in the part and in the whole.

We turn now to the second term of the definition of intuitive science: "the adequate knowledge of the essence of things." When Spinoza speaks "of things" in the plural (*rerum*) he means individual, or singular finite things (as opposed to "all things"). This will become clear when we examine the various contexts in which Spinoza expounds on the third kind of knowledge, especially in *Ethics* Part 5. For now I would like to focus on what Spinoza means by the *essence* of an individual, or singular finite thing. In Chapter 2 we discussed Spinoza's conception of individual or singular things. We saw there that Spinoza defines an individual or singular thing in terms of a grouping of parts organized so as to produce a single effect, or alternatively, so as to maintain a certain ratio of motion and rest among the parts. This conception of individuality is to be distinguished from Spinoza's account of the essence of a thing, which Spinoza articulates

in Part 3 thus: “The striving [*conatus*] by which each thing strives [*conatur*] to persevere in its being is nothing but the actual essence of the thing” (3p7; G II 146). While we just noted that Spinoza’s account of essence as *conatus* should be distinguished from his account of individuality as a fixed ratio of motion and rest, which he never frames in terms of essence, there is nevertheless an intimate connection between the two doctrines: if the fixed ratio of motion and rest is what characterizes the individuality of a thing, its *conatus* will consist in a striving to preserve this ratio of motion and rest.

This account of the essence of a thing as its *conatus* is a start, but it needs to be considered in light of Spinoza’s formal conception of essence, which we began to touch on above. What is the essence of, say, a human being, for Spinoza? If the answer comes back, “a human being’s essence is its *conatus*,” then another more pressing question follows: do all human beings have the same *conatus*, or does each human being have its own *conatus*? Spinoza’s answer to this question is ambiguous. As we saw, his definition of essence in 2d2 is as individualistic as it can be. It reads,

I say that to the essence of any thing belongs that which, being given, the thing is necessarily posited and which, being taken away, the thing is necessarily taken away; or that without which the thing can neither be nor be conceived, and which can neither be nor be conceived without the thing (G II 84).

So in the case of a human being, if its essence is its *conatus*, the human being cannot be or be conceived without its *conatus*, and the *conatus* cannot be or be conceived without the human being. So the *conatus* and the individual human being are co-extensive. Each human being has its own *conatus*. By contrast, in the scholium to 1p17, Spinoza says just the opposite of this, that distinct human beings “can agree entirely according to their

essence,” adding that it is only in existing where they must differ. “And for that reason,” Spinoza says, “if the existence of one perishes, the other’s existence will not thereby perish. But if the essence of one could be destroyed, and become false, the other’s essence would also be destroyed” (G II 63). On this version of essence, all human beings would have the same *conatus*. How are we to resolve this conflict?

One suggestion would be to distinguish between two notions of essence at work in Parts 1 and 2 of the *Ethics*, respectively, as we did above in the discussion of God’s essence. If we were to do this here, then according to the concept of essence operative in *Ethics* Part 1, all human beings have the same *conatus*, whereas according to the concept of essence operative in the second part of the *Ethics*, each human being has its own *conatus*. This does not get us terribly far, because it is difficult to see why Spinoza would have deployed different conceptions of essence in Parts 1 and 2. However the resolution, or lack thereof, turns out, the conflict is obviously relevant, and needs to be kept in mind, when interpreting what Spinoza means when he says that intuitive science proceeds to the adequate knowledge of the essence of things. If there are two conceptions of essence, which does he have in mind in this case? We will return to this problem shortly.

It is not necessary to probe what Spinoza means by “adequate knowledge,” in particular, of the essence of things, as we did in the case of the first term of the definition. The knowledge of the essence of things becomes adequate when it “proceeds from an adequate idea of the formal essence of certain attributes of God,” that is to say, when it forms part of the third kind of knowing. In order to understand what it is to have an *adequate* knowledge of the essence of things, we turn in the next section to looking at the

relationship between the two terms of the definition, and how intuitive science “proceeds” from the first to the second. Before we do so, let us review the findings of this section. First, by “an adequate idea of the formal essence of certain attributes of God,” we understand an adequate idea (which can *only* be adequate if it is truly of God) of God’s causal power considered under a certain attribute, such as extension. Next, by “the adequate knowledge of the essence of things,” we understand the adequate knowledge (i.e. knowledge which proceeds on the basis of the first term) of the *conatus*, or striving to persevere of individual things.

II. *Scientia Intuitiva*: Relating the Terms of the Definition

In the last chapter we saw how Spinoza describes the progression from the first term of reason (common notions or adequate ideas of the properties of things) to the second (less universal notions) vaguely, as a gradual “advance,” or in terms of what ideas “follow.” Upon analysis it turned out that Spinoza was expressing by such vague notions a rather precise deductive procedure. The movement from the first to the second term of the definition of intuitive science is framed in similarly vague terms as a “proceeding” (“this kind of knowing proceeds [*procedit*] [...]”). By now we should expect that, despite the vagueness of the phraseology, Spinoza has both a logical and a causal relationship in mind. From Spinoza’s metaphysics, we know that in fact there is a logical and causal relationship between God’s essence and singular things. Let us look at this in more detail as it relates to the third kind of knowledge. The key passages are 2p45-47.

2p45 reads: “Each idea of each body, or of each singular thing which actually exists, necessarily involves [*involvit*] an eternal and infinite essence of God” (G II 127). At first glance, this is a strange proposition, since exactly the opposite appears to be the case. Do we not reflect on singular things which actually exist – pens, trees, what have you – all the time without our idea of such things involving an eternal and infinite essence of God? Straightaway we can see that the meaning of the proposition depends on the notion of *involvere* being employed. This is a term that one finds throughout Spinoza’s writings, and commentators have not been unaware of its importance.¹²⁹ One of the more important occurrences of the term is in the crucial 1a4, the causal axiom (“The knowledge of an effect depends on, and involves, the knowledge of its cause”). Spinoza references this axiom in the demonstration of 2p45, making clear that he intends the same meaning of *involvere* in 2p45.

Without delving too deeply into the metaphysical question of the meaning of *involvere* in Spinoza, it is necessary to make a few points. Consider for a moment Proposition 18 of Part 1: “God is the immanent, not the transitive, cause of all things” (G II 63). This well-known proposition serves to distinguish in no uncertain terms the God that Spinoza is talking about in the *Ethics* from the creator-God of monotheistic religions. If we go on to consider the demonstration of the proposition as well, we find that 1p18 does more than ward off confusion with prevailing conceptions of deity. It goes some way towards specifying the particular relationship between God and his productions that Spinoza is driving at. The demonstration reads,

¹²⁹ See Elhanan Yakira, “Ideas of Nonexistent Modes: *Ethics II* Proposition 8, its Corollary and Scholium” in *Spinoza on Knowledge and the Human Mind*, ed. Yirmiyahu Yovel and Gideon Segal, 159-170 (Leiden: E.J. Brill, 1994); also, Deleuze.

Everything that is, is in God, and must be conceived through God (by p15), and so (by p16c1) God is the cause of things, which are in him. That is the first [thing to be proven]. And then outside God there can be no substance (by p14), that is (by d3), thing which is in itself outside God. That was the second. God, therefore, is the immanent, not the transitive cause of all things, q.e.d. (G II 64).

This demonstration is interesting in revealing that, for Spinoza, the statement of the proposition – “God is the immanent, not the transitive, cause of all things” – consists in two, logically distinct, components. First, there is the causal relationship between God and things. That is the first thing which Spinoza proves in the demonstration by recourse to 1p16c1. Even though 1p15, which says that “Whatever is, is in God,” and which Spinoza cites in the proof of the causal relationship between God and things, would seem by itself to rule it out, Spinoza nevertheless goes on to prove separately, as a “second” thing, that there can be nothing outside of God, in order to show that God is an *immanent* cause. He proves this by recourse to 1p14 (“Except God, no substance can be or be conceived”). Thus, *first*, there is the question of God as the cause of things. *Then*, there is the question whether God is an immanent or transitive cause of things. This duality of causality and immanence, if we may so call it, reflects the choice presented by Curley at the outset of his influential book, *Spinoza’s Metaphysics*, between interpreting the relation between God and his productions (or in other words, between *natura naturans* and *natura naturata*) as one of either cause or inherence. I suspect that the duality also reflects that between the terms *dependere* and *involvere* present throughout the *Ethics*, but especially in 1a4. While I am sympathetic with Curley’s endeavor to refocus attention on the causal aspect of the relation, I think no choice between the terms should

be made, since both are substantive aspects of Spinoza's metaphysical standpoint.¹³⁰ God is a cause, *and* he causes nothing outside himself, but all his productions are modifications of his own infinite essence.

How does this help us to understand the statement of 2p45 that "Each idea of each body, or of each singular thing which actually exists, necessarily involves an eternal and infinite essence of God"? Our foregoing analysis indicated that God's relation to things is not merely a causal/logical one insofar as it can be further specified as either immanent or transitive. If we hinted that *dependere* bespoke the primary causal/logical relation, then *involvere* conveys the specification of that relation as immanent. Thus, when in 2p45 Spinoza mentions *involvere* on its own, he effectively puts the stress on the immanence of God to singular things. Thus singular things are not merely logically dependent upon God, but moreover are produced *in* God. This should not be taken to change the logical/causal nature of the connection, which is fundamental. But there is a clear distinction between things that are caused by a creator-God who transcends the world, and things that are caused by a God which they are also *in*. The difference manifests itself in the fact that, on the latter model, each idea of each singular thing which actually exists "necessarily involves an eternal and infinite essence of God." Thus, my idea of a pen or a tree is actually an idea of God modified in this or that way – the very

¹³⁰ For Curley's expression of his view, see Curley (1969), chapter 1; also, Curley (1991), 35-53. In the latter, Curley challenges Bennett to address Spinoza's distinction between *Natura naturans* and *Natura naturata*, arguing that it speaks against the identification of God and the universe. Since my interpretation identifies God and the universe, I should have to answer the challenge as well. Without having the time to get into a full response, I believe that any reading which makes the distinction between *Natura naturans* and *Natura naturata* more substantive than a distinction between two aspects of the same reality destroys Spinoza's monism in that there would have to be at least two parts of reality on such a reading. Curley might then point to the incompatibility of the inherence and causal interpretations. Unfortunately, there is not space to respond to this objection here. For a discussion of Curley's view, with a critique similar to the one offered here, see also Yitzhak Melamed, "Inherence and Immanent Cause in Spinoza," *The Leibniz Review*. Vol. 16, December 2006, pp.43-55.

result which many of Spinoza's contemporaries found to involve "monstrosities."¹³¹ Philosophers have, of course, appealed to the "stamp" or "mark" of the Maker in his works, such that inherence would not appear a necessary feature of the causal relationship between God and things. However, just as Spinoza's theory of ideas obviates appeal to God's benevolence for assuring the correspondence of clear and distinct ideas with their objects, as we saw in Chapter 1, so here, another feature of Spinoza's metaphysics, i.e., God's immanence, obviates appeal to the "stamp" or "mark" of the Maker in his works for assuring knowledge of God through things. In both cases, Ockham's razor seems to have done some work.

In the scholium, Spinoza explains, "I am speaking, I say, of the very existence of singular things insofar as they are in God. For even if each one is determined by another singular thing to exist in a certain way, still the force by which each one perseveres in existing follows from the eternal necessity of God's nature" (G II 127). Here Spinoza evokes the dichotomy of causes that runs through his metaphysics, and which we have been emphasizing since Chapter 1. On the one hand, each singular thing is determined by an infinite number of other singular things. On the other, each singular thing, insofar as it comprises part of an infinite mode, is caused by the power of the attribute. The former type of cause is beyond the human intellect, but the latter is not. We can know a singular thing adequately by conceiving it in its logical connection with its attribute, in other words, by conceiving it *through* its attribute.

So far, this merely confirms what we already surmised from the definition of the taxonomy. However, the passage from the scholium goes further still, since it also specifies the nature of the causal connection between God and thing. It contrasts

¹³¹ See Leibniz, 507.

existence “in a certain way,” which is caused by the infinite series of singular antecedents, with “the force by which each one perseveres in existing,” which “follows from the eternal necessity of God’s nature.” Thus we learn not only that the dichotomy of causes obtains, but we also get a sense of the division of labor therein. In this passage, Spinoza uses the term “force” (*vis*), but in Part 3, he introduces the term that has become more well-known in this connection – “striving” (*conatus*). As we saw above, “The striving (*conatus*) by which each thing strives to persevere in its being is nothing but the actual essence of the thing.” There is no apparent reason not to equate the *vis* of 2p45 with the *conatus* of 3p7, such that the force to persevere that Spinoza speaks of in 2p45 should also be taken to be the *conatus*, or “actual essence of the thing.” Consequently, the essence of a singular thing follows from the eternal necessity of God’s nature, whereas the actual existence “in a certain way” follows from the infinite series of singular antecedents. This is all completely consistent with 2p40s2’s definition of intuitive science, according to which the third kind of knowing “proceeds from an adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the essence of things.”

To see that Spinoza himself connects 2p45 with the third kind of knowledge, we turn to 2p47. This proposition numbers among the boldest of the *Ethics*, reading: “The human mind has an adequate knowledge of God’s eternal and infinite essence.” The proposition is an application of the more general 2p45 (which pertained to ideas of singular things in general) to the human mind and the ideas of singular things available to it, namely, ideas of “itself, its own body, and external bodies as actually existing” (2p47dem; G II 128). Spinoza’s contention here is that since human minds have such

ideas, and since such ideas “[involve] an eternal and infinite essence of God” in the manner specified above, human minds therefore have a knowledge of God’s essence. Since this knowledge is involved in any idea of any singular thing whatsoever, whether “considered as a part or a whole” (2p46), 2p46 explains that this idea can only be conceived adequately, just like the common notions, as we have seen.¹³² The connection to the third kind of knowledge is made in the scholium to the proposition (2p47s), which says,

From this we see that God’s infinite essence and his eternity are known to all.

And since all things are in God and are conceived through God, it follows that we can deduce from this knowledge a great many things [*plurima*] which we know adequately, and so can form that third kind of knowledge of which we spoke in p40s2 and of whose excellence and utility we shall speak in Part 5 (G II 128).

The discussion of 2p45-47 expands on the definition of intuitive science provided in 2p40s2. In particular, we learn that the basis for forming the third kind of knowledge, i.e., “an adequate idea of the formal essence of certain attributes of God” is in fact involved in the ideas we have of all singular things. Moreover, we learn that the knowledge of singular things “proceeds from” knowledge of an eternal and infinite essence of God, insofar as the force to persevere in existing of the former follows from the latter. Thus intuitive knowledge is conceiving singular things not through the infinite series of singular antecedents which condition their existence “in a certain way,” but rather conceiving them through their respective attributes, which give rise to their force

¹³² According to Guérout, there is a difference between the common notion that God is in 2p46 and the universal common notions of 2p38. Guérout explains that while the common notions of 2p38 are in the part and the whole as a common *property*, God is in the part and the whole as a common *cause* (Guérout (1974), 425). This distinction is crucial in understanding why God can serve as the foundations of intuitive science, but the common notions of 2p38 are only adequate to serve as foundations for reasoning.

or striving to persevere, which is to say, their essence. To this effect, Margaret Wilson writes, “I take these passages to suggest that the third kind of knowledge involves an intuitive grasp of the relation of things’ essential, individual force of persistence to God’s power.”¹³³

So we have established through an exegesis of 2p45-47 that the relationship between an adequate idea of the essence of certain of God’s attributes, or the first term of the definition of intuitive science, and the adequate knowledge of the essence of things, or the second term, is in fact a causal and logical relationship, as expected. In particular, it involves grasping how God’s causal power is involved in the striving to persevere, or conatus, of individual things. Stated more broadly, intuitive science involves grasping how God’s power works through (in some causal sense) the power of individual things. So far so good. But several questions remain to be answered. First, while we have shown that the third kind of knowledge involves a logical and causal proceeding from the first term of the definition of intuitive science (“an adequate idea of the formal essence of certain attributes of God”) to the second (“the adequate knowledge of the essence of things”), how does this proceeding differ from that of the second kind of knowledge? In other words, we must get clear on the *intuitive* aspect of intuitive science. Moreover, we have established that any singular thing can be known according to the third kind of knowledge, but what does this mean in practice, and what is its significance? More importantly, we need to get clearer on the knowledge of the essence of singular things

¹³³ Wilson (1996), 123. While in agreement with Wilson’s conclusive inference about the third kind of knowledge, I do not understand why she goes on to say, “Of course this suggestion does not get us *very* far in understanding just what Spinoza has in mind. But given the limited amount that he tells us about *scientia intuitiva*, and the central importance of this notion in the final Part of the *Ethics*, it seems that even vague clues ought to be noted explicitly.” I do not see what is vague about the dependency of things’ essence on God’s power, nor do I grasp why the illumination of this connection does not contribute significantly to understanding what Spinoza intended. In any case, this perhaps amounts to just a minor divergence of perspective.

involved in intuitive science. Knowing *that* some thing's essence derives directly from divine power is a far cry from knowing anything about that thing's particular essence. Is intuitive science limited to the seemingly anemic claim that a thing's *conatus* issues from the power of God, or does it promise something more?

III. The *Intuitive* Aspect of Intuitive Science

With respect to the first question, Spinoza presents two illustrations of what we might call the formal, or structural contrasts between the second and third kinds of knowledge. The reason I say “formal” or “structural” contrasts is because both examples in question involve the same knowledge content. The first such example is the fourth proportional example which we have already considered in connection with the first and second kinds of knowledge. Let us look at it now with respect to the third. In fact, it is the difference between the first two kinds of knowledge and the third that the example seems designed to highlight above all others. In particular, the primary contrast is between solving the problem by means of some auxiliary, be it hearsay, or experience (as per the first kind of knowledge), or the force of demonstration (as per the second kind of knowledge), on one hand, and seeing the solution directly, without any such aid, on the other.¹³⁴ Spinoza writes,

But in the simplest numbers none of this is necessary. Given the numbers 1, 2, and 3, no one fails to see that the fourth proportional number is 6 – and we see

¹³⁴ This emphasis is also apparent in the *TIE*'s version of the example, where Spinoza says, with respect to mathematician's reliant on Euclid's proof, “they do not see the adequate proportionality of the given numbers. And if they do, they see it not by the force of that Proposition, but intuitively, without going through any procedure” (*TIE* §24).

this much more clearly because we infer the fourth number from the ratio which, in one glance [*uno intuitu*], we see the first number to have to the second (2p40s2; G II 122).

Of course, it is hard to know exactly what to make of this example, since it involves mathematical beings of reason, whereas, as we have said many times now, the point is to know physical and real beings. The one thing that we can take away from the example is that in some sense, relative to the other kinds of knowledge, intuitive science is direct, eschewing any intermediary in its proceeding from one term to the next. This implies that in some sense the “proceeding” from an adequate idea of certain attributes of God to the adequate knowledge of the essence of things, as constitutes the third kind of knowledge, is direct, or seen “in one glance.” Fortunately, Spinoza provides another example highlighting the contrast between the second and third kinds of knowledge, but this time, in application to physical and real beings.

The other example, which occurs in 5p36s, concerns knowing “how our mind, with respect both to essence and existence, follows from the divine nature, and continually depends on God.” The second and third kinds of knowledge represent two means of deducing this truth about the human mind and its relation to the divine essence. As in the example of the fourth proportional, it is the relative directness or immediacy of intuitive science which is important here as well. But the emphasis in 5p36s is actually not on this distinction as such, but rather it is on the superiority of the third kind of knowledge that results from its relative directness:

For although I have shown generally in Part 1 that all things (and consequently the human mind also) depend on God both for their essence and their existence,

nevertheless, that demonstration, though legitimate and put beyond all chance of doubt, still does not affect our mind as much as when this is inferred from the very essence of any singular thing which we say depends on God (5p36s; G II 303).

The fact that knowing the mind's dependence on God by way of the second kind of knowledge "does not affect our mind as much" as when this is known by the third kind of knowledge is presumably why Spinoza says that the third kind of knowledge is "much more powerful" (ibid.) than the second. This means that the superiority of the third kind of knowledge over the second is, at least in large part, an *affective* superiority. We discuss this affective dimension further below.

Looking at the passage for its strictly epistemological offerings, we find an excellent confirmation of the distinction between reason and intuitive science. For its part, reason begins with a universal claim (all things depend on God for both their essence and existence), then introduces a specific field of application (the human mind) by way of yielding a less universal truth (the human mind depends on God for its essence and existence). Thus we see how in the case of the second kind of knowledge, the relationship between God and the human mind is based on and mediated by the universal truth that all things depend on God. No such mediation is involved in the case of the third kind of knowledge where the relationship is seen directly.

The example does, however, create a discrepancy insofar as Spinoza says that the human mind's dependence on God *is inferred (concluditur)* from the very essence of the singular thing. This ordering stands in contrast to that in the definition of intuitive science from 2p40s2, which describes a knowledge that "proceeds from an adequate idea

of the formal essence of certain attributes of God to the adequate knowledge of the essence of things.” In 2p47, moreover, we saw Spinoza explain how on the basis of the adequate knowledge of God’s eternal and infinite essence “we can deduce [*deducere*...] a great many things.” Thus we have two contrasting orders of reasoning, or what we might call, to avoid confusion with the second kind of knowledge (reason), logical orderings: on the one hand, a proceeding or deduction from the attribute to the mode; on the other, an inference from mode to attribute. I raise this discrepancy not to point out an inconsistency in Spinoza, but rather to pre-empt a potential objection, as well as to reveal something about intuitive science, and to underscore a feature of Spinoza’s method more generally.

In intuitive science, what comes to be grasped is the logical relation between a mode and its attribute. The one is not deduced from the other in the sense of discovered.¹³⁵ It is surely not the case that the attribute is arrived at on the basis of the mode. Spinoza dismisses this methodological perversion – a presupposition of natural theology – in 2p10. Nor, however, is it the case that modes can be deduced from their attributes. In his penultimate surviving letter, a letter to Tschirnhaus, Spinoza writes, “You ask whether the variety of things can be demonstrated a priori from the concept of Extension alone. I believe I have already shown clearly enough that this is impossible.”¹³⁶ Unfortunately, Spinoza was able to say little more with regard to such matters at that time, since as of yet he had “not been able to set out anything concerning them in an orderly way.”¹³⁷ In any case, Spinoza did not think it possible to deduce

¹³⁵ This should not be taken to mean that Spinoza’s epistemology does not admit of discovery. On this, see the discussion of methodology in the previous chapter.

¹³⁶ G IV 334, Curley’s working translation.

¹³⁷ *Ibid.*

singular things, or “the variety of things,” as Tschirnhaus says, from the attribute of extension, or from any attribute for that matter, alone. Thus, Spinoza is not able to deduce the human mind from the attribute of thought. The former is given as an axiom – “*Homo cogitat*” (2a2; G II 85). The conception of the attribute itself is arrived at on the basis of rational considerations, including the fact that singular thoughts cannot be conceived through themselves. If they cannot be conceived through themselves, the argument runs, they must be conceived through another – i.e., the attribute of thought. The demonstration of the attribute also has recourse to an axiom (1a2; G II 46): “What cannot be conceived through another, must be conceived through itself.” Intuitive science is formed, therefore, by coming to know the relation between attribute and mode, rather than constituting one of them on the basis of the other.

This contention might seem to fly in the face of the purpose and power of Spinoza’s geometrical method. Is not the whole point that one starts with a true cause – i.e. an infinite being – and from that basis then proceeds to deduce truths in a systematic manner? It would seem that there is a definite logical ordering, one which proceeds from attribute to mode, not vice versa. How is this reconciled with what we are saying about intuitive science?

For Spinoza, effects must be known through their causes. Causes cannot be known adequately through effects. Thus, the attribute of thought cannot be adequately known *through* the human mind. Rather the latter needs to be known through the former, otherwise one’s idea will be confused, and ultimately inadequate. To this extent, the order is paramount. However, this logical ordering is distinct from the order of discovery. We noted in the last chapter how analysis and synthesis work together in

Spinoza, and the same applies in the case of intuitive science. We may well have the notion “man thinks” before we understand the attribute of thought. In that case, the conception can only be confused. Once we have the adequate idea of the attribute of thought, however, we can then form an adequate idea of the human mind on its basis, without however having deduced the human mind from its attribute. Indeed, as we have noted, Spinoza thinks it would be impossible to deduce a singular thing such as the human mind from the attribute of thought a priori.

We therefore glimpse again, as we did in the last chapter, too, the role of imagination and sense data in the construction of an edifice of knowledge. Images and sense data can be turned into adequate ideas when they are connected with the attributes of which they are modes. This, by turn, is part of the power of the third kind of knowledge, insofar as anything can become an adequate idea if it is thought through the idea of its respective attribute as its cause.

IV. The Adequate Knowledge of the Essence of Things

Before taking further the question of the notion of essence operative in intuitive science, and specifically what kind of knowledge of the essence of things it promises, let us briefly review some of the main points of this chapter. First we interpreted Spinoza’s definition of intuitive science in 2p40s2 as a proceeding from an adequate idea of God’s causal power considered under a certain attribute to an adequate knowledge of the *conatus* of singular things. Then we showed, on the basis of 2p45-7, that this “proceeding” is a logical/causal relation whereby God’s power sustains at every moment

the *conatus* of individual things. In the third section, we observed that the “proceeding” is not a deduction in the sense of a discovery of the essence of singular things on the basis of God’s power, but rather consists in thinking the essence of singular things (known through experience) *through* God’s power as befits the proper causal and logical order (if not the order of discovery). We noted that thinking singular things through God’s power in this way allows any inadequate idea to be transformed into an adequate one. Recall that in the first section of this chapter, we raised a difficulty in the interpretation of what Spinoza means by the *essence* of singular things. In Part 1, Spinoza speaks of essence as common to a number of individuals. In Part 2, Spinoza introduces an individualistic definition of essence, according to which each individual has its own essence. There are two questions that need to be answered in the remaining section of this chapter. First, what conception of essence does Spinoza have in mind in the definition of intuitive knowledge? And second, does intuitive knowledge grant a substantive knowledge of the essence of singular things, or merely show, less impressively, *that* such essences depend on God’s power?

Guérout argues that the essence of things towards which intuitive science proceeds is an essence *common* to many things, such as the conception of essence operative in the passage we looked at from Part 1. In defense of this claim, Guérout says that Spinoza never talks about the *singular essence* of things, but always about the essence of *singular things*.¹³⁸ According to Guérout, if Spinoza had meant to specify that intuitive science proceeds to an individual essence for each individual thing, he would have adopted the former formulation. In my mind, this is a very weak argument, since both formulations are ambiguous. The “singular essence of things” could just as

¹³⁸ Guérout (1974), 462.

much denote a common essence as the “essence of singular things” could denote an individualistic essence for each individual thing. Guérout interprets the essence to be common, in particular, to a given species. In an Averroist vein, Guérout thinks that in the state of beatitude induced by the third kind of knowledge, all human minds are the same, since the third kind of knowledge does not discriminate between individual essences, but proceeds to the essence that all human beings share, which is uniquely characterized by reason and understanding.¹³⁹ While it is true that, in Part 4, Spinoza speaks of human communities as exclusively united around their unique rational power, this is in the context of Spinoza’s practical philosophy, where Spinoza admits to adopting inadequate categories for the sake of human welfare. There is no evidence that such categories extend beyond the practical sphere, and into the metaphysical, with the exception of the anomalous passage in Part 1 that we flagged, and that Guérout leans heavily on.

At the bottom of Guérout’s interpretation seems to be the impression that knowledge of singular essences unique to each thing is impossible, coupled with the assumption that the knowledge *that* the essences of singular things follow from God would be too trivial. So Guérout reaches back to the conception of essence operative in Part 1, which Spinoza abandoned in Part 2, in order to fashion a reading of intuitive science that renders it somewhere between impossible and trivial. For Guérout, a knowledge of human essence is the perfect balance. Aside from the implausibility that Spinoza would revert to a conception of essence that he self-consciously abandoned in the very part of the *Ethics* in which he abandoned it, the knowledge *that* the essences of things follow from God is far from trivial, even if it is not as impressive as a substantive

¹³⁹ Guérout (1974), 464.

knowledge of essence itself. As we have already indicated, and as we will further see in what follows, such a knowledge is extremely powerful in an affective (and therefore ethical) dimension, precisely by virtue of its flexibility, whatever its epistemic merit turns out to be. It seems to me, then, that we are left with two possibilities. Either intuitive science somehow leads to a knowledge of the essences unique to singular things, or it is just the knowledge *that* the essences of things follow from God.

Curley aligns himself with the former interpretive option, that intuitive science promises adequate knowledge of the essences unique to singular things.¹⁴⁰ Curley's reading leans on a passage from the *TIE* where Spinoza appears to outline a program for gaining knowledge of singular essences. The passage in question follows shortly after the one quoted in the first chapter that invokes the "fixed and eternal things." Here is the last part of that passage again:

So although these fixed and eternal things are singular, nevertheless, because of their presence everywhere, and most extensive power, they will be to us like universals, *or* genera of the definitions of singular, changeable things, and the proximate causes of all things.

Commentators typically take these "fixed and eternal things" as analogues of the attributes and infinite modes of the *Ethics*. Curley makes a connection between these fixed and eternal things and the ideas of extension, motion and rest, i.e., the common notions, which serve as the foundations of reason. Here is the succeeding passage that Curley quotes in support of his interpretation of intuitive science:

there seems to be a considerable difficulty in our being able to arrive at knowledge of these singular things. For to conceive them all at once is a task far

¹⁴⁰ See Curley (1973), 57-8.

beyond the powers of the human intellect. But to understand one before the other, the order must be sought, as we have said, not from their series of existing, nor even from the eternal things. For there, by nature, all these things are at once. So other aids will have to be sought beyond those we use to understand the eternal things and their laws.

Nevertheless, this is not the place to treat them, nor is it necessary until after we have acquired a sufficient knowledge of the eternal things and their infallible laws, and the nature of the senses has become known to us. Before we equip ourselves for knowledge of singular things, there will be time to treat those aids, all of which serve to help us to know how to use our senses and to make, according to certain laws, and in order, the experiments that will suffice to determine the thing we are seeking, so that at last we may infer from them according to what laws of eternal things it was made, and its inmost nature may become known to us [...] (*TIE* §102-3; *G II* 37).¹⁴¹

One of the chief conclusions that Curley draws from this striking passage is that the third kind of knowledge follows upon the second, *pace* “rationalist” interpretations of Spinoza, which mistakenly predicate reason upon intuition. Curley interprets Spinoza’s statement of the preliminary need to acquire “a sufficient knowledge of the eternal things and their infallible laws” to mean that rational knowledge, or the second kind of knowledge, must be worked out *before* it is possible to pursue the knowledge of singular things – the province of intuitive science. Not only must we first come to an understanding of the general laws of nature, but the nature of the senses must also become known. Once such

¹⁴¹ This passage is quoted in Curley (1973), 57, though I have quoted here the later translation from the *Collected Works*, Vol. 1.

prerequisites are in place it will be possible to plan the proper experiments to determine the essences of singular things. Thus, Curley takes these passages from the *TIE* to suggest that the third kind of knowledge is, in a sense, the fulfillment, or culmination, of the second kind of knowledge, insofar as it is on the basis of universal, general claims that the knowledge of singular things is built up.

Diane Steinberg offers an interpretation that complements Curley's, albeit in different terms.¹⁴² According to Steinberg, intuitive science consists in a kind of "reduction," rather than a deduction or immediate inference. Like Curley, Steinberg sees intuitive science as equivalent to the second kind of knowledge taken to its extreme, where the knowledge of universals becomes the knowledge of some singular essence. Pointing out that, for Spinoza, the essence of an individual mode consists in a ratio of the common properties, motion and rest, Steinberg argues that, while reason regards this ratio in general terms, it does not capture the essence, but merely what it has in common with other individuals. A specification of the ratio, however, would capture the essence, according to Steinberg, and this specification is the "reduction" Steinberg takes to be definitive of intuitive science.

Without wishing to conflate the readings of Steinberg and Curley, I am interested for present purposes in what they have in common, namely, what we might call a "scientific interpretation" of intuitive science. According to both interpretations, rather than a different kind of knowledge altogether, the third kind of knowledge is the ideal terminus of the second. This is not to say that the two are not qualitatively different, since, as we have seen, the limit involves a shift from the universal to the singular, and

¹⁴² Diane Steinberg, "Knowledge in Spinoza's *Ethics*" in *A Cambridge Companion to Spinoza's Ethics*, ed. Olli Koistinen (New York: Cambridge University Press, 2009), 154-5.

from the non-essential to the essential. What we learn from the third kind of knowledge, on their interpretation, is just what we would learn about any given thing if we had what scientists in the twentieth century came to call a “unified theory of everything.”¹⁴³

According to the alternative reading under consideration, which we might, just for the sake of contrast, call the “metaphysical interpretation,” we do not, in fact, learn anything substantive about the essences of things in intuitive science, but rather simply *that* the essences of things (whatever their intrinsic nature) depend on God’s power. If, on the “scientific interpretation” of Curley and Steinberg, the third kind of knowledge is superior to the second for its epistemic fruits, on the “metaphysical interpretation,” while not epistemically barren by any means, as we shall see, the power of intuitive science lies most conspicuously in its potential to moderate the affects, and attain the intellectual love of God that Spinoza identifies with the pinnacle of human well-being. It will be helpful to look briefly at the affective dimension of intuitive science before returning to epistemic analyses and a critical evaluation of the competing interpretations.

We already saw in our analysis of 5p36s, where Spinoza compares two ways of knowing that the human mind depends on God, that the rational grasp of this truth “does not affect our mind as much” as when it is intuited. To be sure, both ways of knowing include affective dimensions; that is to say, reason is by no means affect-neutral. Spinoza explains in *Ethics* Part 3 how the mind “rejoices insofar as it conceives adequate ideas” (3p58dem; G II 187-8), and, as we know, both reason and intuitive science begin and end with the conception of adequate ideas. Wherein lies the affective superiority of the third

¹⁴³ Stephen Hawking uses this phrase on several occasions in *A Brief History of Time* (London: Bantam Books, 1988), identifying the discovery of such a theory as the goal of science. Steven Weinberg also speaks of a “theory of everything” as the goal of physics in *Dreams of a Final Theory* (New York: Vintage Books, 1994).

kind of knowledge over the second? The answer has to do with the intellectual love of God that the third kind of knowledge alone brings about.

Spinoza's arguments in Part 5 for the relation between the third kind of knowledge and the intellectual love of God *qua* pinnacle of human well-being are complex, incorporating references to various propositions in previous parts of the *Ethics*. Perhaps the easiest way to begin to understand the relation is to look back at the opening passages of the *TIE*, where Spinoza outlines his philosophical quest, and the goal he has discovered, and endeavors to promote. Having dismissed the typical pursuits of pleasure, honor, and wealth as vexed by the uncertainties of fortune and circumstance, Spinoza proclaims, "But love toward the eternal and infinite thing feeds the mind with a joy entirely exempt from sadness" (*TIE* §10; G II 7). In the *Ethics*, Spinoza defines love as an affect of joy accompanied by the idea of an external cause (3p13s; G II 151). The reason for the constancy of this joy has to do with the constancy of an eternal and infinite object of love *qua* external cause. But why would the eternity and infinity of something external cause joy in the first place? This is where the union of the human mind with God comes into play. The eternity and infinity of God causes joy when we discover that we partake of God's power, such that loving God's power and loving our own power are one and the same. Spinoza explains in 5p36:

The mind's intellectual love of God is the very love of God by which God loves himself, not insofar as he is infinite, but insofar as he can be explained by the human mind's essence, considered under a species of eternity; that is, the mind's intellectual love of God is a part of the infinite love by which God loves himself (G II 302).

So the intellectual love of God consists in a recognition of the union between the human mind and the divine essence. The question now is why the knowledge of this union affects the mind more when it is intuited than when it is grasped rationally?

Spinoza does not answer this question directly, but I suppose he takes it to be evident on the basis of what he has shown regarding the distinction between the second and third kinds of knowledge. Recall that reason arrives at knowledge of the mind's dependence upon God (which, insofar as this dependence expresses a relation of immanence, also expresses a union) via a syllogism: all things depend on God; the human mind is a thing; therefore, the human mind depends on God. By contrast, the third kind of knowledge sees the relationship between God and the human mind *uno intuitu*, in one glance. We know that, for Spinoza, knowing the union intuitively leads to a quantitatively more powerful affect, since knowing it rationally “does not affect our mind *as much*” (emphasis added). The superiority of the third kind of knowledge is not merely quantitative, however, since knowing the union intuitively leads to an affect exclusive to the third kind of knowledge, i.e., the intellectual love of God. The fact that the difference is qualitative as well as quantitative lends support to those interpretations that highlight experiential aspects of knowledge in Spinoza.¹⁴⁴

Having outlined the affective dimension of intuitive science, we are now in a position to critically evaluate the two interpretations of intuitive science under consideration. There are two arguments against the “scientific interpretation” of intuitive science. The first is a purely textual concern. While there is little doubt that the passages

¹⁴⁴ Herman De Dijn. “Wisdom and Theoretical Knowledge” in *Spinoza: Issues and Directions*, eds. Edwin Curley and Pierre-François Moreau (Leiden: E.J. Brill, 1990), 152: “So, far from the insights into the eternity of our singular essence being deducible from God, an *experience* of ourselves (as powerful in knowing) is required, and it is this experience which, in combination with a general metaphysical truth, leads to intuitive ‘knowledge’ of the inherence of *ourselves* as an eternal essence in God.”

from the *TIE* that Curley appeals to speak in favor of the scientific interpretation, there is nothing analogous to the *TIE*'s program for gathering knowledge of singular things in the *Ethics*. This discrepancy is not damning *per se*. Indeed, we have argued all along that it is necessary to go to the *TIE* for a conception of the intrinsic denominations of true ideas, which is absent from the *Ethics*. However, the discrepancy is less problematic in the case of adequacy, since we know Spinoza employs the notion of intrinsic denominations in the *Ethics*, although he never specifies its content. The same cannot be said for the *TIE*'s experimental program. This should be borne in mind.

The second argument against the scientific interpretation points to a deeper problem. According to our account of it, this interpretation reads the third kind of knowledge as an ultimate refinement of the second. Steinberg's "reductive" version of the interpretation brings out this feature of ultimacy well. According to her, the third kind of knowledge would be satisfied by a specification of the ratio of motion and rest of a given individual. We suggested that another way to think of this is in terms of the kind of knowledge that a unified theory of everything could yield about an individual. Of course, Spinoza never speaks of a unified theory of everything, but the notion of a complete science is, at least, not completely anachronistic, as we see from the notion of a *mathesis universalis*, which Descartes introduced.¹⁴⁵ The problem has rather to do with the apparent insensitivity of this interpretation to all of Spinoza's comments about the nature of essence. It is true that Spinoza characterizes an individual in terms of the ratio of motion and rest of its constituent parts. Nevertheless, we pointed above to an important distinction between the ratio of motion and rest, on one hand, and the striving

¹⁴⁵ Descartes uses this term in his *Regulae* (Descartes, Vol. 1, 19). Gaukroger cites the sixteenth-century Belgian mathematician, Adrianus Romanus, as the most likely source for Descartes's use of the term (Gaukroger, 100).

to persevere in that ratio, on the other. It is the striving to persevere, or *conatus*, that Spinoza identifies with the essence of a thing. If this distinction is borne in mind, it is not at all clear how a “reduction,” or some kind of perfection of theoretical and experimental science, could ever illuminate the *conatus*. Since the concepts of individuation and essence at work here did not figure in the *TIE*, it is difficult to see how they can be retrospectively fitted into the earlier framework. Indeed, it seems as if the earlier framework is too crude to accommodate a distinction between them.

I am not sure what to make of the *TIE*'s Baconian experimental program for discovering singular essences. It reads like a promissory note to be paid down under ideal circumstances at an unspecified future time. What is certain is that, in the *Ethics*, we find a very different emphasis with respect to the third kind of knowledge. Perhaps that is because the *Ethics* is just what its title suggests – an ethics – such that we should not expect Spinoza to follow up his gestures toward a scientific program, but to focus rather on the affective, practical dimensions of knowledge. It has often been said that there are as many interpretations of the third kind of knowledge as there are interpreters of Spinoza. With that in mind, I hesitate to add to the *mêlée*, and to come down definitively on one side or the other of the interpretive question we have been considering. However, I do not think the evidence is equal on both sides, and my leanings will be clear in what follows. Towards gaining a better understanding of it, I would like respond to two potential objections to the “metaphysical interpretation.”

The first objection is simply that the third kind of knowledge, on this reading, is too anemic. How could Spinoza be so excited about a kind of knowledge that shows merely *that* the essences of singular things depend on the power of God, especially since

this can also be known through the second kind of knowledge? We have already given one answer to this question, pointing to the resounding affective significance of the specifically intuitive grasp of this knowledge. I now want to argue that it is not anemic from an epistemic standpoint either. Of course, as noted, the second kind of knowledge is sufficient to reach the conclusion that the human mind depends on God, insofar as all things do. However, I think there is reason to think that these two kinds of knowledge are in fact *not* equal from an epistemic standpoint. Just because two kinds of knowledge result in the same conclusion does not mean that they contain precisely the same content, since the path to the conclusion must be considered as part of the equation. In the case of our knowledge that the human mind depends on God, when this is seen directly, rather than syllogistically, the relation between God and the human mind is also grasped. It is in grasping this relation that we understand the power of the human mind, i.e., its *conatus*. Yovel puts the point in this way:

there is no additional *information* gained through the third kind of knowledge.

All the information we need and can possess of the object of our inquiry has already been supplied by *ratio*, the scientific investigation which subjects the object to a network of mechanistic natural laws. But yes, there is a distinct cognitive gain involved here, because what we already know of the object by external causality is now *interiorized*, to produce a grasp of its *particular essence* and, thereby, also of the immanent-logical way in which it derives from the nature-God and inheres in it.¹⁴⁶

It is not entirely clear to me what Yovel means by the “interiorization” of external causality, but he likely has in mind the striving to persevere in a given ratio of motion and

¹⁴⁶ Yovel (1990), 159.

rest that, we said, must be distinguished from the ratio itself. From the standpoint of the second kind of knowledge, individuality is a ratio rather than a striving. The *conatus* is missing from the second kind of knowledge.

The second worry about the metaphysical interpretation is that it breaks up any continuity between the two kinds of knowledge, and fails to explain how, as Spinoza writes in 5p28, “The striving, or desire, to know things by the third kind of knowledge cannot arise from the first kind of knowledge, but can indeed arise from the second” (G II 297). Aside from according with certain important passages from the *TIE*, the scientific interpretation has the virtue of elegantly accounting for the transition from the second to the third kind of knowledge, as we saw. If the third kind of knowledge concerns the union of God and things, in what way does reason prompt the desire for knowledge of this union? Or, in what way does reason lead to intuitive science, on the “metaphysical interpretation”?

Herman De Dijn, who could be classified as an exponent of the “metaphysical interpretation” (along with Yovel, and, as we saw above, Wilson), provides an account of the emergence of intuitive science out of rational knowledge. By doing science, at the level of reason, explains De Dijn, we develop a more objective, de-anthropomorphized view of the world with correlative increased feelings of power, as compared with remaining at the first level of knowledge. “In the joy of adequate knowing,” De Dijn continues,

the rational knower experiences himself as transcending his ordinary concerns in the pursuit of a purely scientific, objectifying view of things. But he can also envisage himself and his experience as part of the impersonal, non-goal-directed

whole. At this moment, in this ‘envisaging,’ something other than a purely intellectual process takes place: the knower relates *himself* as a singular entity to the whole, now envisaged as all-encompassing God or Nature of which the individual can *feel* himself to be an eternal part.¹⁴⁷

De Dijn’s account deftly interweaves both affective and epistemic dimensions of the second and third kinds of knowledge. Feelings of power and instances of understanding map on to one another, and, as it were, feed one another. Reason leads into intuition *both* because the epistemic pieces are in place *and* because “the joyful *experience* of rational knowing leads to a desire for new experiences of power and self-transcendence in the intellectual pursuit.”¹⁴⁸ Having de-anthropomorphized one’s understanding of the world, having taken specifically human ends out of the picture in the service of objectivity, the door is open epistemically to reinsert oneself into the scientific worldview, and it is easy to see how the essential striving to persevere would lead the way through that door. Spinoza’s famous letter on the worm in the blood helps to further develop the metaphysical interpretation.

In Letter 32, Spinoza responds to Oldenburg’s question about the coherence of the parts of nature with his famous example of the worm in the blood. The point of Spinoza’s example is to illustrate how, within a limited perspective, what is actually a part can be mistaken for a whole. Spinoza explains,

if we should suppose that there are no causes outside the blood which would communicate new motions to the blood, and no space outside the blood, nor any other bodies to which the particles of blood could transfer their motion, it is

¹⁴⁷ Herman De Dijn “Wisdom and Theoretical Knowledge” in *Spinoza: Issues and Directions*, edited by Edwin Curley and Pierre-François Moreau (Leiden: E.J. Brill, 1990), 151.

¹⁴⁸ *Ibid.*, 150.

certain that the blood would always remain in the same state, and its particles would undergo no other variations than those which can be conceived from the given relation of the motion of the blood to those of the lymph, chyle, and the like. Thus the blood would always have to be considered as a whole and not as a part. But because there are a great many other causes which restrain the laws of the nature of the blood in a certain way, and which in turn are restrained by the blood, it happens that other motions and other variations arise in the particles of the blood which follow not simply from the relation of the motion of its parts to one another, but from the relation of the motion of the blood as a whole and of the external causes to one another. In this way the blood has the nature of a part and not of a whole.¹⁴⁹

In this passage, Spinoza describes a change of perspective somewhat analogous to the Copernican revolution. Spinoza contrasts an understanding of the motions of the blood which does *not* take into consideration the effects of causes external to the blood with one which *does*. The former is analogous to the Ptolemaic account of the retrograde motion of Mercury and Venus in terms of epicycles – an explanation which remains within the confines of the Aristotelian model, according to which the earth and the visible sky formed a “whole.” The latter, of course, is analogous to the Copernican/Galilean account, according to which the earth is just one planet among many, including Mercury and Venus, which all orbit the sun. Thus instead of being viewed as the whole, the earth began to be regarded as parts of a vast universe. The key to this transition, according to the paragraph just quoted, is the discovery of “external causes,” or in other words, more

¹⁴⁹ *A Spinoza Reader*, edited and translated by Edwin Curley (Princeton, NJ: Princeton University Press, 1994), 83; G IV 171-2.

universal laws of nature with greater explanatory power. This shift, then, represents a shift from one theory to another, from a less adequate theory to a more adequate theory, and remains within the province of reason, the second kind of knowledge. Spinoza adds, further along in the letter, “since the nature of the universe is not limited, as the nature of the blood is, but is absolutely infinite, its parts are restrained in infinite ways by this nature of the infinite power, and compelled to undergo infinitely many variations.”¹⁵⁰ A unified theory, or even simply universal laws, would presumably grant us the knowledge of the variations of the parts. According to the scientific interpretation, that knowledge constitutes the third kind of knowledge. But Spinoza says next, “*But*, in relation to substance I conceive each part to have a closer union with its whole.”¹⁵¹ According to the metaphysical interpretation, it is the grasp of this union that constitutes the third kind of knowledge. Our present question is: why should knowledge of this union arise specifically from scientific understanding?

The letter on the worm in the blood indicates two fundamental movements of knowledge. First, there is the movement from a partial perspective to a holistic perspective. This shift, we have seen, is facilitated by reason. Then, there is another shift from a knowledge of how parts are governed by laws to a knowledge of “a closer union” between part and whole. We can therefore reformulate De Dijn’s analysis of the transition from reason to intuitive science in epistemic terms. Reason gives knowledge of truly universal, rather than local, laws. Reason sets up a universal truth according to which subordinate claims are deduced, as we saw in the last chapter. But this universal

¹⁵⁰ Ibid., 84; G IV 173.

¹⁵¹ Ibid., emphasis added.

truth mediates what, from another perspective, is still an *immediate* relationship. Intuitive science emerges out of reason in its grasp of the closer union.

Appendix: Some Reflections on Spinoza's Idea of God

Spinoza's conception of God is undoubtedly the most distinctively Spinozist of Spinoza's concepts, and probably also the most important concept for his philosophical system. In a sense, it is not really possible to compare Spinoza's God with the other important elements in his system, since they are all, at least if you accept Spinoza's terms, ways in which God is modified or conceived. You could say that God is not only the Ur-concept of Spinoza's system, it is *the* concept. This has been borne out for us by the fact that Spinoza's idea of God has, to a greater or lesser extent, been a presence in each of the chapters of this dissertation. In the first chapter, it was necessary to introduce the idea of God in order to gain a grasp of the general structures of Spinoza's ontology. Even in the case of the concept of adequacy, which, I believe, is one of the few of Spinoza's concepts that is *not* parasitic on the idea of God, and even might be said to be more fundamental than the latter in some respects, it was necessary to argue that in fact the idea of God is *not* determinative of the intrinsic properties of a true idea, even if it *is* determinative of the *truth* of ideas. When discussing the first kind of knowledge, and its inadequacy in the second chapter, the idea of God is felt precisely insofar as it is *not* directly present. Imagination is an *experientia vaga* – a random, or wandering experience of the world – because it lacks the essential orientation and grounding provided by the idea of God. This is why Spinoza says in the *TIE* that it is necessary to arrive at the idea

of God “as quickly as possible” (*quanto ocius*) (G II 19). In the third chapter, we encountered the idea of God again, in particular, as that concept which is non-negotiable in Spinoza, in other words, that which cannot be proven or falsified in experience, yet which, we maintained, provides a foundation for scientific engagement with reality. And in this fourth chapter, we have encountered the idea of God most explicitly, since, as we have seen, *scientia intuitiva* begins in an adequate idea of certain attributes of God.

Spinoza’s way of ideas reaches a peak when the knowledge of God is attained. There is a movement from the given true ideas to the knowledge of God, in the first place, and then there is a movement from the idea of God to an adequate conception of things, in the second. We have considered these two movements over the course of the preceding. I think it will be worth isolating, for a moment, the idea of God from the way of ideas in order to appreciate the uniqueness of this most pivotal and central of Spinoza’s concepts. Obviously, much has been written about the God of Spinoza, and it will scarcely be possible to add much to what has already been said in the short span of these reflections, but there are a few points worth making in the present context.

First, there is Spinoza’s employment of the word “*Deus*,” “God.” It is almost funny that Spinoza used this word (even if it is completely understandable considering the era in which he wrote), since, in many ways, it signifies something entirely different from what is normally meant by the word “God.” Spinoza’s God did not create the world, and does not transcend the world; it is neither benevolent nor provident; strictly speaking, it is possessed neither of will nor intelligence. On the contrary, it acts by necessity, rather than choice, and is comprised, at least in one guise, by extended matter. It is in this light that Spinoza’s gloss, “*Deus seu Natura*,” “God or Nature,” seems to

make so much sense of things. Spinoza seems to be talking not so much about God as he is about Nature. However, insofar as he is *not* talking about nature exclusively as a creation, but rather as encompassing both *natura naturans* and *natura naturata*, the disjunction (God or Nature) is *apropos*. There are other reasons that Spinoza's employment of the term, "God," is not perverse despite its unorthodoxy, but we shall not delve into them here.¹⁵²

Students of Spinoza's conception of God might feel the discomfort, or at least awkwardness, of referring to "it" with a singular pronoun. The awkwardness stems not from the impersonal aspect of the pronoun, but from the fact that Spinoza's God is not limitable by any means. This is akin to the point we made above about Spinoza's God not being one among many concepts, but rather *the* concept in Spinoza's philosophy. But we can take this further insofar as it is not appropriate, strictly speaking, to refer to Spinoza's God in the singular person as if there was *only one*. It is true that Spinoza describes his God as unique – there are not others; nor, however, is there just one. Number is not an applicable property or category in this case. Spinoza explains to his friend Jarig Jelles that "since the existence of God is his essence, and we cannot form a universal idea concerning his essence, it is certain that someone who calls God one or unique does not have a true idea of God, or is speaking improperly about him."¹⁵³

To conceive God's essence in terms of existence is not an innovation of Spinoza's. The so-called "ontological argument," which dates back to Anselm, and

¹⁵² In particular, I have in mind the fact that intellectual love of God constitutes beatitude, for Spinoza. If Spinoza's God is not an object of worship in the orthodox sense, knowledge of God, or more accurately, knowledge of our union with God, is the pinnacle of human experience. In this sense, Spinoza's employment of the word "*Deus*" is more suggestive than "*Natura*," although even in this case they are, in fact, interchangeable.

¹⁵³ G IV 240, Curley's working translation.

which Descartes helped to revive, turns on the idea that God cannot properly be conceived except as existing. Spinoza's interpretation and usage of the notion that existence is essential to God led, however, to very unorthodox conclusions. The definitive move from the traditional notion of God as essentially existing to the Spinozist God is the interpretation of the infinity implied in God's essential existence, or so I would like to suggest. In the first place, Spinoza interprets God's infinity as absolute, as opposed to being infinite merely in one kind of way (as are the attributes). An absolutely infinite being, i.e. God, exists, for Spinoza, because there is nothing that can prevent it from existing.¹⁵⁴ Spinoza's three proofs for God's existence in 1p11 (or four, depending on whether the *a priori* reformulation of the third *a posteriori* proof is counted as a separate proof or not) are essentially variations on this theme. While not wishing to conflate them, for present purposes it is possible to present a representative thread of argumentation. Spinoza's arguments in the first half of *Ethics* Part 1 rely heavily on the idea that distinct substances can have nothing in common with one another (1p2); if they had something in common, then whatever it is they had in common would be more basic than the substances themselves, and it would be possible to conceive the substances through that which they had in common, violating Spinoza's definition of substance as that which "is in itself and is conceived through itself, that is, that whose concept does not require the concept of another thing, from which it must be formed." Moreover, substances that have nothing in common with one another cannot causally affect one another (1p3). There is nothing that can prevent the existence of an absolutely infinite

¹⁵⁴ Leibniz would want to add that it not only has to be the case that nothing prevents the existence of an absolutely infinite being, but also that the being is *possible*. See, Leibniz, 199, 231. So far as I can tell, Spinoza takes the possibility of an absolutely infinite being for granted – that is to say, he takes for granted that its definition does not imply a contradiction.

being since it would have to have something in common with the absolutely infinite being in order to causally affect it, but in that case it would be part of it, and that would prove that it exists. After proving the existence of an absolutely infinite being, it follows quickly that there can be nothing else, since all attributes pertain to the absolutely infinite being – “Except God, no substance can be or be conceived” (1p14; G II 56).

This is the point I wanted to get at. I have necessarily stepped quickly through Spinoza’s argumentation, and have skipped certain details,¹⁵⁵ but the point is to recognize that Spinoza conceives God as *absolutely* infinite, which means, for him, that there is nothing besides God. It does not make sense to think about God creating anything distinct from him, because there can be nothing distinct from an absolutely infinite being. It does not make sense to think about God willing something that he does not have, because an absolutely infinite being cannot lack anything. Completely self-sufficient, opposed by no external constraints, Spinoza’s God simply exists in all the ways in which it is possible to exist. Whatever can exist does exist. And whatever does not is impossible. Spinoza’s God is existence itself in the purest possible way. Spinoza’s name for this existence is simply “eternity” (1d8; G II 46).

It is against this backdrop that it becomes possible to see the pivotal role that Spinoza’s idea of God plays in his entire system, and especially in his way of ideas, and why Spinoza says it is necessary to reach the idea of God as quickly as possible. In the occasions we had to treat God’s nature up to this point, we touched on some of God’s essential features, such as necessity, infinity, and power. I have thought it useful here to

¹⁵⁵ For a logical analysis of Spinoza’s arguments for God’s existence, see Don Garrett, “Spinoza’s ‘Ontological’ Argument,” *The Philosophical Review* 88 (Apr. 1979): 198-223; Martin Lin, “Spinoza’s Arguments for the Existence of God,” *Philosophy and Phenomenological Research* 75 (Sept. 2007): 269-297.

delve further into the nature of Spinoza's God, since it is important to see why Spinoza's God is able to function in Spinoza's philosophy in the way that it does, but it is not immediately obvious how or why it is able to do so. In this connection, I want to stress the point we just made, that Spinoza's God comprises everything that *can* exist – no less and no more. The reason this conception is so important, at least within Spinoza's philosophy, is its implication of no gaps, that everything is laid out. One of the chief upshots of Spinoza's conception of God as absolutely infinite, and therefore lacking nothing, is that nothing else *could* have happened (1p33). In other words, it is not the case that God *could* have created the world differently.¹⁵⁶ Spinoza considered this to be a conclusion of significance for the prospects of science, writing,

I have no doubt that many will reject this opinion as absurd, without even being willing to examine it – for no other reason than because they have been accustomed to attribute another freedom to God, far different from that we have taught (D7), namely, an absolute will. But I also have no doubt that, if they are willing to reflect on the matter, and consider properly the chain of our demonstrations, in the end they will utterly reject the freedom they now attribute to God, not only as futile, but *as a great obstacle to science* (1p33s2 emphasis added; G II 74-5).

Spinoza's reasons for thinking that a voluntarist conception of God is an obstacle to science are clear; we already touched on them in our discussion of Spinoza's

¹⁵⁶ For a fuller treatment of "necessitarianism" in Spinoza, see Don Garrett, "Spinoza's Necessitarianism," in *God and Nature: Spinoza's Metaphysics*, ed. Yirmiyahu Yovel, 191-218 (Leiden: E.J. Brill, 1991). For a defense of a weaker conception of necessity in Spinoza, according to which only God's existence and general facts about the laws of nature are necessary, while particular facts are contingent, see Edwin Curley and Gregory Walski, "Spinoza's Necessitarianism Reconsidered," in *New Essays on the Rationalists*, ed. Rocco Gennaro and Charles Huenemann, 241-62 (New York: Oxford University Press, 1998).

methodology in Chapter 3. The problem with a voluntarist conception of God, and, in a related way, the problem with contingency, is that it leads human beings to search for final causes rather than efficient ones. As Spinoza explains in the appendix to Part 1, were it not for mathematics, as well as other factors that Spinoza does not name, the truth would have remained “hidden from the human race to eternity.”

If mathematics on its own is sufficient to initiate the transition from looking for final causes to looking for efficient ones, or at least, to considering the essences of things, one might wonder, why is Spinoza’s idea of God necessary? Spinoza addresses a similar question in the *TIE*. In the *TIE* the question is why, if we have a given true idea, is it necessary to have a method on top of that? The worry expressed by this question concerns a regress of reasoning – does the method prove the idea is true? If so, what proves the method is true? And so on. Spinoza replies,

if, by some fate, someone had proceeded in this way in investigating Nature, i.e., by acquiring other ideas in the proper order, according to the standard of the given true idea, he would never have doubted the truth he possessed (for as we have shown, the truth makes itself manifest) and also everything would have flowed to him of its own accord.

But because this never or rarely happens, I have been forced to lay things down in this way, so that what we cannot acquire by fate, we may still acquire by a deliberate plan, and at the same time so that it would be evident that to prove the truth and good reasoning, we require no tools except the truth itself and good reasoning. For I have proved, and still strive to prove, good reasoning by good

reasoning. Moreover, in this way men become accustomed to their own internal meditations.

But the reason why Nature is rarely investigated in the proper order, is, first, that men have prejudices whose causes we shall explain afterwards in our Philosophy [...] (*TIE* §44-5; G II 17).

Spinoza's reply to the question he puts to himself in the *TIE* applies equally to that we raised above concerning the need for the idea of God. Indeed, as we have already seen, arriving as swiftly as possible at the idea of God is an essential part of the method that Spinoza outlines in the *TIE*. Thus the reason for needing the idea of God, and the reason for needing a method are one. Spinoza's answer is simply that it is not *absolutely* necessary, insofar as we could imagine a scientist, for instance, simply going about her business in an orderly way, discovering all manner of truths about nature. However, given human prejudices, which Spinoza canvasses in the appendix to *Ethics* Part 1, human beings generally need guidelines, i.e., a metaphysics that will keep them on course – the stone fell and killed the man because the wind was blowing hard and the man was walking that way, not because it fell *in order* to kill him, to use Spinoza's example (1 Appendix; G II 80-1). Spinoza clearly conceived of his metaphysics, and in particular, his idea of God, as conducive to scientific progress; and of alternatives as obstructive.

The last point I will make about Spinoza's idea of God concerns the feature of being *causa sui*. Being so far removed from the debates about God's existence that consumed seventeenth-century philosophers, it may seem utterly unproblematic for us (or perhaps merely meaningless) for that whose essence involves existence to be described as *causa sui*. However, both Caterus and Arnauld found Descartes' talk of God's causing

himself in the third Meditation to be perverse. We already saw that Spinoza himself was reluctant to speak of God having a cause in the *TIE*. Eventually, however, Spinoza adopted Descartes' notion that a being whose essence involves existence is also its own cause. This question of cause in relation to God's existence is clearly relevant to, and potentially a problem for, our joint contentions that: (1) Spinoza never appeals to self-evidence; and (2) an adequate idea always has the intrinsic property of being conceived through its cause. Clearly, for Spinoza, we are able to have an adequate idea of God. What is more difficult to see is how this idea can honestly be considered to be conceived through its cause. Is it not the case that with the idea of God we hit rock bottom and our spade is turned?

Again our question concerns the nature of Spinoza's God, and its status with respect to the system as a whole. There is no doubting that there is a difference between the sense in which God has a cause and the sense in which his modifications are caused. The difference here is the same as that between *natura naturans* and *natura naturata*. This does not mean that there is not a sense to the claim that God has a cause, and that that sense is important for Spinoza's system as a whole. At least, that it does have such a sense is what I would like to maintain. The point is easiest to see by considering the alternative. What kind of God would Spinoza's God be if it caused everything except for itself? Another way to state the question is: what would be the answer to the question, why does God exist?, if God himself were not the answer? There could not be no reason why Spinoza's God exists. Spinoza's God is causal power itself, as we saw in an earlier section of this chapter. Spinoza's God causes its own modifications *in* causing itself. The reason it causes all the modifications that comprise the natural world studied by

scientists is the same reason it exists at all – it has the power to. In this sense, the spade is not turned, for there are reasons all the way down.¹⁵⁷ This provides a fuller sense to the proposition we examined above: “God’s power is his essence itself” (1p34; G II 76).

¹⁵⁷ For a treatment of the thoroughgoing nature of the principle of sufficient reason in Spinoza, see Michael Della Rocca, “A Rationalist Manifesto: Spinoza and the Principle of Sufficient Reason,” *Philosophical Topics* 31: 75-94.

Conclusion

Spinoza was not the first to notice that the mechanical revolution called for an immanent analysis of the nature of ideas and their relation to objects, if materialism was to be spurned. Descartes inaugurated the so-called “new way of ideas,” introducing “clarity and distinctness” as the first attempt to identify intrinsic denominations of truth. We have already remarked upon the shortcomings of “clarity and distinctness” as such denominations. Descartes’ only recourse when faced with the question of how one recognizes the clarity and distinctness of a perception was to the “light of nature.” It is as if Descartes properly framed the question (although we presented reasons above to doubt whether he understood it to the extent Spinoza did), but failed to provide a viable answer. As we have seen, Spinoza never rested content with claims to self-evidence. Even in formulating the doctrine that truth is the sign of itself, Spinoza gave pragmatic answers to the skeptic, appealing to the productivity of true ideas, in addition to offering the parallelist framework within which a substantive reply can be elaborated, as we showed in Chapter 1. Spinoza picked up where Descartes left off, developing an account of clarity and distinctness according to which an idea is true on the grounds of intrinsic properties if it is thought through its cause.

Spinoza was not the first either in seizing upon genetic definitions as paradigmatic. Hobbes before him developed the importance of synthesis in elaborating his nominalist epistemology, undercutting crude distinctions between “rationalism” and “empiricism” by displaying how reasoning from causes could fit with a fidelity to sense data. For Hobbes, however, such reasoning was no less a matter of bodies in motion than

anything else. Hobbes rejected the “new way of ideas,” even if he embraced many of the same implications of the mechanical revolution that gave rise to it.

These remarks are not intended to downplay Spinoza’s originality, but rather properly to focus it. In terms of philosophical methodology and epistemology, Spinoza was deeply innovative. There are numerous ways one could characterize and classify Spinoza’s diverse contributions on this front, and I take the following to be just one. For me, two methodological innovations stand out. First, drawing on Descartes’ philosophy of ideas, and Hobbes’ deployment of genetic definitions, Spinoza fashioned a methodological framework that deftly synthesizes the contributions of his chief contemporary influences. Rejecting Hobbes’ contention that ideas were nothing more than bodies in motion,¹⁵⁸ Spinoza adopted a Cartesian philosophy of ideas. By turn, Spinoza deployed Hobbes’ theory of genetic definitions to augment Descartes’ theory of clear and distinct ideas, yielding his own unique theory of adequate ideas. The theory of adequate ideas, as a synthesis of Cartesian and Hobbesian elements, I submit, is the first important innovation.

It is in the context of the first innovation that it is possible to understand the second. Spinoza’s theory of adequacy distinguishes between an inadequate idea of a circle and an adequate one, but this distinction is merely formal so long as it is restricted to mathematical objects. Spinoza’s aim, as we saw, is the knowledge of “Physical and real beings.” This requires that “Physical and real” *causes* be found upon which real knowledge can be built up. For Hobbes, this shift from the formal to the “physical and real” is illegitimate, since for the English philosopher, truth resides only within discourse. Descartes, by contrast, searched for such a foundational cause, arriving at the *cogito*.

¹⁵⁸ See Letter 4 to Oldenburg for Spinoza’s explicit denial that ideas are bodies.

Spinoza followed neither the nominalist path nor the Cartesian one. As the anecdotal synopsis related by Leibniz goes, most philosophers start with creatures, Descartes started with the mind, Spinoza starts with God.¹⁵⁹ Spinoza's metaphysical framework itself, within which a knowledge of "Physical and real beings" can be developed, is the second major contribution to epistemological matters.

We saw that two kinds of causes can be discerned within Spinoza's metaphysical framework: (1) an infinite series of finite causes; and (2) a finite series of infinite causes. The former belong to what Spinoza calls "the common order of Nature," which corresponds to the order of bodily affections. The latter is a series of governing causes – Curley calls them "nomological facts"¹⁶⁰ – which control the behavior of the infinite series of finite causes. An infinite series of causes is beyond the capacity of the finite, human mind. But we can get to know the "vertical" line of causality, whereby the infinite series is stamped, as it were, with common, discernible features.

These two innovations – the theory of adequacy whereby an idea is true if thought through its cause, and the metaphysico-causal framework which provides the theory of adequacy with "physical and real" ontological purchase – lay the groundwork for Spinoza's way of ideas. Through this lens, Spinoza's three kinds of knowledge can be interpreted.

As an inadequate form of knowledge, the first kind of knowledge lacks sufficient causes through which to think its objects. Imagination involves the formation of universal notions on the basis of bodily affections. This kind of knowledge is useful for

¹⁵⁹ Quoted in W.N.A. Klever, "Spinoza's Life and Works," in *Cambridge Companion to Spinoza*, ed. Don Garrett (Cambridge, UK: Cambridge University Press, 1996).

¹⁶⁰ Curley (1969), Chapter 2.

getting around in the world, insofar as it involves distinctions relevant to embodied survival, but as a function of the particular constitution of individual bodies, it is a subjective form of cognition, which distorts the objective nature of things. At this level of knowledge, the knower does not transcend the haphazard constructions built up from the common order of nature, or in other words, the infinite series of finite things. So long as the mind remains exclusively at this level, it can only passively wait as new experiences lead to gradually modified universals according to whatever happens to impress the body most; it never, of course, gets to the end of this infinite series, and lacking any other principle of organizing the data, its perceptions are like so many conclusions without premises.

As forecasted in the Introduction, the *per causam* framework is not able to fit quite so cleanly on the forms of adequate knowledge as on the single inadequate form, since there is not one, but two of the former. Since both of these forms of knowledge are adequate, we should expect that they both instantiate knowledge *per causam*; by turn, since there are two distinct kinds, we should expect that they instantiate two forms of *per causam* knowledge. On the basis of our findings, to what extent is this the case?

In the third chapter, we devoted a section to analyzing our conclusions about reason in terms of the *per causam* framework, because the connection is far from obvious. Spinoza articulates neither the second nor the third kinds of knowledge in the terms of knowledge *per causam*, but rather in the logical terms of “following,” “proceeding,” “deducing” and “inferring,” as we have observed. These terms need to be read as corresponding to strictly causal relations in order to be fitted into the framework. This interpretive maneuver, however, is not an imposition, but is rather warranted, indeed

demanded, by Spinoza's doctrine of parallelism. Logical order is the parallel in the attribute of thought of causal order in the attribute of extension. The *idea Dei* maps in logical terms the causal connections which govern and comprise the *facies totius Universi* (the face of the whole universe). Insofar as the human mind has adequate ideas, its ideas are un-mutilated parts of the *idea Dei*, and so correspond to the causal structure of the universe just as some of God's ideas do. The connection between the "proceeding" in the definition of intuitive science to basic metaphysical causal structures is perhaps easier to detect than is that in the case of the "following" in the definition of reason. This has to do with the terms of the respective definitions. Where the third kind of knowledge proceeds from the idea of *God* to the knowledge of *things*, reason advances from common notions to less general universal notions. It is perhaps easier to see the terms of intuitive science as basic elements of Spinoza's ontology, since his ontology is divided among substance and its modifications; God and things are alternative denominations for this division. By contrast, reason trades in the nature of attributes, as well as the more nebulous infinite modes. If these ontological categories might seem more abstract than the categories with which intuitive science deals, they are not, in fact. The governing structures that reason picks out are no less part of the fabric of Spinoza's ontology than God and things. The laws of nature are in the world for Spinoza as much as mathematics is in nature for Galileo; and just as, for Galileo, with regard to those mathematical demonstrations that the human mind grasps, "its knowledge equals the Divine in objective certainty, for here it succeeds in understanding necessity, beyond which there can be no greater sureness,"¹⁶¹ so, for Spinoza, to grasp metaphysical structures is "for our mind to reproduce completely the likeness of Nature."

¹⁶¹ Galilei Galileo. *Dialogue Concerning the Two Chief World Systems*. Trans. S. Drake. Berkeley:

In this way, reason and intuitive science represent two forms of knowledge *per causam* in the domain of physical and real beings. To what extent, however, do the second and third kinds of knowledge actually fit the paradigmatic model of generating the circle by rotating a line around a fixed end? According to Guérout, at least, the fit is one-to-one. Guérout claims that Spinoza simply adapts the genetic method of geometry to the knowledge of physical and real beings,¹⁶² explaining,

Just as Geometry deduces from the fundamental idea of quantity, determined to infinity by movement, the essence of a multitude of figures, so Philosophy, drawing from the fundamental idea of God a multitude of things (*plurima*), deduces therefrom an adequate idea of the essence of things, which constitutes the formation of the third kind of knowledge.¹⁶³

Another passage offers a complementary perspective on the similarity of geometry to Spinozist philosophy as Guérout sees it:

Producing its ideas spontaneously, by the very spontaneity of God, as in geometry it produces from itself, without exterior constraint, ideas of beings of reason, the human understanding can know genetically the essence of real things just as much as geometry knows those of its objects, because, in both cases, the creative spontaneity [*la spontanéité créatrice*] of the ideas of these essences is not an arbitrary fantasy, but the productive power of the true [*la puissance productrice du vrai*], governed from within by the laws of its nature, which is to say by the very laws of the nature of God.¹⁶⁴

University of California Press, 1967.

¹⁶² Guérout (1974), 478.

¹⁶³ *Ibid.*, 480.

¹⁶⁴ *Ibid.*, 487.

Thus, for Guérout, there is really no difference between Euclidean geometry and Spinozist philosophy except for the field of application. Just as the geometer, having grasped the fundamental idea of quantity, can manipulate it in thought so as to produce new figures whose construction rules are transparent because genetically rendered, so the philosopher, starting with the idea of the most perfect being, can genetically produce the fundamental structures of reality. Far from something being lost in the application of geometrical method to metaphysics, in fact, something is gained, namely, a hold on the physical and real.

Guérout's reading is undoubtedly powerful insofar as it tells a compelling story about Spinoza's assimilation of geometrico-synthetic methods to metaphysics. However, the knowledge of physical and real beings, in Spinoza, does not fit the geometrical genetic paradigm as seamlessly as Guérout's account would have it. As we noted in the digression on analytic and synthetic method in Chapters 3 and 4, it is not the case that subordinate truths are simply deductively extracted from the basic terms of the second and third kinds of knowledge. In the case of common notions, there is a reasoning process *from* the notions of extension, motion, and rest *to* such laws as the principle of inertia in the setting up of the foundations of reasoning. Even in the case of our idea of God, we start, according to Spinoza, with other given true ideas from which we build up (as quickly as possible) to the most perfect idea. The power of the idea of God, moreover, is not, *pace* Guérout, that it provides a field for the free play of reason (although it does, as we saw, underwrite the validity of the principle of sufficient reason). The idea's power comes from the fact that the idea of any other thing can be adequately conceived if it is thought through the idea of God's essence. But the thing must be given

in some other way. It is not arrived at through the idea of God on its own. The same is true, we saw, in the case of reason, where subordinate truths are produced by introducing limiting constraints on the most universal laws. Those limiting constraints come not from the most universal truths themselves, but rather from the data of experience.

Since the data of experience is inadequate, and culled from the common order of nature, one might think that this poses a problem for Spinoza's theory of knowledge. If inadequate ideas must be accommodated within purely adequate forms of knowing, how do these forms remain pure? Spinoza is quite clear that the forms of knowledge do remain pure, although his reasons for thinking so must be constructed, since he does not address the problem directly. I think the answer must be different in the case of the two kinds of adequate knowledge, respectively. In the case of reason, the answer is that the inadequate properties of the object are ignored, and the limiting factors introduced into the more universal theory are culled exclusively from the properties that the object has in common with all others, i.e., extension, motion, rest, etc. It is for this reason that, while the second kind of knowledge advances to more local laws, it never arrives at singulars, since it must always abstract from the singularity of the thing. By contrast, intuitive science does claim to yield knowledge of singular things. On the "scientific interpretation" of intuitive science, the essence of a thing is adequately ascertained when, at some ideal stage, science does descend all the way to particulars. That stage is the achievement of a unified theory of everything. On the "metaphysical interpretation," which I confessed to incline towards, the answer is not as different from the case of reason as might first be thought, since what is known is not the substantive essence of a singular thing, but rather *that* the thing's essence (whatever its intrinsic nature), its

striving to persevere, in other words, depends directly on God's power, and is in fact a part of it. In this case, intuitive science, like reason, picks out not a singular property, but rather a common property of singular things. The difference from reason is just the kind of property that is picked out: the striving to persevere *in* a given ratio of motion and rest, rather than the ratio of motion and rest itself.

In these ways, Spinoza demonstrates how the second and third kinds of knowledge offer means to render inadequate ideas adequate, thus activating the mind's power to understand. Since this process involves an analytical movement in concert with a synthetic one, we do not have a case of a purely genetic deduction, as in the case of pure geometry. An analogy with *applied* mathematics might be more *apropos*. This is not, however, to denigrate the undeniable importance that the geometrical paradigm has for Spinoza's epistemology. It is simply to suggest that the transition from the *entia rationum* of pure mathematics to physical and real beings is not seamless. In order to understand Spinoza's mature theory of knowledge, as we find it presented in the *Ethics*, it is necessary to take into account both the pertinence of the geometrical paradigm as well as how it must be both transformed and supplemented in pursuit of knowledge of Nature.

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