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Intuition and Nature in Kant and Goethe

Jennifer Mensch

Abstract: This essay addresses three specific moments in the history of the role played by intuition in Kant's system. Part one develops Kant's attitude toward intuition in order to understand how 'sensible intuition' becomes the first step in his development of transcendental idealism and how this in turn requires him to reject the possibility of an 'intellectual intuition' for human cognition. Part two considers the role of Jacobi when it came to interpreting both Kant's epistemic achievement and what were taken to be the outstanding problems of freedom's relation to nature; problems interpreted to be resolvable only via an appeal to 'intellectual intuition'. Part three begins with Kant's subsequent return to the question of freedom and nature in his *Critique of Judgment*. With Goethe's contemporaneous *Metamorphoses of Plants* as a contrast case, it becomes clear that whereas Goethe can embrace the role of an intuitive understanding in his account of nature and within the logic of polarity in particular, Kant could never allow an intuition of nature that in his system would spell the very impossibility of freedom itself.

From 1770 on Kant consistently rejected anything other than a sensible intuition for human beings. By the mid-1790's, however, for the majority of Kant's successors either intellectual intuition or the practices of an intuitive intellect were understood to be the key to solving the special problem of relating freedom and nature. How are we to understand Kant's particular attitude toward intellectual intuition and what are we to make of an apparent reversal in the fortunes of this concept? I want to suggest two answers. The first is straightforward: the earliest texts produced by the German Idealists remain within Kant's vocabularies even as the meaning and use of his words are being transformed so that intellectual intuition in Fichte, for example, will mean something different than intellectual intuition in Kant. The second answer requires a more careful examination of Kant's position in order to recover a sense of the essential differences between the respective agendas of Kant and his successors. In addressing this I will focus on three specific moments in the history of the role played by intuition in Kant's system. Part one develops Kant's attitude toward intuition in order to understand how 'sensible intuition' becomes the first step in his development of transcendental idealism and how this in turn requires him to reject the possibility of an 'intellectual intuition' for human cognition if

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both moral and epistemic scepticism are to be overcome. Part two considers the role of Jacobi when interpreting both Kant's epistemic achievement and what were taken to be the outstanding problems of freedom's relation to nature; problems interpreted to be resolvable only via an appeal to 'intellectual intuition'. Part three begins with Kant's subsequent return to the question of freedom and nature in his *Critique of Judgment*. With Goethe's contemporaneous *Metamorphoses of Plants* as a contrast case, it becomes clear that whereas Goethe can embrace the role of an intuitive understanding in his account of nature and within the logic of polarity in particular, Kant could never allow an intuition of nature that in his system would spell the very impossibility of freedom itself.

1.

Long before Kant was close to realizing the Critical project he insisted upon a distinction between intellectual and sensitive intuition that would remain in place for the remainder of his career. The question thus arises in the earliest moments of Kant's development: what precisely is at stake for Kant in his restricting cognition to a 'merely' sensible intuition? In the Inaugural Dissertation of 1770 Kant's primary consideration will be the rehabilitation of metaphysics into a science capable of responding to both moral and epistemic scepticism.

Kant's worries regarding scepticism followed in part from his reading of Hume and it is a well remembered fact in the biographies of each that Kant cites Hume for having woken him from a 'dogmatic slumber'. Kant was well acquainted with a 1755 translation of Hume's *Enquiry Concerning Human Understanding* and by 1766 Kant's *Dreams of a Spirit-Seer* would reverberate with the potency of Hume's scepticism for the 'dreams of metaphysics' as Kant struggled there to redefine metaphysics as a 'science of the limits of human reason' (2:368).[1] Resolving the problem of scepticism was thus bound up from the first with what would become Kant's ongoing effort to restore metaphysics to her rightful place as 'queen of all the sciences' (Aviii). In the *Inaugural Dissertation* the key to both of these tasks would be overcoming the problem of 'logical subreption'. This type of error or 'subreptive axiom' occurs once concepts proper only to sensible experience transgress those bounds in their application to the immaterial realm. Kant charged himself for having made this mistake since both his *Nova Delucidatio* (1755) and the *Physical Monadology* (1756) ascribed forces of attraction and repulsion to respectively spirits and monads.[2] As an act of contrition, *Dreams of a Spirit-Seer* had concluded that 'It is impossible for reason ever to understand how something can be a cause, or have a force; such relations can only be derived from experience' indeed, 'All judgments, such as those concerning the way in which my soul moves my body, or the way in which it is now or may in the future be related to other beings like itself, can never be anything more than fictions' (2:370, 371).[3]

By 1770 Kant was ready to offer a solution to the problem of logical subreption and he was confident enough to effectively propose it in the title of his

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dissertation: *On the Form and Principles of the Sensible and the Intelligible World*. Insisting that the method of metaphysics concern itself wholly with the prevention of sensible concepts from any transgression of their bounds (2:411ff), Kant argued that only a radical separation between sense and intellect could avoid the possibility of cross-contamination.[4] Distinguishing between sensitive and intellectual concepts like this allowed Kant, moreover, to rescue the concept of causality from the inductive practices of the empiricists, an absolute requirement if scepticism was to be overcome. Kant's list of purely intellectual concepts—concepts such as substance, necessity, and cause—were thus carefully described as concepts which 'never enter into any sensual representations as parts of it, and could not, therefore, in any way be abstracted from it' (2:395).[5] The problem with this solution, as Kant himself would quickly discover, was that so far as the response to scepticism was concerned, the break between sense and intellect posed an unanticipated problem of its own.

This problem turns on the impossibility of applying radically heterogeneous intellectual concepts to sensible content. Hume's scepticism regarding necessary connection might demand that concepts like cause be deemed a priori but the impossibility of applying these concepts to sensible intuition means that metaphysics will remain not only sterile but also useless in the face of the empiricist challenge. While these constitute the well-known set of considerations leading up to Kant's 'critical turn' of 1772, it is only with the benefit of hindsight that one can easily see how Kant will need to both rethink his understanding of subreptive axioms and work to reconnect sense and intellect before anything like an adequate response to Hume will be found.[6]

Putting the specific trajectory of Kant's development aside for the moment, however, it is important to see how Kant's solution to the problem of subreption helps determine the possibilities for intuition from the outset. For metaphysics to be restored as a science capable of responding to both moral and epistemic scepticism the problem of logical subreption must be overcome and this overcoming can be a natural outcome once sense and intellect are made radically distinct. Such radical heterogeneity allows Kant, moreover, to rethink the possibilities for sensitive knowledge. In the *Dissertation* this starts with a distinction between sensible data and sensible form: 'To sensible cognition there thus belongs, on the one hand, a matter which is sensation, and on account of which the cognitions are called *sensual*, and on the other hand a form, on account of which representations are called *sensitive*' (2:393). This distinction between the matter and form of sensitive knowledge is combined with an account of sensible representation according to which 'the form of the representation indicates a certain aspect or relation of the sensa and yet is not properly an outline or schema of the object but only a certain law inborn in the mind coordinating with one another the sensa arising from the presence of the object, for objects do not strike the senses through their form or configuration' (2:393). What Kant means by this is that when it comes to objects of experience sensible representations are neither copies nor archetypes but rather the synthetic result of sensible matter and the mind's imposition of sensible form and, as such, immanent to the laws of the mind.

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The lawfulness of sensible intuition's receptive coordination of its data sets up, therefore, an account of truth. 'Although phenomena', Kant tells us, 'are, properly, semblances [*species*], not ideas, of things, and express no internal or absolute quality of the objects, knowledge of them is nonetheless perfectly genuine knowledge' (2:397). This 'perfectly genuine knowledge' is possible, according to Kant, because judgments about sensible objects concern only the internal agreement between the subject and predicate of a judgment as opposed to some kind of external correspondence between subject and object. In Kant's words, '[T]he concept of the subject [of a judgment], so far as it is a phenomenon, can be given only by its relation to the sensitive faculty of knowledge, and it is also by the same faculty that the sensitively observable predicates are given'. Since, therefore, 'the representations of subject and predicate arise according to common laws', a 'perfectly true knowledge' can be allowed for phenomena (2:397). By 'common laws' Kant refers here simply to the formation of judgments according to rules for either the logical subordination or the comparison of concepts with the result that 'sensitive cognitions being given, they are subordinated by the logical use of the intellect to other sensitive cognitions as to common concepts, and as phenomena to more general laws of phenomena' (2:393). By focusing, therefore, on the internal relationship between subject and predicate over the supposed but unknowable external connection between subject and object Kant hopes to close the epistemic gap facing all sensible judgments; a strategy that if not entirely convincing in its 1770 presentation will nonetheless prove useful when it comes to the *Critique of Pure Reason* in 1781.

While the fear of logical subreption opens up a space for the reinvention of sensitive knowledge in both its practice and epistemic effect, Kant's attitude toward intellectual knowledge remains conservative as he tries to explain *intellectualia* without appealing to a doctrine of innate ideas and the special means that would seem to be required for accessing them.[7] In contrast to both the doctrine of innate ideas and the empiricists's *a posteriori* account, Kant argues that intellectual concepts are in fact 'originally acquired' insofar as they are generated by the mind itself on the occasion of experience. In 1781 this is indeed the certificate of birth upon which so much will depend for the proof of their objective validity but Kant is already clear in 1770 that the question of origin must be resolved in this fashion if he is to meet the empiricist challenge regarding the status of causal claims.[8] The intellectual concepts provide the 'very concepts of objects and their relations' (2:393) but although these are therefore said to 'represent things as they are' (2:392) Kant is explicit in rejecting the possibility of this as somehow amounting to an access to a supersensible realm (2:396). Our intuition is irrevocably limited to the sensible and Kant is unmistakably clear on this point:

> No intuition of things intellectual but only a symbolic [discursive] knowledge of them is given to man. Intellection is possible to us only through universal concepts in the abstract, not through a singular concept in the concrete. For all our intuition is bound to a certain formal

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> principle . . . this formal principle of our intuition (space and time) is the condition under which anything can be an object of our senses, and being thus the condition of sensitive knowledge it is not a means to intellectual intuition. Further, all the matter of our knowledge is given by the senses alone, whereas a noumenon, as such, is not to be conceived through representations derived from sensations. Consequently, a concept of the intelligible as such is devoid of all that is given by human intuition. (2:396)

This stands in contrast, however, to the case of the divine intellect who stands rather as 'the ground, not the consequent, of its objects' and who is 'owing to its independence, archetypal' and therefore 'completely intellectual' (2:397).

Unpacking the differences between human and divine intuition is critical both for understanding Kant's positive account of intuition and for undermining the potential misinterpretation of that position in terms of an asserted Platonism at work in the *Dissertation*.[9] As Kant introduces the distinction between the respective objects of sensitive and intellectual cognition he reminds us that 'the former was called, in the ancient schools, *phaenomenon*; the latter *noumenon*' and that whereas the former depends upon the subject's being 'modified in diverse ways by the presence of objects', intellectual cognition 'is exempt from this subjective condition' (2:392). From this Kant concludes that 'it is clear, therefore, that representations of things *as they appear* are sensitively thought, while intellectual concepts are representations of things *as they are*' (2:392). While this does indeed sound Platonic in its contours, Kant's strictures against intellectual intuition require that one reconsider what he might understand by both 'noumena' and the representation of 'things as they are' since from the perspective of such a metaphysics neither would appear to be possible without some sort of intellectual access.[10] That Kant is not in fact engaged in this type of metaphysics becomes clear from the following considerations.

As humans our cognition can be distinguished from God's at every level: the type of cognition, the quality and mode of access to objects, and the type of objects capable of being accessed in the first place. While this much is abundantly clear in Kant's texts, however, there is potential for confusion unless one clearly distinguishes between 1) an intuitive versus a discursive intellect, 2) an intellectual versus a sensible intuiting, and 3) an intellectual versus a sensible object of intuition; differences often captured simply in terms of a contrast between 'intellectual intuition' and the specific limits of human cognition.[11] The potential for confusion arises from the start since Kant most typically contrasts an intuitive intellect with a sensible intuiting. Thus the intuitive understanding will often be described as 'archetypal' so far as it is original, active, or productive in contrast to a sensible intuiting described as 'ectypal' so far as it is derivative, passive, or receptive. Despite the differences between an archetypal intellect and ectypal intuition, however, the quality of immediate access to the respective contents of intuition in each case yields intuitions that are 'singular and concrete' though the grounds for this are themselves different in each case (2:396, 397). The

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divine or intuitive intellect is guaranteed an immediate access to the object of its intuition because its objects are literally produced in the act of their being known (God neither 'happens upon' objects nor does he fall subject to distinctions between possibility and actuality or between appearances and things in themselves). The passive reception of sensation represents a case where there is immediate access to an object as well but in this instance it is to the unprocessed object of a sensible intuiting; this type of intuiting, in other words, yields 'singular and concrete' intuitions because it is unmediated and thus reflective only of a direct, causal impingement on the senses. As a result, no sensible intuiting can provide access to the objects available to an intuitive intellect—intellectual intuitions, *intelligibilia*, or noumena—since these objects could not by any definition provide sensations for the senses to receive.

What, then, about the discursive intellect described in 1770 as providing access to 'things as they are' or 'noumena' and thus as the supposed antithesis to the case of a sensation-based production of things as they appear? In contrast to both the intuitive intellect and sensible intuiting, the discursive intellect's access to its objects remains both 'general and abstract'. Without recourse to intellectual intuiting as a means, it yields only a discursive or 'symbolic' knowledge of its objects, a knowledge mediated, therefore, by either the 'originally acquired' concepts of objects and their relations on the one hand, or the symbol of moral perfection on the other: 'The maximum of perfection, which is called by Plato an idea (as in the idea of the state) we now entitle an ideal' (2:396). These and these alone, therefore, constitute Kant's understanding of the intellect's access to things as they are, for to suggest otherwise would be to impute far more than an implied metaphysics along the lines of Plato's division between noumena and phenomena. It would be tantamount to suggesting that the intellect, no less than the divine archetype, is somehow capable of an immediate access to intelligible objects, the possibility of which Kant expressly forbids.[12]

The critical difference between Kant's account of the intellect in the *Inaugural Dissertation* and the Understanding in the *Critique of Pure Reason* flows in part from this last piece of the distinction between an intuitive and a discursive intellect. In 1770 the fact of discursivity or of a necessarily mediated relationship to objects signals the difference in certainty afforded an intellect whose access, by contrast, is immediate or direct. By 1781 the account by which sensible representations were said in 1770 to yield 'genuine knowledge' has been transferred to the Understanding. This allows the Understanding to declare the possibility of truth regarding objects, not indeed with respect to either their existence or how they might be in themselves, but absolutely with respect to the *form* of their appearances. Kant will not waver in denying cognition the possibilities afforded an intuitive intellect because the epistemic achievement of transcendental idealism ultimately requires that we depend upon sensible intuition and a discursive intellect whose empirical employment allows us to treat nature as appearance; *mediation*, not access, is what finally guarantees the response to Hume. So far as the theory of knowledge is concerned, therefore, this is what is at stake in Kant's rejecting intellectual intuition for human cognition.

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In assessing what might be lost at the hands of this restriction two points should be noted. First, it is no accident that Kant chooses space and time as the forms of sensible intuition. Historically associated with the ideas respectively of geometry and mathematics (or mechanics), space and time already appear in Descartes' account—with clear Neoplatonist influences—of intellectual intuition. Reassigning space and time to sensible intuition allows Kant to certify the epistemic value of sensibility even as he is able to avoid any special appeal to intellectual intuition (e.g. 2:403). The second point turns on the sense of a 'maker's knowledge' associated with the intuitive intellect. The divine archetype enjoys immediate access to objects because in this case the process of thinking is wholly productive: to think is to produce and thus also to know with the kind of immediacy only granted to a creator. But this kind of maker's knowledge is precisely of a kind with that ultimately enjoyed by the Understanding regarding the form of appearances. Kant will not miss the possibilities afforded an intuitive intellect because he has already appropriated its special yield: the noncontingent truths of mathematics and geometry and the unique access guaranteed a maker when it comes to knowing one's products. For this is just what it means to redefine objects as objects-of-knowledge and to conclude, as Kant does, that 'Reason has insight only into that which it produces after a plan of its own' (Bxiii).

2.

In order to move this discussion to its next stage I want to develop some of the ways in which limits operate in Kant's system. The fundamental limitation is the Understanding's restriction to an empirical employment, to an employment devoted solely to the synthesis of sensible intuition and intellectual concept. Such limited application yields great results insofar as it comprehends nature as a field of synthetic appearances or set of constructed objects-of-knowledge. But there is a second aspect of what it means for the Understanding to be limited to an empirical employment. This limitation concerns the material source of our sensible intuitions. The mind provides form but Kant is clear when it comes to material content's being located in a source external to the mind, in a source, that is, standing outside the set of knowability conditions required for any object to appear to us as an object-of-knowledge. Referring to this source simply as a thing in itself, Kant describes it in the *Critique of Pure Reason* as a mere logical correlate, a kind of agnostic X in response to the question that asks after the source or content of knowledge. Certainty can be had with respect to all questions concerning the form of appearances, a certainty guaranteed by the fact that it is we ourselves who provide that form, but we can have no knowledge whatsoever with respect to questions concerning the source or content of appearances. The thing in itself thus refers to a 'mere something', a negatively conceived noumenon understood simply to be the negative limit with respect to any possible knowledge we might have of objects. Limits serve Kant well, therefore, not only for the positive results achieved when knowledge claims are limited to

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the field of sensible appearances, but for their negative function in clearing the way for speculation without the fear of scepticism. The Understanding may be limited to an agnostic X when discussing material content, for example, but Reason can safely speculate on the question of matter's living forces. Similarly, we are free to be guided by the idea of the moral law or to search for the unconditioned ground of nature but we are able to do so only so long as we recognize that the Ideas guiding speculation are regulative versus constitutive for action and thought.

Only by protecting claims to knowledge in this manner, according to Kant, can we meet the sceptical challenge while still preserving a space for moral reflection. That said, it is just this move on Kant's part—a move requiring that we know neither the material content of our sensible intuition nor the moral objects of an intellectual intuition—that lies at the heart of Kant's rejection by his successors. If the mediating force of boundaries allows Kant to reply to Hume then it is just as much the overcoming of these divisions that will come to be seen as necessary for any reply to Kant. It is within this context, therefore, that Spinoza's *vis intuitiva* can arrive as a specific solution for thinkers looking to put an end to the many borders—between sense and intellect, nature and freedom, knowledge and thought—demarcating Kant's work.

The choice of Spinoza at this historical juncture owes itself to the Pantheism Controversy and since the details of this are well known I will confine myself to the following points regarding it.[13] When, in 1785, Jacobi accused Lessing of Spinozism it was immediately understood that this charge was synonymous with atheism and that, as the controversy developed into an exchange between Jacobi and Lessing's defender Moses Mendelssohn, it was equally clear that no less than the entire German philosophical-literary community would have to take sides.[14] For Jacobi, the choice between faith and reason was a choice between faith and fatalism, determinism, Spinozism, pantheism, and ultimately atheism, with the ultimate value of any philosophical system being determined therefore by the values it produced. This had the effect of fuelling what was already a growing impatience with the sterility of rational-demonstrative approaches to nature—an attitude encouraged by both the Scottish Enlightenment professors in Göttingen and the *Frühromantik* circle surrounding Goethe—and offering by way of alternative an emphasis on an existential commitment in intellectual endeavours. As Fichte would nicely capture the sentiment: 'What sort of philosophy one chooses depends, therefore, on what sort of man one is; for a philosophical system is not a dead piece of furniture that we can reject or accept as we wish; it is rather a thing animated by the soul of the person who holds it' (1:434).[15] There are a number of ironies at work in this controversy with the greatest undoubtedly concerning Spinoza's effective renaissance as a result of Jacobi's finger-pointing. But it is ironic too that in Jacobi's second round, the 1787 dialogue 'David Hume on Faith, or Idealism and Realism', Hume—whose sceptical challenge helped inspire Kant's great solution—now stands as the inspiration for Jacobi's *Vernunftanschauung*.[16] This rational or intellectual intuition is 'one and the same' thing as feeling (*Gefühl*) and provides an unmediated access to the actuality and

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truth of objects,[17] a move on Jacobi's part that, as another source of irony, would suggest exactly the turn to idealism to which he was so opposed.

In the Fall of 1785 Kant received an outraged letter from Mendelssohn describing Jacobi's *Spinozabüchlein* as a monster with 'the head of Goethe, the body of Spinoza, and the feet of Lavater'.[18] In addition to Kant's being directly named in Jacobi's book—Jacobi had used Kant's account of space, an account 'entirely in the spirit of Spinoza', to explain Spinoza's understanding of the relationship between whole and parts—Kant's philosophy was fundamentally suspect so far as he too could be accused of valuing reason to the point of freedom's extinction. Kant's response, *What is Orientation in Thinking* [1786], accordingly offered a defence of the speculative use of Reason as a tool for orientation in thought. Picking a line in the essay between what he described as Mendelssohn's 'rational insight' and Jacobi's 'rational inspiration', Kant identified his own conception of 'rational belief' as a 'signpost or compass by means of which the speculative thinker can orient himself on his rational wanderings in the field of supra-sensory objects' (8:142).[19] Unconvinced by such distinctions, Jacobi's 1787 dialogue included a special supplement meant to attack any Kantian apologists hoping to defend Kant from the charges of outright idealism, famously criticizing Kant's notion of a thing in itself as a lame and ultimately incoherent attempt to stave off the charge.[20] Kant's system, in Jacobi's view, might claim to provide knowledge but certainly not of anything real; it made room for faith but only for such as one both eviscerated of its theistic form and incapable, except speculatively, of providing any sense of its contents. Kant's task, through this lens at least, was clear. In the same manner that a successful transition from 1770 to 1781 required that Kant reconnect sense and intellect, it is now the case that the transition from 1781 to 1790 will require that Kant rethink the relationship between Understanding and Reason or, to speak in terms of their special objects, between nature and freedom.

It was Spinoza's *Ethics* which furnished the intellectual community engaged in this debate with two conclusions deemed significant in light of Kant's specific division of labour between the Understanding and Reason.[21] For Spinoza, nature and freedom—extension and thought in his terms—represent the two modes of God's absolute substance and thus while they might appear to be radically distinct they are in fact united by way of their supersensible substrate. The essential unity of nature and freedom can be grasped, moreover, via intellectual intuition or *scientia intuitiva* (*Ethics* V:P25).[22] This type of intuition identifies the highest form of knowing; it is the immediate knowledge of the essence of a thing and its relation to God and represents, therefore, knowledge of an object in all of its causal networks from its first existence as an archetype in God's mind to its appearance as a mode of either extension or thought. Intuition for Spinoza provides, in other words, what Kant expressly forbids: a knowledge of objects which expresses the underlying connection between freedom and nature.[23] Even if such intuition is capable of grasping the substantial identity of all things in God, however, Spinoza understands a strict difference between God's free productive activity (*natura naturans* or 'nature naturing') and the concrete

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determination of the act itself through its product (*natura naturata* or 'nature natured'); a distinction overlooked during the Pantheism controversy in favour of an essential *identity* at work in 'God-Nature' [*Deus sive Natura*] (*Ethics* I:P29S).[24]

The combination of an asserted identity between God and Nature and the possibility of an intellectual intuition of this identity appeared to many as a potential response to Kant's systematic boundaries between Understanding and Reason. Kant, by contrast, might have been prepared to take up again the problem of freedom's relation to nature but he was adamant in his rejection of the solution proposed by Spinoza's metaphysics. Kant's general attitude towards Spinoza could not be clearer in a letter praising Jacobi for having 'refuted the syncretism of Spinoza':

> All syncretistic talk is commonly based on insincerity, a property of mind that is especially characteristic of this great artist in delusions (which, like magic lanterns, make marvelous images appear for a moment but which soon vanish forever, though they leave behind in the minds of the uninformed a conviction that something unusual must be behind it all, something, however, that they cannot catch hold of). (Kant to Jacobi, August 30, 1789; 11:76)

If Kant takes Spinoza to be offering a sort of soft seduction of magic lanterns and delusions, however, it is instructive to compare this reaction to Goethe's. Having taken up Spinoza for serious study during this same period, Goethe was almost exultant as he wrote to Jacobi: 'When you say man can believe only in God, I say to you that I hold much with seeing. And when Spinoza speaks of *scientia intuitiva* . . . these few words give me courage to dedicate my whole life to the consideration of things that I touch and of whose formal essence I can hope to form an adequate idea, without worrying how far I will come and what is denied me' (*Goethes Briefe*, I:508–9).[25] Nature, as Goethe understands Spinoza, is continuous with our very selves and the intellectual intuition of nature not only puts us in contact with the divine it demonstrates our own mind's harmonic place in the system of nature:

> Since the simpler powers of nature are often hidden from our senses, we must seek, through the powers of our mind, to reach out to them and represent their nature in ourselves . . . [for] our mind stands in harmony with the deeper lying, simpler powers of nature and so can represent them in a pure way, just as we can perceive the objects of the visible world with a clear eye'. (*Sämtliche Werke*, IV:2:332)[26]

The difference between Kant and Goethe's respective positions is already revealed in this statement. Even if Spinoza can be criticized for having taken a 'teleological road to theology' in his account of nature, as Kant sees it, Spinoza can nonetheless to be praised by Goethe for precisely the syncretic view which might have led to such a conclusion. Though Goethe was himself a great critic of

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casual appeals to teleology in science, what he read in Spinoza's philosophy was the promise of a new approach to nature, one far more in keeping with his own.

3.

I now want to move toward the final stages of this discussion by taking up Kant and Goethe in terms of their two portraits of nature—Kant's *Critique of Teleological Judgment* and Goethe's series of reflections on the *Metamorphoses of Plants*—from the early 1790s. As described earlier, according to the argument of Kant's *Critique of Pure Reason* the Understanding knows nature only as a series of appearances or objects of knowledge conforming to the mind's own constitutive practices. For the laws of the Understanding to be at the same time the laws of nature, however, knowledge of nature must conform to its mechanistic account; Reason might look for the unconditioned, but the Understanding will always be limited to the series of conditioned effects.

The case of an organism is therefore special, as Kant will describe it in 1790, because in this one case we are led ineluctably toward the speculative thought of the organism's existence as a free natural purpose even though such an existence must remain inexplicable for the Understanding. For an organism to count as having a natural purpose it must be organized such that each and every part is connected in a fashion necessary for the proper functioning of the whole where the idea of the whole both precedes the parts and determines their relation. But it must also be the case that the organism can be understood to be self-sustaining; that it serve as both cause and effect of itself in so far as 'the parts of the thing combine into the unity of a whole because they are reciprocally cause and effect of their form' (5:373). Only if a product of nature can meet this second criterion, Kant tells us, will it be more than mere machine but indeed 'both an *organized* and *self-organizing* being, which therefore can be called a natural purpose' (5:374). To use Kant's example of a living organism, a tree can be said to function as both cause and effect of itself in three ways: first, as a species so far as it is capable of both the generation and preservation of its genetic line; second, as an individual since it is capable of taking matter that is foreign to it and processing it 'until the matter has the quality peculiar to the species' (5:371), and third, the tree as organism is a systematic whole whose preservation and success requires the mutual interaction and dependence of all its working parts. Nature viewed as organism versus machine, however, 'involves a causality which is such that we cannot connect it with the mere concept of a nature without regarding nature as acting from a purpose; and even then, though we can think this causality, we cannot grasp it' (5:371). In fact, 'the organization of nature has nothing analogous to any causality known to us' so far as mechanism fails even to explain the organism's formative force of propagation (5:374, 375).

As a result, Kant consistently rejects the possibility of a constitutive role for the idea of natural purposes. Kant has in fact two sets of arguments against the constitutive use of teleological principles. The first are effectively sceptical so far as they argue that knowledge of these principles is impossible: 'we have

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complete insight only into what we can ourselves make' and since we cannot have this relationship to an organism, we cannot know if the organism is in fact purposive or is only an extraordinarily elaborate machine (5:384, 388). The second set of arguments against the constitutive use of teleological principles emerges in Kant's discussion of Spinozist versus hylozoic interpretations of natural purposes. Here Spinoza is credited with an idealistic approach, an interpretation to be rejected so far as it ultimately fails to account for anything besides the underlying unity of nature. Since, as Kant reads Spinoza, this universal substrate acts without intentions then although it affords unity we cannot meaningfully ascribe purposivity to it. The unity of a purpose, as Kant puts it, 'does not follow at all from a connection of things (beings of the world) in one subject (the original being), but always carries with it a reference to a *cause* that has understanding' (5:393). Spinoza's account of the underlying unity of nature poses a second problem as well so far as it eliminates any contingency among its modes—all modes of extension and thought stand in necessary connection to God—and purposivity, for Kant, requires the possibility of freedom as the special causality of natural beings (5:393).[27] So much then for the idealistic approach but the realistic interpretation of natural purposes will also be rejected. Here Kant considers two species of hylozoism, dismissing the first as effectively incoherent. With Leibniz as his implicit target, Kant had already argued in his *Metaphysical Foundations of Natural Science* (1786) that a transcendental grounding requires that we take matter to be inert because this conception alone allows for the constitutive application of the categories to matter's appearances. In Kant's words, 'The possibility of a natural science proper rests entirely upon the law of inertia . . . The opposite of this and therefore the death of all natural philosophy, would be hylozoism' (4:544).[28] Since the broadest conception of hylozoism takes all matter to be living force it therefore 'involves a contradiction' according to Kant's understanding of matter as appearance. More significant, from Kant's perspective, is the fact that hylozoism breaches the limits of an Understanding restricted to an empirical employment insofar as we can have no sense of matter's inner life: 'these determining grounds and actions do not at all belong to the representation of the external senses and hence also not to the determinations of matter as matter' (4:544). The second case of hylozoism asserts a purposive spirit inhabiting matter, a conception akin to treating nature as a whole like an animal but since this is again something we could never know and because our only evidence for it is experiential our claims for it remain necessarily circular (5:395).

What the notion of natural purpose *can* do, according to Kant, is serve as a regulative guide for our reflective judgment as it investigates both organisms and their supreme basis (5:375). As he develops this notion of natural purpose Kant ultimately suggests that we must approach nature's purposivity on analogy with the special causality that is our own freedom. If this is done, Kant argues, we can reflect upon nature's own supersensible substrate as the ground for the systematic unity of nature; as the ground, in other words, for considering nature as a whole on the model of the organism. To put this another way: sensible

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intuition reveals nature to be a mechanism, reflective judgment allows us to problematically consider the intellectual intuition of nature as organism (5:407–9). When Kant describes intellectual intuition in the third *Critique* he continues to understand this as a form of knowing proper only to a being for whom cognition is materially productive and whose access to its productions is not mediated in any way by either concepts or synthetic processes. He develops the notion further, however, insofar as the intuitive intellect is now said to be capable of starting with the intuition of a whole before moving to its parts; a practice that, in marked contrast to our own, eliminates all contingency from its knowledge of a thing.[29] What intellectual intuition yields is the simultaneous knowledge of nature as both determinate mechanism and teleologically organized system (5:407), a result close to that offered by Spinoza's *scientia intuitiva* and indeed not so far different from the reflective capacity of judgment itself as it problematically addresses nature as a whole in its systematic unity.

In the earlier portion of this discussion I assessed the potential loss to Kant's system following his restriction of human cognition to a sensible intuition and a discursive Understanding to be effectively none: Kant reassigns the Cartesian account of geometric and mathematical intuition to Sensibility—a move that will necessarily validate the spatio-temporal claims of sensible intuition—and he provides the Understanding with the same degree of 'maker's knowledge' regarding the form of appearances as that reserved for the Divine intellect. These components are necessary, moreover, for the epistemic achievement of transcendental idealism so far as it is *mediation* versus direct intuition which closes the gap left open by materialism and exploited by Hume's scepticism. This general strategy proves useful once more when considering the connection between nature and freedom since any potential losses felt at the hands of Kant's prohibition can be avoided once the special advantages afforded intellectual intuition are reassigned to reflective judgment.[30] Against Spinoza's system, the reflective consideration of nature's systematic unity can be asserted without any compromise of freedom's essential independence from nature. Similarly, with an understanding of the organism as the point of contact between the mechanical appearances of nature as phenomenon and the free causality standing at the basis of mechanism—a unity grasped by the concept of a natural purpose which is both cause and effect of itself—Kant can assert the necessity of thinking the connection between nature and freedom even as a treatment like Spinoza's is dismissed for its dogmatically asserting the same thing. Finally, physico-theology—or 'the teleological road to theology' as Kant sometimes describes it—can be rejected along with other attempts at a constitutive use of teleological principles though Kant himself will appeal to the need for their regulative use. Thus in the same way that the Understanding's restriction to an empirical employment ultimately yields all the special advantages afforded an intuitive intellect, the restriction of teleological principles to their regulative use will allow reflective judgment an effective intellectual intuition of nature's unity without appealing to the kind of metaphysical system that, in Kant's view, would eliminate freedom altogether.

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4.

In contrast to the majority of his contemporaries, Goethe carefully read through Spinoza's *Ethics* following the onset of the Pantheism controversy and in 1784–5 he composed a set of notes demonstrating his engagement with the text. In this 'Study Based on Spinoza' Goethe described nature's fundamental unity so far as 'being is within everything that exists, and thus also the principle of conformity which guides its existence;[31] and he intimates the role of intuitive perception when explaining that 'The mind may perceive the seed, so to speak, of a relation which would have a harmony beyond the mind's power to comprehend or experience once the relation is fully developed'.[32] For Goethe, living things cannot be understood by a set of external measurements since 'all living things have their relation within themselves; thus we call the individual or collective impression they make on us true—so long as it springs from the totality of their existence'.[33] If the engagement with Spinoza proved exhilarating, however, Goethe's attempt to work through Kant's *Critique of Pure Reason* in 1789 was less than satisfying. As he described the process: 'I found pleasure in the portal but I dared not set foot in the labyrinth itself; sometimes my gift for poetry got in my way, sometimes common sense, and I felt that I made little progress' but then, Goethe continues,

> . . . the *Critique of Judgment* fell into my hands, and with this book a wonderful period arrived in my life [. . .] the main ideas in the book were completely analogous to my earlier work and thought. The inner life of nature and art, their respective effects as they work from within—all this came to clear expression in the book. [. . .] The antipathy I felt toward ultimate causes was now put in order and justified. I could make a clear distinction between purpose and effect, and I saw why our human understanding so often confuses the two. ('The Influence of Modern Philosophy' [1817] (Goethe, 1988a: 29))

It was Kant's critique of teleological approaches to nature that made the work especially valuable for Goethe. In his second essay on the metamorphosis of plants—written in 1790 but after having read the third *Critique*—Goethe criticizes 'the convenient and false espousal of the theory of final causes' as a deterrent in the study of organisms but suggests that hope remains for the physiologist so far as 'the newer school of philosophy' will no doubt take up Kant's attack on the improper use of teleological principles.[34] This theme would be picked up again and with increased vehemence as Goethe charged mankind's vanity for the assumption of final causes, arguing that 'we have been retarded in our philosophic views of natural phenomena by the idea that living organisms are created and shaped to certain ends by a teleological life force'.[35] Goethe's own view, nascent in the early insistence that 'a living thing cannot be measured by something external to itself'[36] sees nature as a process that is mutually determined 'from within toward without and from without toward within'.[37]

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There are a number of descriptions in order to illustrate this: a mammal such as a seal, for example, has an inner determination which conforms to the skeletal 'archetype'—it is a quadruped—but its exterior has been determined from without by the sea, hence the fullness of fishlike character.[38]

The mention of an archetype introduces a point of contact with Spinoza as significant for Goethe as is an understanding of God-Nature's thoroughgoing identity. For Spinoza, all modes of nature or freedom (extension or thought in his terms) can be traced back to their existence as God's archetypes. As Goethe made use of this notion, all of nature can be understood as a series of infinite appearances of these archetypal ideas. The seal is thus yet another manifestation of the skeleton which is the archetype at work in animal life; in botany it is the leaf. The discovery of these archetypes, moreover, marks the special task and challenge for the scientist, a task made possible via the 'intuitive perception' of nature.[39] Goethe's praise for Spinoza's *scientia intuitiva* thus meant also a critique of Kant's position. Citing Kant's account of intellectual intuition at some length (5:408), Goethe comments that,

> Here, to be sure, the author seems to point to divine reason. In the moral area, however, we are expected to ascend to a higher realm and approach the primal being through faith in God, virtue, and immortality. Why should it not also hold true in the intellectual area that through an intuitive perception of eternally creative nature we may become worthy of participating spiritually in its creative processes? ('Judgment through Intuitive Perception' [1817] (Goethe, 1988a: 31))

Intuiting the archetype, for Goethe, amounts to a discovery of the infinite harmony within which each finite can find its place.[40] Intuitive perception, therefore, cuts across Kant's schema so far as it asserts the possibility of immediate sensible perception of the very Idea preceding the parts as a whole.[41]

The specific process by which the archetype, Proteus-like, moves through nature with various functions and with frequent changes of form is 'metamorphosis'. With metamorphosis as nature's guiding principle alterity is literally inscribed in each moment of identity—'a leaf that only sucks fluid under the earth we call the root; a leaf that spreads out from those fluids we call a bulb'—to the extent that identity becomes completely fluid—'All is leaf, and through this simplicity the greatest multiplicity is possible'.[42] Goethe's conception of unity is therefore both dialectical and physical so that unity emerges within opposition as a necessary connection between reciprocally implicated poles and this is physically at work in nature whether we are interested in the opposing tendencies of expansion and contraction or an explanation of the phenomenon of colour. The logic of polarity is thus always already at work in the process of metamorphosis.

It is through this conception of metamorphosis that one can find a degree of complementarity between Kant and Goethe. The concept of a natural purpose, for Kant, identifies a causality impossible for the Understanding to grasp except

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on analogy with the special causality that is our own freedom. Thus when Kant praises Blumenbach's account of epigenesis, for example, he is interested in it precisely for its description of a 'formative impulse' (*Bildungstrieb*) that is responsible, if blindly, for the organization of matter. Here Goethe's critique of Blumenbach is instructive: Blumenbach fails to appreciate the equality of matter and form and thus like a species of hylozoism asserts the presence of an 'anthropomorphized' drive, a spirit which 'confronts us as a god' among matter's inert particles. 'When an organism manifests itself', Goethe writes, 'we cannot grasp the unity and freedom of its formative impulse without the concept of metamorphosis'.[43] Kantians might well 'preach the gospel of freedom' but it is Goethe who will 'defend the rights of nature'.[44] It is the concept of metamorphosis that finally captures Kant's work to understand the special causality of the organism; for nature as a mutually determining set of processes—'from within and without'—is thus truly purposiveness without purpose. The archetype may determine the organism's possibilities but only so far as external factors require them.

5.

Thus far I have argued that no less than the entire critical achievement of transcendental idealism was at stake for Kant with respect to his restricting humans to a discursive Understanding and a sensible intuition; an achievement resting on the Understanding's being limited to its empirical employment and its having therefore to do solely with nature understood as a field of appearances. There is, however, the other side of this rejection, the side falling under the heading of Kant's need to 'deny knowledge in order to make room for faith'. As Kant tells Jacobi, 'I think that you will not find the compass of reason to be unnecessary or misleading in this venture. The indispensable supplement to reason is something that, though not part of speculative knowledge, lies only in reason itself, something that we can name (viz., freedom, a supersensible power of causality within us) but that we cannot grasp (Letter to Jacobi, August 30, 1789; 11:76). Intellectual intuition, as Kant understood it, entails more than a special kind of knowing, it introduces a special metaphysics as well. And while that metaphysics is perfectly suited to a program such as Spinoza's, for Kant this kind of metaphysics can only eliminate a freedom 'we can name but never grasp'. Thus while Kant's desire to ensure freedom's place in nature is clear, it is this same motivation that causes him to pull back in the face of the organism at precisely the moment when Goethe would see a way to go on. The essential complementarity between the two accounts of nature's activity—the purposiveness without purpose best grasped by Goethe's notion of metamorphosis—*is* significant. But it is significant too that the critical point of connection in the accounts of nature serves equally as the point of departure between them. For Goethe, the logic of polarity allows for unity without the dissolution of either pole so far as the possibility of the one determines the possibility of its opposite. Inscribing polarity within metamorphosis allows Goethe to argue for the unity of

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freedom and nature without an elimination of freedom. The logic of polarity simply cannot function, however, within the framework of Kant's epistemic goals. Indeed, while the *Critique of Judgment* represents a genuine return to the question of freedom's relation to nature, freedom's place is once more secured via boundaries set by Kant: if hylozoism would be the death of natural philosophy then science can be secured only once freedom sets the rule for a nature composed of inert matter; if Spinozism eliminates autonomy then the speculative assertion of a transcendental substrate for nature must remain a species of reflective judgment, etc. Science and morality are ultimately preserved within the compass of Kant's solution but it is a solution within which the intuition of nature's metamorphosis must remain a species of speculation alone.[45]

Jennifer Mensch
Department of Philosophy
The Pennsylvania State University
USA
jam782@psu.edu

NOTES

[1] All citations from Kant indicated according to the pagination of *Kants Werke* (Kant 1902) with volume and page number indicated in that order by the use of Roman numerals separated by full colons. An exception to this will be references to the *Critique of Pure Reason* which follow standard citation practice in referring to the A-edition of 1781 and the B-edition of 1787 when providing *Werke* page numbers. Bibliographical references to the use of English translations will be noted at their first appearance.

[2] *Nova Delucidatio*: 1:415; *Physical Monadology*: 1:484. For discussion of Kant's early account of forces see Laywine 1993 and Friedman 1992: 1–52.

[3] *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics* (Kant 1992a: 301–59). Kant's newfound conviction is even more pronounced in his response to Mendelssohn's comments on *Dreams*: '[T]he upshot of all this is that one is led to ask whether it is intrinsically possible to determine these powers of spiritual substances by means of a priori rational judgments. This investigation resolves itself into another, namely, whether one can by means of rational inferences discover a *primitive* power, that is, the primary, fundamental relationship of cause to effect. And since I am certain that this is impossible, it follows that, if these powers are not given in experience, they can only be invented' (Letter to Moses Mendelssohn, April 8, 1766; 10:72). English translations of Kant's correspondence by Arnulf Zweig (Kant 1986).

[4] It is clear that avoiding subreption represents one of the primary goals of the *Inaugural Dissertation*. Kant's letter to Lambert accompanying a copy of the dissertation includes the warning that '[E]xtremely mistaken conclusions emerge if we apply the basic concepts of sensibility to something that is not at all an object of sense' (Letter to J. H. Lambert, September 2, 1770; 10:98). For an examination of the effect Lambert's reply would have on Kant's subsequent understanding of the problem see Beck 1978, and the more recent essay by Alison Laywine (Laywine 2001). For an extensive consideration of the role played by subreption see Birken-Bertsch 2006.

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[5] Kant's *Inaugural Dissertation* (Kant 1992b: 121–60).

[6] The problem of subreption will itself be transformed once the application of intellectual concepts to sensible intuition becomes the cornerstone of Kant's transcendental idealism. The problem of transgression will be reformulated by 1781 as referring to the false application of intellectual concepts to objects of what would have to be an intellectual intuition. Metaphysics will be rehabilitated but only after it is understood that intellectual concepts are limited to their empirical employment and that the transcendental employment of these concepts can yield only 'a logic of illusion' (A131/B170). For a recent assessment of the considerations surrounding Kant's letter to Herz see Mensch 2007.

[7] Kant takes intellectual concepts—possibility, existence, necessity, substance, cause—to have a two-fold function. Their 'elenctic' role staves off the problem of subreption insofar as 'they perform the negative service of keeping sensitive concepts from being applied to noumena'. Their 'dogmatic' use is responsible for generating a moral exemplar or 'Perfectio Noumenon' which can serve as 'the common measure of all other things so far as real', a measure of perfection in either a theoretical sense, 'the Supreme Being, God' or a practical sense, 'moral perfection' (2:395, 396).

[8] 'For in view of their subsequent employment, which has to be entirely independent of experience, they must be in a position to show a certificate of birth quite other than that of descent from experiences' (A86/B119; cf. A2/B2, A44/B62, A66/B91).

[9] Kant refers to Plato periodically throughout his work, usually in reference either to the noumenal status of the Ideas or the intellectual intuition required to access them (2:396, 2:413; A5/B9, A313/B370-A319/B375; 5:363–64). There are a number of commentators who take Kant's metaphysics in the *Inaugural Dissertation* to be essentially Platonist; as Lewis White Beck puts it, 'What is truly novel in the metaphysics of the Inaugural Dissertation pervades the whole ... I refer to the underlying Platonism of the entire project. The distinction between the sensible and the intelligible world, the role of ideas, the distinction between human and divine intuition, and even the neo-Platonism implicit in the quotation from Malebranche all show the effect of Kant's reading of Plato, which apparently occurred first in 1769 (see Max Wundt, *Kant als Metaphysiker* [Stuttgart, 1924]: 162–164). Platonic terminology lasts long after Kant had given up Platonic ontology' (Kant 1992b: 116, n. 4; cf. Beck 1978: 103). See also Margolis 2001: 239–55; Nuzzo 2001: 225–38, and Kuehn 2001: 192. Kuehn takes it that Kant read Plato himself but considers the potential influence of the Cambridge Platonists as well (Kuehn 2001: 470, n. 19).

[10] If you start out with the assumption that there is a type of Platonism at work in the *Dissertation* then, insofar as this kind of metaphysics demands access to an intelligible realm, Kant appears to be incoherent in rejecting the possibility of intellectual intuition either as a mode of access or as a specific content for cognition. For this reason Lewis White Beck called Kant's rejection of intellectual intuition 'the great lacuna' of the *Inaugural Dissertation* and would go on to interpret Kant's letter to Herz as determined by the special problem of connecting intellectual concepts with noumenal objects (Beck 1989: 21–6).

[11] While a number of commentators have looked at specific points in the constellation of issues surrounding intellectual intuition, few have considered Kant's position as whole. An exception is Gram 1981.

[12] A comprehensive discussion of Kant's noumena-phenomena distinction is in Allison 1978. A different, though no less helpful, perspective on this topic is found in Parrini 1994.

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[13] There are numerous studies devoted to this controversy but two of the best remain Snow 1987 and Beiser 1987: 44–126.

[14] As Beiser puts it, 'Along with the publication of the *Kritik der reinen Vernunft* in May 1781, the most significant intellectual event in late eighteenth-century Germany was the so-called pantheism controversy between F. H. Jacobi and Moses Mendelssohn. [. . .] The pantheism controversy completely changed the intellectual map of eighteenth-century Germany; and it continued to occupy thinkers well into the nineteenth century' (Beiser 1987: 44). Regarding Spinoza's supposed Atheism, Copleston nicely distinguishes two strands in Spinoza's thought: 'if taken in its deterministic, mechanical, scientific-mathematical aspect, Spinozism is an atheistic system' but it is true too that Spinoza 'declares that it is only love for a thing eternal and infinite which is the source of unmixed joy, while his ethical system culminates in the *amor intellectualis Dei*' (Copleston 1946: 43).

[15] J. G. Fichte, *The Science of Knowledge* (Fichte 1982: 16); Fichte's *Werke* (Fichte 1971: 434).

[16] H. S. Harris identifies Hamann as the source of Jacobi's 'highly original development of Hume's theory of belief'; see Harris 1977: 47, n. 41.

[17] Cf. 'We have to make use of the expression 'intuition of reason' [*Vernunftanschauung*] because language does not possess any other way to signify how something that the senses cannot reach is given to the understanding in *feelings* of rapture, and yet given as something truly objective, and not merely imaginary' in *David Hume on Faith (Preface, 1815)* in *The Main Philosophical Writings and the Novel 'Allwill'. Friedrich Heinrich Jacobi* (Jacobi 1994: 563); Jacobi's *Werke*, (Jacobi 1812–25, vol. 2: 60).

[18] 'Überhaupt ist diese Schrift des Hrn. Jacobi ein seltenes Gemisch, eine fast monströse Gebürt: der Kopf von Goethe, der Leib Spinoza, u. die Füsse Lavater' (Letter from Moses Mendelssohn to Kant, October 16, 1785; 10:271). The mention of Goethe is due to Jacobi's inclusion of Goethe's previously unpublished *Prometheus* insofar as its discussion had been the occasion for Jacobi's conversation with Lessing regarding Spinozism. A complete collection of Jacobi and Mendelssohn's contributions to the controversy is in Scholz 1916; for an excerpted English edition of Jacobi's *Spinozabuchlein* see Jacobi 1994: 173–251.

[19] 'What is Orientation in Thinking' in *Kant: Political Writings* (Kant 1991: 245).

[20] Complaining about the general incoherence of Kant's appeal to a thing in itself, Jacobi wrote that '*without* that presupposition I could not enter into the system, but *with* it I could not stay within it' and asked 'How is it possible to reconcile the presupposition of objects that produce impressions on our senses, and in this way arouse representations, with an hypothesis intent on abolishing all the grounds by which the presupposition could be supported' (Jacobi's *Werke*, vol. 2: 223, 226; Jacobi 1994: 336, 337).

[21] It bears reminding that the majority of the participants in the Pantheism Controversy would not have had first-hand knowledge of Spinoza and so would have principally relied on three sources: Bayle's *Dictionnaire* articles, Wolff's refutation of Spinoza in his *Theologia Naturalis*, and Jacobi's own *Spinozabüchlein*; until the Paulus edition of 1802 the only extant copies of Spinoza's work were from a rare 1677 edition. Dale Snow documents this as well as some of the misinterpretations, particularly on Bayle's part, that this entailed: Snow 1987: 403f.

[22] Spinoza's *Ethics* cited by Part in Roman numerals, (P)roposition number, and (S)cholium (Spinoza 1992a).

[23] 'This kind of knowledge proceeds from an adequate idea of the formal essence of certain attributes of God to an adequate knowledge of the essence of things. I shall illustrate all these kinds of knowledge by one single example' (II:P40). Spinoza's example

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at this point is mathematical and essentially Neoplatonist in its account of intuition as a case of immediate inference. As the account is developed in part five, however, Spinoza's broader concerns emerge once intuition is specifically linked to 'knowledge under the form of eternity': 'Therefore to conceive things under a form of eternity is to conceive things in so far as they are conceived through God's essence as real entities; that is, in so far as they involve existence through God's essence. Therefore our mind, in so far as it conceives itself and the body under a form of eternity, necessarily has knowledge of God, and knows . . . etc.' (V:P30). Spinoza admits in the *Emendation* that 'the things I have hitherto been able to know by this kind of knowledge have been very few' (22) but he nonetheless works to provide a method leading to ends along the same lines as those laid out in the ethics: 'Our aim, then, is to have clear and distinct ideas, that is, such as originate from pure mind . . . Next, so that all ideas may be subsumed under one, we shall endeavor to connect and arrange them in such a manner that our mind, as far as possible, may reproduce in thought the reality of Nature, both as to the whole and as to its parts' *Treatise on the Emendation of the Intellect* (Spinoza 1992b: 91); see esp. 108, no. 5 re. perception 'under the form of eternity'. Eckart Förster's interpretation here is narrower given his claim that it is Goethe who first broadens Spinoza's use of *scientia intuitiva* beyond the case of mathematics and then applies it to the Kantian account of natural purposes in particular. See Förster 2002: 188.

[24] Herder is perhaps the prime example of such emphasis. Whereas for Spinoza there is a clear difference between God as immanent cause and nature as passive product, on Herder's reading the identity between God and nature serves as the basis and evidence for a physico-theology which can be revealed intuitively. Thus while for Spinoza there could be a clear difference between the physics revealed as a result of *ratio*'s approach to *naturata* and the metaphysics intuitively discovered via *intuitio*, in Herder this distinction is collapsed. Detlev Pätzold argues similarly in Pätzold 2006. See also Bell 1984: ch. 5; and Zammito 1997: esp. pp. 129 f.

[25] *Goethes Briefe* (Goethe 1988b). During 1784–85 Goethe read through Spinoza with Charlotte von Stein and Herder; Herder had given Goethe a copy of Spinoza's *Ethics* with the inscription 'Let Spinoza be always for you the holy Christ'. A history of Goethe's engagement with Spinoza during these years is in Richards 2002, especially 376–82. Eckart Förster argues that Goethe's relations with Jacobi constituted a separate '*Spinozastreit*': 'Neben der bekannten Auseinandersetzung zwischen Jacobi und Mendelssohn . . . gab es noch einen zweiten, zur gleichen Zeit stattfindenden Spinozastreit, der nicht minder wichtig ist für die philosophische Entwicklung nach Kant, der aber vor der Idealismus-Forschung bisher kaum zur Kenntnis genommen worden ist: der zwischen Jacobi und Goethe' (Förster 2002: 181).

[26] *Sämtliche Werke nach Epochen seines Schaffens* (Goethe 1985–98).

[27] There is a second problem regarding the lack of contingency, as Copleston identifies it: '[I]f one starts with the infinite Substance, God, it is impossible to demonstrate that the modifications of Substance must follow or to explain their appearance, for an infinite Substance will, *ipso facto*, realize all its potentialities in undivided simplicity: to speak strictly, it will have no potentialities, but will be Act pure and simple' (Copleston 1946: 44).

[28] *Metaphysical Foundations of Natural Science* [1786] (Kant 1985). The three foundational laws for Kant are the conservation of motion, the law of inertia, and the equality of action and reaction, as constituted according to substance, causality, and community respectively. In the *Metaphysical Foundations* Kant remains essentially Newtonian in his conception of matter if for different reasons. Newton is committed to the Reformation understanding of matter as necessarily passive in contradistinction to God's active agency and thus

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considers forces to be at work between inert particles. While these specific considerations might not be at work in Kant's account, he is as concerned to maintain matter's essential passivity for all the reasons discussed above. On Kant's Newtonian sense of forces see Friedman 1992, especially chapter 5, and the more recent Friedman 2006. For Reformationist influences on Newton see Deason 1986; Westfall 1977, especially chapters 7 and 8; and Hankins 1985, especially chapter 2.

[29] Eckart Förster distinguishes the differences between intellectual intuition and an intuitive intellect in sections 76–77 of the third *Critique*, linking the account of the '*Synthetisch-Allgemeinen*' in particular to Goethe's approach (Förster 2002: 177–80).

[30] More generally considered, reflective judgement allows us to make sense of the purposiveness of life for human purposes. For a hermeneutic reading of the reflective use of 'life' see Makkreel 1990: ch. 5.

[31] 'A Study Based on Spinoza' [1784–5] in *Goethe: Scientific Studies* (Goethe 1988a: 8).

[32] Goethe 1988a: 9.

[33] Goethe 1988b: 9.

[34] 'Metamorphoses of Plants—Second Essay' [1790] in *Goethe's Botanical Writings* (Goethe 1952: 80).

[35] 'An Attempt to Evolve a General Comparative Theory' [1794] (Goethe 1952: 81).

[36] 'A Study Based on Spinoza' [1784–5] (Goethe 1988a: 8).

[37] 'An Attempt to Evolve a General Comparative Theory' [1794] (Goethe 1952: 83).

[38] 'Outline for a General Introduction to Comparative Anatomy, Commencing with Osteology' [1795] (Goethe 1988a: 123).

[39] For the special role played by Goethe's scientist see Amrine 1990, and Bortoft 1996.

[40] See also 'Polarity' [1799] (Goethe 1988a: 155).

[41] Remembering his encounter with Schiller, Goethe recalls that 'I gave an enthusiastic description of the metamorphoses of plants, and with a few characteristic strokes of the pen I caused a symbolic plant to spring up before his eyes . . . he shook his head and said "That is not an observation from experience. That is an idea." . . . I collected my wits, however, and replied, "Then I may rejoice that I have ideas without knowing it, and can even see them with my own eyes"': in 'Fortunate Encounter' [1794] (Goethe 1988a: 20).

[42] Goethe, *Zur Morphologie: Von den Anfängen bis 1795, Ergänzungen und Erläuterungen*, in *Goethe: Die Schriften zur Naturwissenschaft*, (Goethe 1977: 2.9a:58). Elaine P. Miller provides a thoughtful consideration of Goethe's view of nature in relation to Kant's in Miller 2002: 45–77. An older but still helpful account (with much attention paid to Goethe's late biographical conversations with Eckermann) is Cassirer 1945: 61–98.

[43] 'The Formative Impulse' [1817] (Goethe 1988a: 36).

[44] The 'Kantian' here is Schiller: 'The Influence of Modern Philosophy' [1817] (Goethe 1988a: 30).

[45] I would like to especially thank Eckart Förster for his comments on an earlier version of this paper. Support for this research was funded in part by a Kristeller-Popkin Travel Fellowship sponsored by the *Journal of the History of Philosophy* and a Franklin Research Grant from the American Philosophical Society.

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