

# Spinoza's God in Goethe's Leaf: The Spinozist Foundation of Goethean Morphology

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*"I said to the almond tree, 'Sister, speak to me of God.' And the  
almond tree blossomed."*

—Nikos Kazantzakis

On a first level, Goethe's unit of plant transformation, the *Urpflanze*, may be thought of as a synecdoche for Spinoza's God, to wit, a pattern of vegetative growth standing for the inner-workings of Nature as a whole.<sup>1</sup> Indeed, the most straightforward way of linking Spinoza's metaphysics to Goethe's sciences of form would appeal to their common understanding of Nature as a variegating entity that preserves its identity under ever different shapes and forms. Incidentally, in his multi-pronged and at times vitriolic critique of Spinozism, Pierre Bayle had argued *ad absurdum* that, were we to call the "God of the Spinozists" immutable, we would have to recognize a similar status to Proteus, Thetis and Vertumnus – i.e. the shape-shifting deities of Greco-Roman antiquity.<sup>2</sup> Yet, beyond simply associating Goethe with the mythical form of an infinitely plastic God, I believe there is much more to be said about the effect this Dutch philosopher had on the romantic scientist, seeing how his entire vision was articulated in undeniably Spinozist terms. What is more, the first principle in any science of Nature was to be

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1. I would like to thank Hadi Fakhoury for his enthusiasm and scholarly guidance throughout the writing of this paper. If it weren't for him the original draft of this paper would not have been presented in the 2015 conference of the Centre for Research on Religion (CREOR) at McGill University, and professor Frederick Amrine would not have taken notice of my work. I'm truly indebted to Fred for the powerful argument made in his "Goethean Intuitions" (*Goethe Yearbook* 18 [2011]: 35-50) which made me realize its potential as a Master's thesis topic (see Michail Vlasopoulos, "Goethe, and the Philosophy of Form," Unpublished master's thesis [Harvard University GSD, Cambridge MA, 2012]).

2. Note I. II in Pierre Bayle, *Dictionnaire Historique et Critique* (Rotterdam: R. Leers, 1697), 4: 1083-1100.

claimed by a mode of knowing that both thinkers referred to as intuitive. On that account, it will be argued here that Goethe's way of mentally yielding the *Grundform* in his morphological studies is homologous to, if not directly derivative of, Spinoza's way of yielding the attributes of his God. The first part of the paper lays down some fundamental themes in Spinozistic metaphysics on the occasion of explicating one of the many geometrical analogies in the *Ethics*. The reader will be introduced to: the relation between modes and their God; the categorical status of both finite and infinite modes; the notion of physical and conceptual immanence; and how it all comes together in the subject matter of the *scientia intuitiva*. After a brief account of Goethe's foray into plant morphology, I proceed with the hypothesis that both thinkers study what comes down to the same Nature under different attributes; that Goethe's morphology takes as its object the same God as Spinoza's; but instead of studying It under one of the two traditional attributes, Extension and Thought, he sees It under the light of a new attribute; what may be termed *Morphē* in reference to the root of his newly-coined "morphology."

Spinoza's *Ethics* is a book that gained some notoriety for being, among other things, "demonstrated in the geometric order" [*ordine geometrico demonstrata*].<sup>3</sup> Still, however cumbersome a reading this may have made it, the allusion to the form of Euclid's *Elements* makes perfect sense if put in context. After all, the *Ethics* was written in an era that revered the said ancient treatise in geometry as a paradigm of demonstrative reasoning, and took it to hold the promise of nothing less than a final science. The early moderns were indeed captivated by a vision of a complete and definitive exposition of human knowledge that would do for the subject matter of physics or ethics what Euclidean geometry had done for magnitude with so much success. Modeled thereon and fully informed with the deliverances of empirical observation, what they referred to as *Scientia* – with a capital S – would have contained a finite sequence of definitions, postulates and self-evident axioms whence all particular truths might be derived in an orderly deductive fashion. A matter purely formalistic as it might appear, I strongly believe Spinoza did not invoke the venerated geometric order as a mere expository device, a decision that would eventually alienate many a

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3. The subtitle of the *Ethics* as it appeared in Baruch Spinoza, *Opera Posthuma* (Amsterdam: Jan Rieuwertsz, 1677).

reader, from Heinrich Heine to Henri Bergson.<sup>4</sup> Most likely, he aspired to say something about the world itself. Indeed, for Spinoza, everything is held together by meaningful conceptual relations independently even from our human minds, in the same way the laws of geometry can be supposed to be valid even prior to our gaining knowledge of them. The order of all facts that make up the definitive story of the world is enfolded in some first principles, perhaps even finite in number, like in Euclidean geometry. So, even though human minds cannot behold the world of facts in their infinite number and complexity, there lies a promise that they may contemplate, eventually, their unique source and origin. Arguably, a similar brand of epistemological optimism was adopted by Johann Wolfgang von Goethe who, like the Dutch philosopher, never gave up affirming the absolute intelligibility of Nature.

From all the plentiful geometrical analogies offered throughout the Spinozistic corpus, one sentence stands out in capturing the essence of Spinoza's God in all Its fecundity, and that with unparalleled succinctness:

[F]rom God's supreme power, or infinite nature, infinitely many things in infinitely many modes, that is, all things, have necessarily flowed, or always follow, by the same necessity and in the same way as from the nature of a triangle it follows, from eternity and to eternity, that its three angles are equal to two right angles.<sup>5</sup>

As it ought to be expected from a book ordered geometrically, this scholium is the culminating product of some many preceding propositions that have hitherto shown substances to be necessarily existing (*Ethics*, Book I, Proposition 7), infinite (EIP8), and indivisible (EIP12-13, EIP15s[II]-[VI]), right before it is demonstrated that an absolutely infinite substance, God

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4. Henri Bergson once claimed that a neophyte confronted with the quasi-mechanical complexity of Spinoza's *Ethics* is struck with admiration and terror "as though he were before a battleship of the Dreadnought class." Cf. Henri Bergson, "Philosophical Intuition" in *Key Writings*, ed. Keith Ansell Pearson and John Mullarkey (New York: Continuum, 2002), 236-237. Similarly, Heinrich Heine considered this method a defect, like a bitter shell that holds a tasty kernel. Cf. Heinrich Heine, *Religion and Philosophy in Germany: A Fragment*, trans. John Snodgrass (London: Trubner & Co, 1882), 135-137.

5. *Ethics*, Book I, Proposition 17, Scholium 2. Unless otherwise noted all translations from the *Ethics* and the *Treatise on the Emendation of the Intellect* come from: *The Collected Works*, trans. Edwin Curley (NJ: Princeton University Press, 1985); letters from *Spinoza: Collected Works*, ed. Michael L. Morgan, trans. Samuel Shirley (Hackett Pub Co: Indianapolis-Cambridge, 2002).

or Nature, exists in exclusion of any other conceivable substance (EIP14-15). Now, the traditional way of introducing Spinoza's substance monism would be to ease the reader through the monumental ontological argument of the first book of the *Ethics*, propositions one to fourteen. However, on the occasion of that excerpt, I should like to begin *in medias res* and follow Spinoza's deductive path from the idea of the infinite being, "downwards," to the infinite order of worldly things. I hope the reasons behind this approach will become clear by the end of this paper.

What exactly are the things that follow from God? Simply, all there is and can ever be. But is this the whole story told by Spinoza? Apparently not. It is intimated in the same passage that there are two different ways of "following" – a metaphysical distinction rendered grammatical by having the "following from" [*sequi*] in present tense, in contrast to the "having flowed from" [*effluxisse*] in perfect. Running the risk of reading too much into this excerpt, we may suppose that the aspectual information of these forms was meant to highlight the difference between two sorts of "effluences" of God: (a) one, conveyed by the perfective aspect, refers to ephemeral effects that are completable in time; (b) the other, conveyed by what could be called a progressive aspect, to effects being produced constantly and indefinitely so. The first class is populated by all those finite beings that spawn here or there, now or then, and the second, by certain ubiquitous and eternal facts of law that govern their behavior.

A crucial theorem in Spinozist metaphysics, and nothing less of a founding principle of his physics, is that motion and rest belong to the second kind of products. Motion follows "from the absolute nature of God's nature" and, as such, it is an eternal and infinite modification of God (EIP21). In the literature, what mediates between the nature of the infinite being and its fully determinate manifestations are known as infinite modes, like the kinematics that befall extension.<sup>6</sup> In particular, motion for Spinoza assumes the important role of the principle of individuation, i.e. that which allows distinct beings be parceled out of the infinite fabric of pure Extension.<sup>7</sup> What makes a finite being the sort of thing it is, and the very particular instance

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6. "Infinite," because they follow from a perfect being absolutely, "modes," because, albeit permanent and ubiquitous, they are but *features* of that one being.

7. I will heretofore capitalize the first letter of the words "extension," "thought" or "form," to signify their being meant as divine attributes.

of that sort, is a persisting ratio of motion and rest tracing a unique path in space.<sup>8</sup> Accordingly, it wouldn't be improper to think of Spinoza's motion as morphogenetic, i.e. a kinematic principle that is generative of form.

However succinct, the analogy with the geometrical proposition warrants a closer examination. Though the phrase "by the same necessity" [*eadem necessitate*] indicates a univocal understanding of necessity among the *relata*, the "in the same way" [*eodem modo*] conveys a much more heretical association of the source of the analogy (geometrical demonstration) with its target (divine expression). It implies that we are to God, not as creatures are to a creator, but as theorems are to their grounds.<sup>9</sup>

Even more strikingly, we read in proposition 15 of the *Ethics* that "Whatever is, is in God, and nothing can be or be conceived without God." Notably, the infamous "in" of that sentence marks a departure not only from a certain theological common sense, but of a logical one as well. Not surprisingly, it is known to have raised the ire of the religious-minded critics then, as much as it bewilders readers today. The reason for the former was the profanely intimate relation Spinoza's God bears to Its creatures. Not only are we comprehended by God in the same way conclusions are contained in premises (as in EIP17, EIP25s or EIIP8s), but it is also suggested we reside in him in the same way properties inhere in substances. After all, as is explicitly stated later in EIP25s, finite beings are simply God's affections, or the various ways by which God's attributes are expressed in a certain and determinate way. So, even more paradoxically than the view that likens creation to a cosmic derivation, the latter view implies that creatures are parasitic on their creator in the same way that "rationality" or "paleness" is of a "Socrates."

Upon a closer look, the appeal to phenomena of predication seems to fly in the face of common-sense grammar (or at least, the familiar ways we talk thereby). Normally, our logic recognizes concrete finite beings as the ultimate subjects of predication, whereas Spinoza's theorems suggest

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8. Something structurally similar is expected from God's infinite intellect under the attribute of Thought in virtue of his doctrine of parallelism (see Ep. 64 as well as *Ethics*, Book II, Proposition 7).

9. Cf. *Ethics*, Book II, Proposition 8, where Spinoza parallelizes the way "the formal essences of the singular things, or modes, are contained in God's attributes" with the way an infinite number of equal rectangles, formed from the segments of any two intersecting lines inside a circle are comprehended by that circle.

they be themselves predicable of a God-subject. Though we can say of a “Socrates” that “he is human,” the being that goes by the name “Socrates” cannot be said of any other thing other than his own self, let alone of some other substance.<sup>10</sup> However, in a hypothetical language modeled after Spinoza’s metaphysics, what is now considered concrete within our logic – the historical Socrates in this case, as opposed to his humanity – we would have to demote to qualifications of some deeper, more fundamental subject.

Perhaps at this point, true dogmatist that he was, Spinoza would much rather give up on our common-sense grammar than compromise his metaphysics. As Anthony Kenny so succinctly puts it, for Spinoza, “the proper way of referring to creatures like us is to use not a noun but an adjective.”<sup>11</sup> Indeed, as soon as Spinoza brings the discussion down to the level of finite modes for the purposes of outlining the principles of interaction amongst bodies and minds in Book II, proposition 9 and onwards, God gets qualified in various ways by the adverb “insofar [*quatenus*].” So, for instance, a human mind is said to perceive something adequately, as long as the idea of that thing is in God, “not *insofar* as [It] is infinite, but *insofar* as [It] is explained through the nature of the human Mind (EII P12, corollary).<sup>12</sup> Unfortunately, though, the categorical status of finite beings is not the only problem looming over the analogical association of God’s expressivity with geometrical proceedings.

Apart from the uneasy relationship between creature and creator, what should trouble the reader even more is the very act of the former following from the latter. What does the excerpt from that scholium (EIP17s2) imply about the act of creation or generation itself? Taking a closer look at the other *relatum* of the analogy, one can easily notice that proposition 32 of Euclid’s *Elements*, Book I, is demonstrated by way of a large arsenal of propositions, themselves premised on a bedrock of self-evident axioms, postulates, as well as geometrical constructions. It seems that, if the analogy be taken seriously, every act of “following from God” would need to be explained through some

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10. This point was famously brought to the fore by professor Curley in his *Spinoza’s Metaphysics: an Essay in Interpretation* (Cambridge: Harvard University Press, 1969) and *Behind the Geometric Method* (Princeton: Princeton University Press, 1988).

11. Anthony Kenny, *The Rise of Modern Philosophy* (Oxford: Clarendon Press, 2006), 191-192.

12. Emphasis added; I modified Curley’s translation by replacing the pronoun “he” with “It” to give an impersonal ring to Spinoza’s God.



extrinsic principle, just like a property is proved of a subject by having the truth of a general statement be mechanically transferred to a particular one through a middle term. For instance, in the classical form of the syllogistic procedure, I arrive at the conclusion that “Socrates is an animal,” only as long as my initial premise “Socrates is a man” be concatenated to the major premise “all men are rational animals.” In addition, involved in any kind of syllogistic is the idea of progress in time. Each step in the deductive path from premises to conclusion is conceived of as a mind’s passage from old to new knowledge, or from potential to actual knowledge. In the end, our ability for meaningful reasonings goes only as far as inferring a valid conclusion from the concordance of at least two premises. This worry was in fact brought to Spinoza’s attention by Tschirnhaus, one of the first men in the Spinoza circle to get his hands on the manuscript of the *Ethics*:

In mathematics I have always observed that from any thing considered in itself – that is, from the definition of anything – we are able to deduce at least one property; but if we wish to deduce more properties, we have to relate the thing defined to other things. It is only then, from the combination of the definitions of these things, that new properties emerge.<sup>13</sup>

In other words, a geometric demonstration is premised on a plurality of brute statements, from the interaction thereof new connections arise between terms and new properties are proved of subjects. No single premise is rich enough to spontaneously generate a new piece of knowledge if not for the input of an external principle.<sup>14</sup> What is more, since the order and connection of bodies is the same as the order and connection of ideas – according to Spinoza’s *Doctrine of Parallelism* from *Ethics* IIP7 – the problem of the poverty of premise in Thought is mirrored by a problem of the idleness of matter in Extension. Think of the Cartesian cosmogenesis in the unpublished *Le Monde*: by means of an initial divine push or stir, God sets a grand monolith of an extension into motion. This metaphor is

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13. Tschirnhaus to Spinoza, Ep. 82 in *Spinoza: Complete Works*, 957.

14. Harold H. Joachim argues along the same lines: “Is it not a commonplace of Logic, a familiar and indisputable doctrine, that our thought, in deducing, never proceeds *from* the Whole; that it moves always to part *within* the Whole (or within *a* Whole) and in accordance with its dominant character or the principles of its totality?” (Harold Henry Joachim, *Spinoza’s Tractatus de Intellectus Emendatione: a Commentary* [Oxford: Clarendon Press, 1940], 69).

as old as the Book of Genesis, if not much older. We resist the idea of something being expressive of itself by itself; we, like the ancients, cannot think of matter as being generative of form, any more than expect a solitary premise to yield a new piece of knowledge. In fact, when called to illustrate the ontological status of Spinoza's modes, or "God's affectations," be they infinite or finite, our imagination presents us with the familiar way a piece of cloth or a body of water is affected by a local perturbation; little wonder the common metaphor for the Spinozist God is a turbulent sea or a pleated cloth.<sup>15</sup> However, both pictures fall short in that their subjects, sea and cloth, cannot themselves account for their waves or pleats respectively. Their forms of expression are determined by a causal influence that is conceptually and physically external to them.

Contrary to all this, Spinoza's morphogenetic motion is neither transferred nor instilled into a passive *res extensa*. The version of extension that Spinozist physics takes as its object is inherently and eternally dynamic, unlike Descartes' own. Since motion is the product of an infinite substance being ever-self-affected, it cannot be situated in time like any other worldly activity. Hence, the kinematic character of Spinoza's Substance ought to be eternally acted out. The problem arises when we try to conceive the "following from" [*sequi*] relation in a temporal sense. That, in turn, would suggest a creative act of God à la Descartes, and, temporally determined as it would have been, it would conflict with the infinitude of the divine being.<sup>16</sup>

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15. Anthony Quinton describes Spinoza's modes as "temporary contours taken on by the fabric of everything that there is, like waves in the sea" (Anthony Quinton, Interviewed by Bryan Magee on Spinoza and Leibniz, *The Great Philosophers*, UK: BBC, 1987). Perhaps this stems from Spinoza's own metaphor for the human condition which likens us to "waves on the sea, driven by contrary winds,...not knowing our outcome and fate" in EIII59s. Aaron Garrett also writes about the form of the *Ethics*: "To take a metaphor from Leibniz by way of Gilles Deleuze, each proposition is like a pleat or fold in a Baroque curtain that as one unfolds it one realizes envelops bolt after bolt of pleated cloth. As each proposition is unfolded, longer and longer demonstrations and justifications emerge until the whole argument up to that point is like one long seamless piece of cloth" (Aaron Garrett, "The Virtues of Geometry," in *The Oxford Handbook of Spinoza's Ethics*, ed. Michael Della Rocca, 18-44 [New York: Oxford University Press, 2018]).

16. The eternity that Spinoza has in mind, as the eighth definition of the first part of the *Ethics* suggests, is not put in terms of indefinite duration; by "eternity" he understands "existence itself insofar as it is conceived to follow necessarily from the definition alone of the eternal thing (E1D8)."



It should also be noted here that the notion of immanence, so commonly associated with Spinozist metaphysics, had been already used in a scholastic context to distinguish instances of bio-causality from mechanical causation. Immanence is the quality of any action which is initiated and consummated in the interior of the same being.<sup>17</sup> And, a world that can move itself, like Spinoza's, deserves to be deemed alive in some way or another, at least insofar as certain philosophical traditions are concerned which associated soul with self-motion or a principle of motion and rest. So, despite its seeming proto-mechanical rigidity, Spinoza's God is much closer to an infinitely complex organism than to an infinitely complex machine, the worldview advanced by many a philosopher of his time. It is reasonable then to suppose Goethe saw as much in Spinoza's philosophy, in his attempt to reinstate the organism as the principal object of natural philosophy.

But still, the problem asserts itself thus: if the order of physical events is the same as the order of mental ones, how is the immanentist character of self-motion in the physical realm mirrored in the realm of conceptual relations? How can a thing, in isolation from any external principle – unlike Euclid's proposition 32 – be generative of a demonstrable feature? Spinoza's answer to Tschirnhaus' worry reads as following:

With regard to your question as to whether the variety of things can be demonstrated a priori solely from the conception of Extension, I think I have already made it quite clear that this is impossible. That is why Descartes is wrong in defining matter through Extension; it must necessarily be explicated through an attribute which expresses eternal and infinite essence. But perhaps, if I live long enough, I shall some time discuss this with you more clearly.<sup>18</sup>

Since Spinoza passed away a few months after making that pledge, it has since been left to the reader to reconstruct a possible response out of his written word. But, in want of such a response, some ninety-one years after his death, Spinoza's worldview fell victim of Voltaire's sharp critique: "Influenced by Descartes, he makes improper use of Descartes' equally

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17. Cf. Edouard Thamiry, "Immanence," in *The Catholic Encyclopedia*, vol. 7, ed. Charles G. Herbermann (New York: The Encyclopedia Press, 1907), 682-687. This view is probably rooted in a passage from Aristotle's *Physics*, Book II, 192b8-33.

18. Spinoza to Tschirnhaus, Ep. 83 in *Collected Works*, 958.

celebrated and senseless expression: Give me motion and matter and I will form a world.”<sup>19</sup> However, seeing how the dismissive comment is directed against both philosophers indiscriminately, I notice a failure from Voltaire’s part to appreciate the subtle ways Spinoza had diverged from Descartes in matters epistemological.

Descartes’ meditator commences with the undeniable certainty of the *cogito* and, with this criterion at hand, he proves – circularly as some scholars complain<sup>20</sup> – the existence of a truthful God who guarantees the conformity of the world to our clear and distinct ideas. Instead of thusly adducing any criteria for certainty, Spinoza conceives of the normative function of a true idea in a way that is not extrinsic to the idea itself.<sup>21</sup> Certainty is not a property that remains to be proved of an idea, but rather a *state* the mind finds itself in, while beholding a true idea, or as Spinoza writes in the *Treatise on the Emendation of the Intellect* §35 (henceforth *TdIE*), it is the way, or “the mode by which we are aware of the formal essence.” In other words, since the positing of a true idea is prior to its certainty, we cannot learn what certainty is in lack of such a mental content. Consequently, the reality of what we clearly and distinctly perceive does not require a divine guarantee to the degree that a godless scientist would be beset by a perpetual skepticism. Even the slightest glimpse of certainty offered by an object simple enough that it cannot be feigned e.g. a mental construction of a geometric figure, allows one to experience, mentally, what truth is. However, the brute truth of just *any* one of our ideas is not sufficient for conducting good metaphysics, and this is because, according to Spinoza, the method for seeking the truth is as perfect as that first true idea is.

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19. “Entêté de *Descartes*, il abuse de ce mot, également célèbre et insensé de *Descartes*: *Donnez-moi du mouvement et de la matière, et je vais former un monde*” (Lettre X, “Sur Spinoza” in *Oeuvres Complètes de Voltaire*, vol. 47, *Mélanges littéraires* [Basil: Jean-Jaques Tourneisen, 1787], 410). English translation in *The Works of Voltaire*, vol. 38: *The Henriade: Letters and Miscellanies* (Akron, OH: The Werner Company, 1906), 235.

20. The main gist of the so-called fallacy of the Cartesian circle is this: in the context of the radical skepticism initiated, there can be no grounds for proving the existence of a veracious God, if the truth of the clear and distinct ideas we have of Him presupposes a divine guarantee.

21. Truth for Spinoza does not consist in the *conformity of the idea to its object* (*adaequatio rei et intellectus*), as the scholastic *credo* goes, but in ideas that are adequate in themselves, in relation to other adequate ideas of varying perfection. This is captured by a slight shift in grammar over which the abstract noun “*adaequatio*” is substituted with the adjective “*adaequata*” as a qualifier of his ideas.

Effectively, Spinoza's own purported method in his *TdIE* is about the discovery of a true idea, which, in addition to being clear and distinct, is also the source for deducing all other ideas in the "proper order (§36)." The accurate representation of Nature requires an ordering of these ideas in a gradient according to their perfection. Spinoza thinks that human science will never be perfected unless it be founded upon and be elicited from the idea of the most perfect being. One needs to order her ideas into a system that tells the story of how all particular things depend on God. "[F]or our mind to reproduce completely the likeness of Nature," as he says, "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 (§42)." In other words, the idea of the most perfect being offers a standard by being generative of all other ideas. In his God then, Spinoza discovers the Archimedean point on the self-evidence of which – to use Frederick Pollock's tectonic metaphor – "he would lay the whole weight of all the subsequent knowledge we may build on our leading assumptions."<sup>22</sup> Along a similar vein, some hundred years after Spinoza's death, Goethe remarked in a short essay on the philosopher that "we call the individual or collective impression they [the things] make on us true – so long as it springs from the totality of their existence."<sup>23</sup> Furthermore, near the end of his life, he admitted that his whole method relies on derivation: "I persist," he writes in 1823, "until I have discovered a pregnant point from which several things may be derived, or rather which voluntarily brings forth much out of itself and delivers it to me;"<sup>24</sup> while he also offered what can be described as an encomium to the geometer and her synthetic methods:

From the mathematician we must learn the meticulous care required to connect things in unbroken succession, or rather, to derive things step by step.... Actually, its proofs merely state in a detailed way that what is presented as connected was already there in each of the parts and as a consecutive whole, that it has been reviewed in its entirety and found to be correct and irrefutable under all circumstances. Thus its demonstrations are always more exposition,

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22. Frederick Pollock, *Spinoza: his Life and Philosophy* (London: C. Kegan Paul & Co., 1880), 129.

23. Goethe, "A Study Based on Spinoza," in *Scientific Studies*, vol. 12 of *The Collected Works*, ed. and trans. Douglas Miller (NJ: Princeton University Press, 1995), 9.

24. Goethe, "Significant Help," in *Scientific Studies*, 41.

recapitulation, than argument.<sup>25</sup>

This important passage speaks against the initial impression that the austere geometrical method is ill-fitted for the subtle purposes of the Romantic naturalist. What geometry had been offering all along in this context is a model of expression such that the effects produced be comprehended by the causes, or the conclusions “be virtually in” the premises, as Aquinas used to phrase it.<sup>26</sup>

In many ways, the *Treatise on the Emendation of the Intellect* contains the conceptual seeds for the form as well as the content of the *Ethics*. In Spinoza’s time, the so-called “synthetic method,” as employed in the *Ethics*, was customarily used by geometers in organizing their conceptual findings into an axiomatized system. It was meant to initiate the reader into the demonstrative path from first principles to various conclusions that can be drawn, or, as an Aristotelian would put it, to the downward movement from things “better known in themselves (*per se*)” to things “better known to us (*ad nos*).” However, the inaugural part of the *Ethics* contains an ontological argument that comprises some fourteen propositions before the striking conclusion of substance monism be drawn. This is the part we purposefully skipped in introducing the first book of the *Ethics* earlier. Insofar as the reader is encouraged to *discover* the unity and singularity of God, and since the postulation of this one divine being is celebrated by Spinoza as the highest principle of his system, we should admit that the first part of the *Ethics* is laid out analytically, not synthetically. In many ways, the analytical procedure of the first half of the *Ethics* is analogical to the way a geometer discovers that which underlies all possible figures and ultimately posits it as the subject genus of her science; only, instead of pure magnitude, it is God that is revealed to Spinoza’s reader as the common ground of all there is and can ever be.

No matter how profound such an analytic ascent is, though, the finite mind cannot lead the world back into the state it was found in before the analysis; whatever particular being was traced back to its origins by analysis cannot be reclaimed in derivation by synthesis. Ultimately, the vision of the

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25. Goethe, “Significant Help,” in *Scientific Studies*, 16.

26. “Conclusio...est virtute in suis principiis” (*Expositio Libri Posteriorum Analyticorum*, Lib. 1, Lectio III).

mind's descent, from a singular God – be it considered an infinite body or an infinite mind – to the essences of finite things, calls for an entirely new mode of knowledge. The key I believe is hinted in this passage from the same preliminary work:

[W]e must never infer anything from abstractions.... [T]he best conclusion will have to be drawn from some particular affirmative essence, *or*, from a true and legitimate definition. For from universal axioms alone the intellect cannot descend to singulars, since axioms extend to infinity.<sup>27</sup>

True science, Spinoza holds, is not about deducing the implicit features of a subject by relating it to an abstract rule or subsuming it under its appropriate class. Instead of an axiomatic system of definitions, axioms, postulates and theorems – no matter how analogous such a geometrical exposition may be to the purported workings of the Spinozist cosmos – Spinoza envisions the unfolding, property after property, of an infinite thing into the transient world we finite beings inhabit, the epidermis, as it were, of a cosmic organism. Such a system would be like starting from the concept of magnitude in geometry and deducing an infinity of possible determinations with no recourse to axioms, in the same way we would describe a familiar person standing across us, reading off trait after trait, without appeal to any abstraction or generalization.

Indeed, the book would be very different had Spinoza followed strictly the directions laid out in the *TdIE*. It is my view that, were the *Ethics* rewritten for Spinoza's ideal reader, it would only contain one definition, the definition of God from the first part, with the rest of the abstract principles (definitions of *causa sui*, of substance, attribute, mode, etc.) being redundant. The world in its entirety would be contained in a single premise. Yet – seeing how the *Ethics* does not strictly fulfill the program of the *TdIE* – the question one faces is whether Spinoza's vision is possible at all within the limits of discursive thought. The geometric exposition, though atemporal and purely formal, and however deified by Spinoza, still bears the mark of the human finite capacity for reasoning. The syntheticity of a proposition, as a Kantian would put it, is possible only in time and over an ampliative movement

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27. *TdIE*, §93.

of thought,<sup>28</sup> whereas in God's intellect nothing is really demonstrated. Eventually, such an exalted object of acquaintance would have to be made possible through a specific theory of knowledge.

Talking about the highest degree of knowledge (the other two being knowing from random experience, be it singular things or signs, and knowing through common notions), Spinoza writes:

[T]his kind of knowing proceeds from an adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the [NS: formal] essence of things.<sup>29</sup>

What is striking here is that Spinoza postulates a degree of knowledge (as well as the object thereof) that overrides the limits of demonstrative reasoning. Spinoza's truth is revealed by a movement of thought that goes beyond the syllogistic through common notions. This he calls an intuitive science, or *scientia intuitiva*.<sup>30</sup> By way of elucidation, he presents us with the simple problem of inferring the fourth proportional number in a sequence of numbers 1, 2, 3, without the mediation of any abstract principle or customary practice. Think of yourselves possessing an intuitive grasp of a line of discrete numbers and identifying relations immediately, without any recourse to rules of thumb or mathematical axioms. Everybody can obviously see that six is to three what two is to one ( $6 : 3 :: 2 : 1$ ). The mind grasps this proportion spontaneously with no recourse to an abstract rule. We are not eager to discover any such rule prior to its being instantiated in this particular set of numbers; we grasp them for how they relate to each other concretely.

When this is applied to things not as simple as those four numbers on a line, things get a bit mystical: within the purview of the intuitive scientist, the principle of motion, as well as all possible finite beings that are generated thereby, are supposed to follow from the infinite being without the aid of any external principle. Only thus would Substance be intuited for the self-moving or animate being it has proven to be. In the end, faced with the limits of discursive reason, Spinoza introduced a higher level of knowing in order

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28. Cf. Introduction <A> to Immanuel Kant's *Critique of Pure Reason*, trans. P. Guyer and A.W. Wood (Cambridge: Cambridge University Press, 1998), 130, A6-7.

29. *Ethics*, Book II, Proposition 40, Scholium 2.

30. Cf. *TdIE* §23; EIIP40s2.



that the physical and conceptual immanence of his God be made possible. Most likely, Voltaire would still not rest his case and remain unsatisfied with such a response, but at least the issue is now framed as an epistemological limitation rather than a metaphysical impasse: if Tschirnhaus and Voltaire cannot see how the definition of one thing is generative of an infinitely populated world, then they must be still looking at things from the limited perspective of the second mode of knowledge. But if the *scientia intuitiva* is possible as the third and supreme way of knowing, then so is a way to conceive of infinitely many things following from the most perfect being. Spinoza is far from having solved the problem, but he at least attributed it to the limitations of human science on pain of locating an inconsistency in his world itself: we may not see exactly how it happens under each attribute, but the explanation of the world must lie within itself. Even if we can't see how, Spinoza's dogma holds the world to be self-explanatory as a matter of metaphysical fact. Since, to be thinking, for Spinoza, is one of the senses in which an infinite being is said to exist (EIIP1), no less so than to *be extended* (EIIP2), and since there can be no limitations to an infinite power of thinking (EID2), a divine intellect is expected to know everything adequately (EIIP3) and intuitively so. But since such a being is all there is and can ever be (EIP14, EIP15), the set of all the adequate ideas about the world, intuitively perceived, would after all be identical to God in the act of self-knowing (EVP32-EVP36).

So far, I've been working out some details of Spinoza's metaphysics from within and *sub specie aeternitatis*, that is to say, by reconstructing certain atemporal relations of the ideas that make up his system, ignoring the historical development of his work, or himself even as a human being. But, as I now turn to Goethe, I am compelled to introduce his thought through some brief historicizing. The reason behind this is that, if we are to expose Goethe's implicit Spinozism in the absence of any systematic exposition of his thoughts, we need to focus on his actual quest in search of first principles: from the inception of a vision, to the amassing of evidence and finally the development of a pertinent method. The ideas of Goethe were in constant transformation throughout his life – not unlike the characters of his *Bildungsromane* or the organic beings in his studies – and so it would be proper to approach his science accordingly, in its dynamic unfolding. To this end, I'm relying heavily on Fred Amrine's informed reading of Goethe's

*Metamorphosis of Plants* as a Spinozist treatise.<sup>31</sup> I plan to expand upon the same theme by tracing applications of the *scientia intuitiva* in Goethe's general study of organic forms.

In more than one place in his autobiography, Goethe stated unequivocally he owes his whole mode of thinking to Spinoza.<sup>32</sup> Admittedly, every time he had to go back to his works “the same calm air breathed” over him, a phrase followed by a dramatic statement: “I gave myself up to this reading, and thought, while I looked into myself, that I had never before so clearly seen through the world.”<sup>33</sup> Even if an exact correspondence between Goethe's research and Spinozistic epistemology cannot be established, we can say this much: he took Spinoza's philosophy to have been relevant to, if not also formative, of his scientific inquiry. It all begun with an intense period of studying the *Ethics* in his mid-thirties after which something of a scientific vision appeared in his mind, put in explicitly Spinozistic terms. In a letter to Jacobi dated May 5, 1786, he quotes Spinoza's highest kind of knowing (the aforementioned excerpt actually) and admits:

These few words give me the courage to devote my life to the contemplation of those things which I can reach and of whose *essentia formali* I can hope to form an adequate idea.<sup>34</sup>

Four months after this last letter to Jacobi, at noon, Goethe set off for Italy, embarking on a quixotic journey that would take him closer to one of his life's goals: the crystallization of an adequate idea of the plant, the *Urpflanze* or primal plant, on the basis of which he was meant to construct an entire science of form and formation. Beyond any doubt then,

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31. Frederick Amrine, “Goethean Intuitions,” *Goethe Yearbook* 18 (2011): 35-50.

32. “This mind, which had worked upon me thus decisively, and which was destined to affect so deeply my whole mode of thinking, was Spinoza” (Goethe, *Truth and Fiction Relating to My Life*, 261). On 7th November 1816, Goethe writes to Zelter from Weimar: “Barring Shakespeare and Spinoza, I do not know that any dead writer has had such an effect upon me” [*Goethe's Letters to Zelter. With Extracts from those of Zelter to Goethe*, ed. A. D. Coleridge (London: George Bell & Sons and New York, 1892), 140].

33. Goethe, *Truth and Fiction Relating to My Life*, trans. John Oxenford, ed. Nathan Haskell Dole, vol. I (London: Robertson, Ashford and Bentley, 1902), 308.

34. *Goethes Werke*, ed. Sophie von Sachsen, 137 volumes (Weimar: Böhlau, 1880-1919) 4.7: 214 cited in David Bell, *Spinoza in Germany from 1670 to the Age of Goethe*, Bithell Series of Dissertations 7 (London: Institute of Germanic Studies, University of London, 1984), 162.

biographically at least, Spinoza's intuitive knowledge should be taken as the initiatory motivation behind Goethe's science of morphology. During his *Italian Journey*, 1786-1788, Goethe was exposed to a new spectrum of plant forms and, most importantly, to unprecedented variations of species already known to him. At first, he expected to find a perfect embodiment of plant form on the ground, as real and tangible as the archetypal villa of Palladio that he visited in Vicenza. However, after having failed to locate the primal plant on the Mediterranean soil, Goethe realized that it must "grow" in an entirely different place; a similar place perhaps whence he "grew" the unfinished parts of the Strasbourg cathedral, after having perceived the "connection of these manifold ornaments amongst each other, the transition from one leading part to another,...from the saint to the monster, from the leaf to the dental."<sup>35</sup>

In August, he was writing to Herder he's very close to discovering "the truth about the how of the organism." "I hope you will rejoice" he says, "when you hear about these manifestations – not fulgurations – of our God." For Goethe (as for Spinoza) the essence of an organism is a direct manifestation of God Himself, and not the effect of a remote creator, what the word "fulguration" would suggest in all its Neoplatonic undertones.<sup>36</sup> Goethe gave an account of this concrete epiphany of his God:

While walking in the public Gardens of Palermo, it came to me in a flash that in the organ of the plant which we are accustomed to call the *leaf* lies the true Proteus who can hide or reveal himself in all vegetal forms. From first to last, the plant is nothing but *leaf*.<sup>37</sup>

By using his imagination to run the unfolding of the plant backwards, Goethe derived the idea of a module in vegetative growth – a *generatrix* we may call it – whose path in space traces out every conceivable plant

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35. "I spent much time" Goethe writes, "partly in studying what actually existed, partly in restoring, in my mind and on paper, what was wanting and unfinished, especially in the towers" (*Truth and Fiction*, 9: 419).

36. The latter term, "fulguration" (éclats, literally meaning "lightning flash"), was famously used by G. W. Leibniz in the *Monadology* §47 to account for the creation of his Monads.

37. "Some Questions About Nature Which Intrigue and Perplex me," 31 July 1787, in *Italian Journey: 1786-1788*, trans. W. H. Auden and Elizabeth Mayer (San Francisco: North Point Press, 1982), 366.

form. Consequently, he calls *Metamorphosis of Plants* (in the 1789 essay of the same name), “[t]he process by which one and the same organ appears in a variety of forms itself to our eyes under protean forms.”<sup>38</sup> In effect, Goethe’s plant may be likened to Nature’s own alembic, distilling a reserve of base materials into ever more rarified states. And just as chemicals get funneled through different vessels in the alembic, the distillation of the plant saps, from the coarser to more refined ones, is facilitated by organs of ever-increasing complexity and definition. So, the organs that accumulate into a plant form are basically instruments for drawing off cruder saps and the introduction of purer ones (§30) until the process of vegetative growth transitions into reproduction. That is to say, in order to reach perfection, i.e. to reproduce itself, the plant requires its sap to be progressively refined by way of successive plant structures. To that end, there emerge the forms of cotyledons, stem leaves, sepals, petals, pistils, stamens, one transitioning into the other, over three full cycles of *expansion* and *contraction*, starting from the outmost contracted state, the seed, to the outmost expanded state, the fruit (§41, 50, 73, 102). Taken together and in sequence, these steps in transformation constitute the “spiritual ladder” of plant generation, as Goethe called it.<sup>39</sup>

Just like Spinoza’s ways of talking about concrete individuals switched from proper nouns to qualifications of a God-subject – say, God insofar as It expresses Socrates’ nature – in Goethe’s botany too, all the familiar nouns made to denote concrete components lapse into participles; any floral part is now identified with a leaf-subject insofar as it is *contracted* and *expanded* (§41, 42); *paired or divided* (§16); *lengthened* and *refined* (§31) *notched or pronounced* (§20); *anastomosed* (§25); *hidden and revealed* (§19, 76); *merged* (§35, 36, 38); *centered* (§70) etc. Most interestingly, in addition to the various transitions between the parts of the same plant, Goethe is willing to extend his principles of transformation across discrete plants: just like the ribs of the leaf anastomose to produce a connected surface in the sequence of growth, so too the pollen of one plant anastomoses with the ovaries of

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38. *The Metamorphosis of Plants* (1790) trans. Agnes Arber, *Chronica Botanica* 10, No. 2, 63-126 (Waltham, Mass: Chronica Botanica Co.; London: Wm. Dawson and Sons, 1946), §4.

39. As translated by Gordon L. Miller in *The Metamorphosis of Plants* (Cambridge, MA; London: MIT Press, 2009), §6. Agnes Arber’s rendition reads as: “an ascent – ladder-like in the mind’s eye....”

another through pollination and fertilization (§63, 69, 113). From that point on, and throughout the rest of his career as a morphologist, Goethe never ceased to widen the scope of the laws of transformation.

Some less than ten years later,<sup>40</sup> Goethe extrapolated the conception of this fundamental organ from plants to the study of insects. Finally, in a grand culmination of his project, circa 1790, the idea of the fundamental organ and its developmental trajectory was extrapolated to vertebrates. The leaf was to different parts of the plant, what the vertebra was to different parts of the skeletal system. Just as the stem was seen as a contracted leaf, so too the skull was described as an expanded vertebra (according to his own vertebral theory of the skull).<sup>41</sup> Ultimately, by the end of his career, the intuitive methods of Goethe had been applied over varieties of natural objects that would have been traditionally considered unrelated, now falling under the same science of form. A ubiquitous body plan had been made the common ground for all these “scientific analogies” between insects, plants and vertebrates: the stem is a modified leaf; the insect, a modified larva; the cranium, a modified vertebra. The logic of transformation allows one part to be explained through another, one whole to be explained through its parts, and finally, one whole to be explained by another whole (see Fig. 1, below).

With these insights in mind, we may finally speculate about deeper conformities between Goethean morphology and Spinozist metaphysics. Arguably, the way Goethe arrives at the first principles of morphology and puts them into use bears some striking Spinozistic undertones. The overarching hypothesis I wish to put forward is that the metaphysical status ascribed to form in Goethe’s science of morphology echoes Spinoza’s theory of attributes.

Spinoza regarded Extension and Thought as two of the infinitely many possible aspects of the real, and elevated them to attributes of his Substance, viz. “what the intellect perceives of substance as constituting its essence” [*id quod intellectus de substantia percipit tanquam ejusdem essentiam*

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40. In a letter to Schiller dated Feb. 8th, 1797, Goethe writes from Weimar that: “I am succeeding at present in some good observations on the metamorphosis of insects” *Correspondence between Schiller and Goethe, from 1794 to 1805*, trans. G. H. Calbert (New York; London: Wiley and Putnam, 1845) 1: 231, Letter CCLXXI.

41. The inception of that idea occurred sometime in 1790, at the Lido of Venice, but remained unpublished until 1820.

*constituens* (EID4)]. Like Clark Kent and Superman, the material universe is identical to the mental universe, but there is no way these two aspects may interact with one another. Just like Clark's colleagues in the Daily Planet, Descartes was tricked into reifying body and mind as two things, while maintaining some privileged status for the latter. Nature, in reality, is refracted to as many attributes as there can be distinct human disciplines. In such a metaphysics, psychology and physics should be regarded as alternating yet non-overlapping ways of accounting for the same world. This means that physical and psychical discourses demarcate their parallel purviews over an infinitely multi-faceted object of study.<sup>42</sup>

In book I of the *Ethics*, the reader is guided through what we identified as an analytical discovery of God; the proof that an all-encompassing, absolutely infinite substance exists in exclusion to any other substantial thing. To this end, the book has been relying on a way of talking about the world beyond the confines of any given attribute, in an "attribute-neutral way." Now, in book II of the *Ethics* and onwards, Spinoza moves from that attribute-neutral analysis of God to a rigorous inquiry into two of its distinctive characters, namely, Thought and Extension. And, these characters are not the kind of things that God has, but what It is, or what It does.

According to Spinoza's theory, the presence of a divine attribute is marked by the intellect's capacity to think of the infinite in its terms and its terms only (EID3, EIP10, EIIP1). An attribute should be sought after in a global character, so fundamental and so pervasive that a complete story of the universe could be told, in principle, without ever wandering from the qualitative bounds set by that very character. After all, since an attribute is "what the intellect perceives of the substance as constituting its essence" (EID4), we should expect it also to be an irreducible feature of the world.

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42. Another useful analogy can be made with our five-fold sensoria. When I am playing the violin, the music I hear, the texture of the strings I feel, the color or form of the instrument I see are not of the same order even though we are compelled to refer them to the same thing. Hallucinogenic experiences aside, I cannot *see* the music, any more than I can *hear* color. My sense-data is delivered across different sensorial domains in correspondence with the various forms of my sensibility. The object of one sense cannot be the object of another, even though we may have reasons to admit that all deliverances of the senses have the same origin or reference. Nevertheless, there can be sensory-neutral ways of accounting for all these perceptions in terms of matter in motion, just like there is an attribute-neutral way to talk about Spinoza's God.



For, evidently, if an attribute constitutes the nature of a being that is “in itself and conceived through itself” – by the definition of substance (EID3) – it is expected to bear the same kind of conceptual independence.

In early modern times, the mark of a well-defined scientific discipline was the conceptual independence of its subject-matter (*hypokeimenon genos*). Each science, according to the then prevailing epistemic standards (of a Peripatetic origin undoubtedly), ought to study a division of reality within a self-contained explanatory framework. The explanations offered in one such framework, according to the requirements of Aristotle’s *Posterior Analytics*, could not use minor terms from other sciences.<sup>43</sup> So, an early modern scientist had two options in treating the subject-matter of, say, thinking: he could either ground all psychological terms to physical ones, thus absorbing psychology into the subject-matter physics, or, treat thinking as a separate subject-matter. Spinoza’s innovation consists in the latter approach. While other early mechanical philosophers were intent on reducing thinking processes to material ones, or inversely, to reduce matter to mind, Spinoza elevated the act of thinking to the status of a natural attribute. In Spinoza’s one-substance philosophy, attributes such as Thinking and Extending are irreducible characters among infinitely more of them equally expressive of the universe.

One may be inclined to consider the subject-matter of Goethe’s newly-founded scientific field in analogy with Spinoza’s own treatment. After all, the “morphé” that forms the root of the neologism *morphê-o-logia* (from the Greek variant of form or shape), was characterized by the same kind of explanatory priority and sufficiency by Goethe, as did Thinking and Extending by Spinoza. In particular, Goethe asserts that:

Morphology rests on the conviction that everything which exists must signify and reveal itself.... The doctrine of form is the doctrine of alteration. The doctrine of metamorphosis is the key to all the signs of nature.<sup>44</sup>

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43. However, it is worth noting that Descartes broke away from that very tradition insofar as he sought solutions to a variety of problems in geometry (continuous quantity) by way of his coordinate system.

44. Goethe, *Die Schriften zur Naturwissenschaft*, 1st division, 10: 128, cited in Robert Richards, *The Meaning of Evolution: The Morphological Construction and Ideological Reconstruction of Darwin’s Theory* (Chicago: University of Chicago Press, 1993), 36.

At this point, it is important to note that the kind of infinity that may be ascribed to Goethe's Morphe (in parallel with Spinoza's Extension and Thought) differs sharply from the indefiniteness of a class concept, i.e. it is not about an infinite number of possible members in a given class. If it were, we would be prone to recognize something like, say, "existence" as the common feature of all things, not unlike the Eleatics, and so impute to substance the attenuated reality of a universal. What makes Spinozistic metaphysics (and derivatively, Goethean morphology) interesting is the fact that the unity of the attributes under study (as well as that of its infinite modifications) is not one of a general concept over its instances, but one of a concrete yet determinable being over its various determinations. Talking about the relation between infinite and finite things, Spinoza writes:

[T]hese 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.<sup>45</sup>

In other words, the universality of those fixed and eternal singular things is just our own way of making their ubiquity logically describable. Along similar lines, whatever term we find suffixed with "ur-" by Goethe (*Ur-pflanze*, *Ur-phänomen*, *Ur-form*) was not meant to signify an abstraction, but a concrete instance, or, as Goethe states: "an instance worth a thousand, bearing all within itself."<sup>46</sup> This, I think, is what initially fueled his expectations for unearthing the leaf of all leaves and plant of all plants. For, how could one "recognize that this or that form was a plant if all were not built upon the same basic model?"<sup>47</sup>

Goethe's Spinozistic insight is that the grouping of things in a class is only symptomatic of their partaking in an underlying concrete thing. As such, their participation in a genus is not merely predicative, as in Linnaean

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45. *TdIE*, §101.

46. From Goethe's *Theory of Color*, cited in Ernst Lehrs, *Man or Matter: Introduction to a Spiritual Understanding of Nature on the Basis of Goethe's Method of Training Observation and Thought* (London: Rudolf Steiner Press, 1985), 109.

47. From Sicily, 17 April 1787, *Italian Journey*, 258-259.

taxonomy, but concrete. The theory behind this assertion is resoundingly Spinozistic: what makes me what I am is not the class I belong to but the thing I am modificatory of. In the context of Goethean morphology, the archetypal leaf, or the modular vertebra, or the vertebrate body plan are not categories but names for concrete processes that express themselves divergently, in certain and determinate ways. Ultimately, Goethe's notion of the archetype takes us from a taxonomy of distinct species to a pre-classificatory field of generative processes. Ernst Cassirer brilliantly summed it up by saying he was the one who "completed the transition from the previous generic view to the modern genetic view of organic nature."<sup>48</sup>

Perhaps the most significant corollary to Spinoza's theory of attributes is that the grasping of an attribute enables one to conceive possible yet not existing finite modes (EIP8s), or glimpse at how the formal essences of the singular things are contained in God's attributes (EIIP8). In other words, attributes are features of something so fundamental that gets to offer insight into what is really possible.

This is how we can have true ideas of modifications which do not exist; for though they do not actually exist outside the intellect, nevertheless their essences are comprehended in another in such a way that they can be conceived through it.<sup>49</sup>

In short, the notion of the attribute of a Substance, along with its infinite and ubiquitous modifications, should provide the generative materials for conceiving any possible finite being. In fact, the ability to form true ideas about conceivable things has to do with the way everything is explained through or contained in an attribute. At the same time, in a pre-theoretical stage, this condition should also be sufficient for identifying a divine attribute (EIIP1). If you can think of a feature that can be descriptive of the world in its entirety, or at least capable of being articulated into fictional events that are no less true than the factual ones, then you have got yourself a divine attribute. Finally, with this insight in mind, we are definitely in a better position to appreciate the allure of the geometrical analogy; for, indeed it seems that the subject genus of geometry, i.e. magnitude or continuous quantity, stands to the figures and relations engendered in it, as a Spinozist

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48. Ernst Cassirer, *Rousseau, Kant, Goethe: Two Essays*, trans. James Gutmann, Paul Oskar Kristeller, and John Herman Randall, Jr (Princeton, NJ: Princeton University Press. 1970), 69.

49. *Ethics*, Book I, Proposition 8, Scholium 2.

attribute stands to its finite modifications or affections.

But how could such ideas be true if not conforming with a fact of existence in some way or another? By refusing to admit any extrinsic denominations for distinguishing a true idea from a false one, Spinoza subverts the scholastic theory of truth as *adaequatio rei et intellectus*, i.e. the conformity between the thing and the intellect. There being or not a thing in correspondence with the idea does not affect its truth value; it only adds content to a core concept.<sup>50</sup> As he illustrates it by way of an analogy in the *TdIE*, an architect who has conceived of an edifice in the proper order and according to the laws of his discipline, gets to have a true idea even if this edifice never existed, and even never will<sup>51</sup> – like Goethe did of the unfinished towers of the Strasbourg cathedral. The truth of these ideas does not consist in God’s matching the world of objects to them; ideas about non-existing things are true as possible states of an infinitely plastic God. We can scientifically explore a realm of possible finite modes, insofar as they are conceivable through an attribute and its infinite modes, just like an architect may think of a variety of tectonic solutions, as long as her thoughts are compatible with the nature of the materials and the rules of engineering. Armed with an idea of such a God and Its infinite eternal modifications, man can abstract himself from the order of actually existing things and elevate “to the realm where divine forces are at work,” as Douglas Miller puts it.<sup>52</sup> Ultimately, to acquire knowledge of the third kind about Nature – as opposed to knowing by random experience or through common notions – is to intuit a divine attribute in its infinite fecundity, to wit, a spectrum of what is finitely possible such that it enables the mind to imagine freely, yet truthfully. The same promise is conveyed by Goethe in a letter addressed to the patron who gifted him a signed copy of Spinoza’s *Ethics* in the first

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50. The things we interact with in our finite lives are formal essences, that in addition to being comprehended by a divine attribute they are also actualized in the common order of Nature (cf. EIIP8). For Spinoza, an *essentia formalis* is every bit as existing as an *essentia actualis*.

51. “[B]ut now I recognised the connection of these manifold ornaments amongst each other, the transition from one leading part to another, the enclosing of details, homogeneous indeed, but yet greatly varying in form, from the saint to the monster, from the leaf to the dental.... I spent much time, partly in studying what actually existed, partly in restoring, in my mind and on paper, what was wanting and unfinished, especially in the towers” (*Truth and Fiction*, 9: 419).

52. Douglas Miller in the introduction to *Scientific Studies*, xx.

place.<sup>53</sup>

The Primal Plant is going to be the strangest creature in the world, which Nature herself shall envy me. With this model and the key to it, it will be possible to go on forever inventing plants and know that their existence is logical; that is to say, if they do not actually exist, they could, for they are not the shadowy phantoms of a vain imagination, but possess an inner necessity and truth. The same law will be applicable to all other living organism.<sup>54</sup>

I take it that such scientifically meaningful fictions of the kind that Goethe finds himself engaged in echo one of Spinoza's original contributions to the theory of knowledge. His theory requires the form of truth to "be sought in the same thought itself," as he says, and "be deduced from the nature of the intellect."<sup>55</sup> By admitting this much, Spinoza had paved the ground for a species of true statements that depend solely on the powers of active thought. The intellect need not be passively subjected to perceptions to redeem its beliefs about an external world; to accurately report facts from the other side, as it were, of a mind-body breach. Using the innate tools – the most foundational of which is the idea of God – and ordering them into a system, the intellect may participate in the production of the real by forming ideas of the virtual. These epistemic commitments, Goethe seems to have turned into a concrete practice, an art even:

When I closed my eyes and lowered my head, I could imagine a flower in the center of my visual sense. Its original form never stayed for a moment; it unfolded, and from within it new flowers continuously developed with colored petals or green leaves. These were no natural flowers; they were fantasy flowers, but as regular as rosettes carved by a sculptor.<sup>56</sup>

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53. In 1784, Goethe received a copy of Spinoza's *Ethics* in Latin as a Christmas gift by Herder, his mentor, carrying the inscription: "Let Spinoza be always for you the holy Christ" cited in Robert Richards, *The Romantic Conception of Life; Science and Philosophy in the Age of Goethe* (Chicago: University of Chicago Press, 2002), 379. See the commentary by John Neubauer in Goethe, *Sämtliche Werke, in 40 Bänden*, Vol. 29 (Stuttgart and Berlin: J. G. Cotta, 1895), 2.2: 875.

54. From a letter to Herder from Naples, 17 May 1787, in *Italian Journey*, 310–311.

55. *TdIE*, §71.

56. Goethe's review of Purkinje's *Sight from a Subjective Standpoint* (1824), *Scientific Studies*, xxi.

On that account, and since the ability to think of non-existing yet true modifications is premised on the acquaintance with a divine attribute, Spinoza could have credited Goethe with the discovery of a parallel attribute. In that case, God would be regarded, in addition to an infinite mind or an infinite body, an infinite Morphe. The physico-mechanical realm of ever-swapping quantities of motion, direction and position, would be just one way of looking out into the world. For, the structural and generational affinities that abound in the natural world, Goethe seems to suggest, deserve a demarcation of their own subject matter, something that would in turn mark, for the Spinozist-minded, the presence of another self-contained attribute.

In the end, I would speculate that the puzzle of immanent causation we stumbled across earlier (and its parallel, immanent explanation) may be circumvented by realizing that, after all, it is not strings of consequences we are supposed to intuit in an “eternal and infinite nature,” waiting to be teased out of it with the aid of extrinsic principles; instead, it is the realm of virtual determinations that lie dormant within such a nature, waiting to be re-enacted intellectually, intrinsically so. Indeed, and in response to Tschirnhaus, to recognize in extension a divine attribute would mean to appreciate motion as already ingrained in an infinitely determinable matter, along with all finite beings comprehended by it. It would mean that we should be able, by the power of intuition, to see how a specific kinematic state of affairs follows from ubiquitous Extension, in the same way the intuitive morphologist in us can see the hoof of the horse following from the five-digit limb of the ubiquitous body plan.<sup>57</sup>

Naturally, reading Spinoza through Goethe’s eyes (or anticipating Goethe through Spinoza’s) comes with its own set of problems, the most pronounced of which has to do with the dubious conceptual sufficiency of Morphe. Spinoza might have protested that Goethe’s form can in fact be conceived through matter and motion, and so that it fails to be as explanatorily basic as is required from a divine attribute. And indeed, unless

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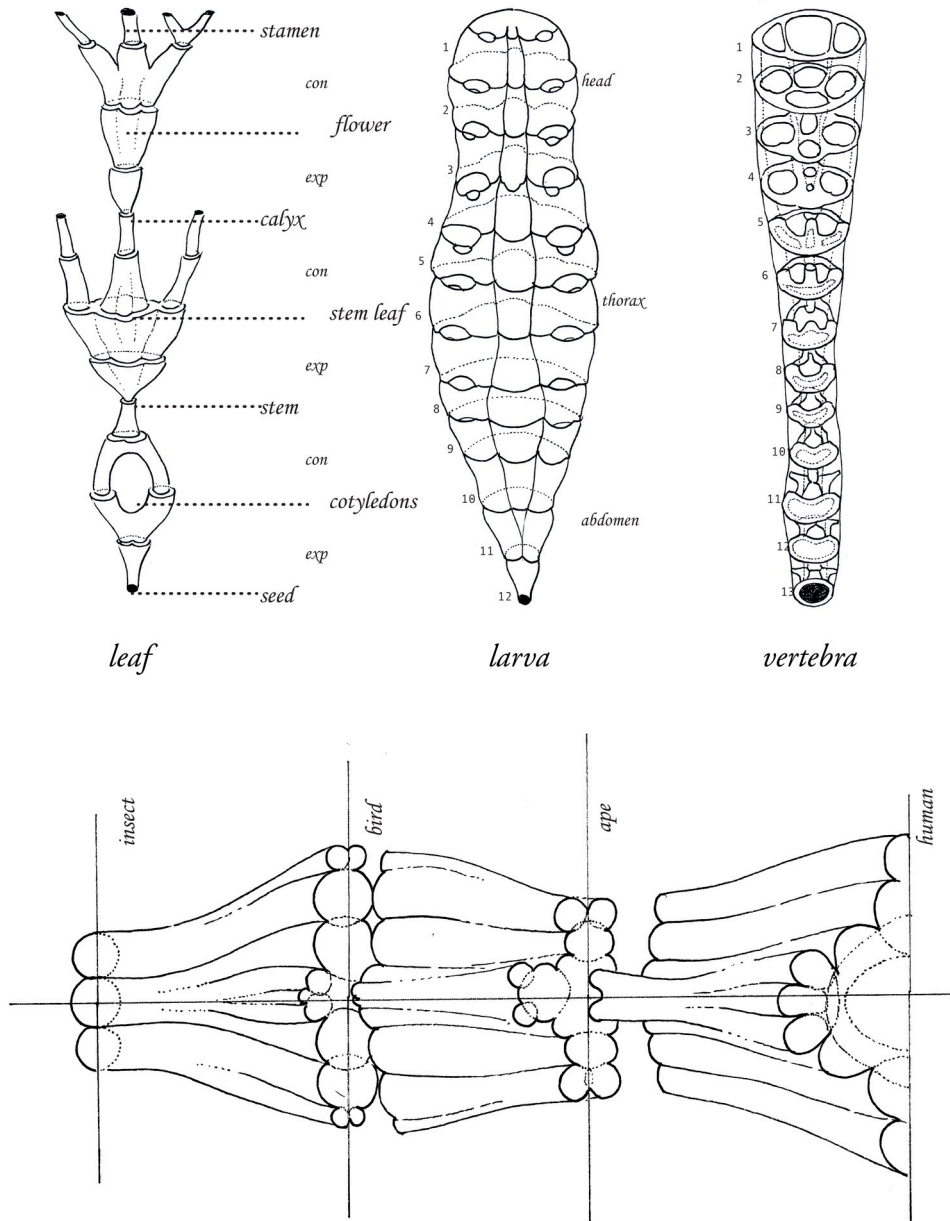
57. “In horses,” Goethe suggests, “the five fingers have been enclosed in a hoof; we see this in an intellectual view, even if through some monstrosity the divisibility of the hoof into fingers did not convince us” (*Principles of Zoological Philosophy* [1830], trans. B. Taylor (1980), in *Mathematical Essays on Growth and the Emergence of Form*, ed. Peter L. Antonelli [Edmonton: The University of Alberta Press, 1985], 326).



the anachronism be committed that Morphe was meant as a topological invariant, not to be defined by the metric properties it happens to take on, the subject of morphology would have to be demoted to an infinite mode, at best, falling under a general science of motion, insofar as it extends to the organic realm.

In any case, however, it might still be conducive to a better understanding of both thinkers to treat the subject-matters of their intuitive sciences as parallel to one another. For instance, it may be useful to suppose that just like, for Spinoza, every finite being is a portion of matter striving to persevere in its being within the laws of motion, for Goethe, every organic configuration is a parcel of Morphe striving for refinement or full expression within the laws of metamorphosis; that Goethe's leaf is, after all, an infinitesimal transformation, or the morphological counterpart of Spinoza's infinitesimal body, what he called *corpus simplicissimum*; that the laws of motion and rest follow from Spinoza's Extension in much the same way as the laws of expansion and contraction follow from Goethe's Morphe; that, by regarding the world as a mesh of qualitative differentiations, Goethe was drawing on a metaphysical framework that had anticipated the discovery of new attributes, out of infinitely many unknowable ones. In such a view, grafted, as it were, on Spinoza's God, that third attribute would consist in a labyrinth of possible paths of transformation yielding as many growth patterns as there are natural kinds, be it leaf, insect, or vertebrate. What is more, these transformations would to be driven by opposing forces whose polarities, ubiquitous, should pulsate the same beneath phenomena once thought unrelated: from the diastole and systole of the heart to the inhalation and exhalation of the lungs; from the expansion and contraction of the leaf to the modular configuration of the insect and the vertebral column; everything here would have flowed and would always follow from a field of vital forces in which Spinoza – had he conducted the same fieldwork as Goethe – might have recognized his own God or Nature.

**Figure 1 (drawn by author)**



“A ubiquitous body plan had been made the common ground for all these ‘scientific analogies’ between insects, plants and vertebrates: the stem is a modified leaf; the insect, a modified larva; the cranium, a modified vertebra. The logic of transformation allows one part to be explained through another; one whole to be explained through its parts, and finally, one whole to be explained by another whole” (p. 109, above).