Spinoza’s Theory of Metaphysical Individuation

Don Garrett

A theory of metaphysical individuation seeks to explain what constitutes an individual thing; what constitutes the persistent identity of the same individual thing through time; and what constitutes the numerical difference among two or more individual things. (By way of comparison, a theory of epistemological individuation seeks to explain how one knows something to be an individual thing; how one knows something to remain the same individual thing through time; and how one knows individual things to be numerically different from one another.) In a discussion of physical topics that occurs between Ethics IIIP13 and IIIP14, Spinoza briefly presents a striking and original theory of metaphysical individuation for a class of entities that he calls “Individuals.” Among the theory’s most striking features is that identity and difference of substance play no role in it—this despite the centrality of the notion of substance in both other seventeenth-century discussions of metaphysical individuation and in Part I of the Ethics itself. Among the theory’s most original features is that it explains the existence, persistence, and difference of an individual as a function of what Spinoza calls its “ratio of motion and rest” (ratio motus et quietis).

Striking and original as Spinoza’s theory evidently is, however, it has also been the object of considerable puzzlement. For he says surprisingly little in the Ethics about several crucial questions: what he means by the term ‘motion and rest’; what he conceives “fixed ratios” of motion and rest to be; what the scope of the term ‘individual’, and hence of the theory as a whole, is intended to be; and how, if at all, his discussion of individuals in Part II is related to his pivotal claim at IIIP6 that “each thing, as far as it can by its own power [quantum in se est], strives to persevere in its being,” a claim that serves as the foundation for both his psychology and his ethical theory. Many readers have concluded that Spinoza’s theory is incoherent, unreasonable, narrow, and/or irrelevant. In the first section of this chapter, I will describe Spinoza’s theory of metaphysical individuation as he presents it in Part
II of the *Ethics*. In the remaining four sections, I will consider, in order, the four crucial questions about the theory just posed. In doing so, I will argue that, despite the brevity of Spinoza's presentation, it is possible to determine the answers to these questions with a reasonable degree of probability; and I will argue that the resulting theory is a coherent, reasonable, inclusive, and powerful one.

**INDIVIDUATION AND ‘INDIVIDUALS’**

Part II of the *Ethics* is entitled "On the Nature and Origin of the Mind." In the Scholium to IIP13, however, Spinoza proposes to present some general facts about the nature of the human body, so that we can know "the excellence of one mind over the others, and also the cause why we have only a completely confused knowledge of our Body, and many other things which I shall deduce ... in the following [propositions]." The presentation that then follows—sometimes called the "Physical Digression"—contains, in all, five "Axioms," one "Definition," seven "Lemmas," and six "Postulates." The Digression divides naturally into three parts: first, Axioms 1' and 2' [following Curley's numbering convention], Lemmas 1–3, and Axioms 1" and 2", all concerning bodies in general, including the "simplest bodies" (*corpora simplicissima*); next, the Definition, Axiom 3", and Lemmas 4–7 plus a scholium to Lemma 7, all concerning composite bodies; and finally, Postulates 1–6, all concerning the human body in particular. Of these various elements, Lemma 1, the Definition, and Lemmas 4–7 bear most directly on the topic of individuation.

Lemma 1, which immediately follows Axioms 1' and 2', states that "bodies are distinguished from one another by reason of motion and rest, speed and slowness, and not by reason of substance." The demonstration of this lemma does not cite either of the two preceding axioms, even though Axiom 1'—"all bodies either move or are at rest"—arguably states a precondition for its truth. Instead, the claim that bodies are distinguished from one another by reason of motion and rest is said to be "known through itself," while the claim that bodies are not distinguished by reason of substance is said to be evident from both IP5 and IP8, and "more clearly evident" from IP15S. Spinoza cites these three passages presumably because each entails—when taken together with IIP2's claim that extension is an attribute—that there can only be one extended substance. After two further lemmas and a pair of additional axioms, Spinoza then offers his Definition of the term 'individual':
Definition: When a number of bodies, whether of the same or of different size, are so constrained by other bodies that they lie upon one another, or if they so move, whether with the same degree or different degrees of speed, that they communicate their motions to each other in a certain fixed manner, we shall say that those bodies are united with one another and that they all together compose one body or Individual, which is distinguished from the others by this union of bodies.

After one further axiom, Spinoza then presents four lemmas that describe the changes an individual can undergo while still "retaining its nature, without any change of form." Specifically, it can undergo the replacement of some of the bodies composing it by others of the same nature (Lemma 4); it can undergo an increase or decrease of parts, so long as the parts increase or decrease in a proportion that allows them to retain the same ratio of motion and rest as before (Lemma 5); it can undergo a change of direction of some of its parts, so long as the parts can continue their motions and communicate them to each other in the same ratio as before (Lemma 6); and it can move in any direction or be at rest, so long as the parts retain their motions and communicate them as before (Lemma 7). In each case, Spinoza's demonstration of the lemma is fundamentally the same: the "nature" or "form" of the individual is, by the Definition, constituted by a "certain fixed ratio of motion and rest," in accordance with which the parts "communicate their motions to one another"; hence, an individual's nature or form can withstand any change that does not alter this ratio. It is notable that in no case does the demonstration appeal to any of the preceding axioms, nor, indeed, to anything except the Definition of 'individual' and (in the case of the demonstration of Lemma 4) Lemma 1. Finally, in the Scholium to Lemma 7, Spinoza distinguishes between levels of composition:

Schol.: By this, then, we see how a composite Individual can be affected in many ways, and still preserve its nature. So far we have conceived an individual which is composed only of bodies which are distinguished from one another only by motion and rest, speed and slowness, i.e., which is composed of the simplest bodies. But if we should now conceive of another, composed of a number of Individuals of a different nature, we shall find that it can be affected in a great many other ways, and still preserve its nature. For since each part of it is composed of a number of bodies, each part will therefore
(L7) be able without any change of its nature, to move now more quickly, and consequently communicate its motion more quickly or more slowly to the others.

But if we should further conceive a third kind of Individual, composed of [many individuals] of this second kind, we shall find that it can be affected in many other ways, without any change of its form. And if we proceed in this way to infinity, we shall easily conceive that the whole of nature is one Individual, whose parts, i.e., all bodies, vary in infinite ways, without any change of the whole Individual.

It might be suggested that to interpret these brief passages as outlining a theory of metaphysical individuation is to overread them. Might not some or all of Spinoza's remarks about bodies "being distinguished from one another by reason of motion and rest" rather than "by reason of substance," about individuals "retaining their natures, without change of form," and about individuals being "distinguished from others by this union of bodies" be regarded instead merely as a contribution to a theory of epistemological individuation, in the sense specified earlier? So construed, Spinoza would simply be proposing the existence of mechanistic explanations of how the discernible characteristics that we employ to identify, reidentify, and distinguish individuals actually arise, without commitment to any specific theory of metaphysical individuation.

There can be little doubt that Spinoza does endorse the view that there are mechanistic explanations of the discernible characteristics of individuals (Epistle 6). There are three reasons, however, for thinking that he intends more than just this in the Physical Digression. First, even read in isolation, the Digression is more naturally interpreted as offering a theory of metaphysical individuation than as merely contributing to a theory of epistemological individuation. In particular, the Definition of 'individual'-and the very choice of the term 'definition' for it—strongly implies that Spinoza is describing what makes something an individual, and not merely what makes something be recognized as an individual. Second, his discussion of personal identity at IVP39D and IV39S (which cites the definition of 'individual') identifies an individual's loss of nature or form with its destruction (see also IV Preface). Hence, it is clear that Spinoza's claims in Lemmas 4–7 about the ability of individuals to retain their "natures" or "forms" (claims that are of course also derived from the definition) are intended as a contribution to a metaphysical theory of individuation. Finally, in Appendix II.14 of his earlier Short Treatise on God, Man, and His Well-
Being, Spinoza quite explicitly offers fixed ratios of motion and rest as the principle of metaphysical individuation, in all of its aspects, for all individual corporeal things. Thus he writes:

[14] Here, then, we shall suppose as a thing proven, that there is no other mode in extension than motion and rest, and that each particular corporeal thing is nothing but a certain proportion of motion and rest, so much so that if there were nothing in extension except motion alone, or nothing except rest alone, there could not be, or be indicated, in the whole of extension, any particular thing. The human body, then, is nothing but a certain proportion of motion and rest. (emphasis added)²

And there is no evidence that Spinoza later intended to withdraw the metaphysical role that this earlier passage clearly assigns to ratios of motion and rest—whatever he may conceive those ratios to be.

Thus, it is reasonable to interpret the Physical Digression following IIP13 as providing the outlines of a theory of metaphysical individuation. Moreover, this theory stands in marked contrast to at least one theory of metaphysical individuation naturally suggested by the writings of Descartes and others. For on that seemingly Cartesian theory, the only individual things are substances, and substance always plays the crucial role in individuation. Something is an individual thing, according to that theory, in virtue of being a substance supporting modes, qualities, or attributes; it remains identical through time simply in virtue of being the numerically same underlying substance; and two entities constitute numerically different individual things simply in virtue of being numerically different substances.³

In contrast, Spinoza maintains that there is only one substance (IP14 and C1). Thus, if he is nonetheless to affirm a real plurality of individual things, he must reject each of the doctrines just described; and so he does in Part II of the Ethics. The Definition implies that individuals are bodies, which, by IID1 (the Definition of ‘body’), are not substances but rather modes of substance. (The phrase of the definition translated as “one body or individual” is unum corpus, sive Individuum. Sive has the sense not of disjunction but rather of “in other words” or “that is to say.”) Something is an individual, according to the Definition, in virtue of having parts that communicate their motions in a “certain fixed ratio” (certa quadem ratione). These individuals remain identical through time, Lemmas 4–7 conclude, in virtue of retaining this same fixed ratio of motion and rest. Finally, Lemma 1 entails that
individuals are, like all bodies, distinguished from one another "by reason of motion and rest" and not by reason of substance; more specifically, according to the Definition, two entities constitute different "individuals" in virtue of their being (numerically) different "unions of bodies," where this "union" is itself constituted simply by the fixed ratio of motion and rest among the component bodies.

**MOTION AND REST**

According to Spinoza, it is not 'substance' but 'motion and rest' that serves as the principle of individuation for individuals and, indeed, for all bodies. Yet the meaning of this term is not at all obvious. Most of the passages of the *Ethics* that refer to motion and rest—including a significant number in the Physical Digression—appear to treat motion and rest in a relatively ordinary way, as two different and contrary characteristics of particular bodies or individuals, consisting in their change or retention, respectively, of spatial relations. As we have seen, however, the *Short Treatise* describes a hypothetical situation in which there would be motion (or rest, but not both) without the existence of any particular things at all; and this seems to imply that motion and rest are two different and contrary characteristics not of particular bodies or individuals, but of the one extended substance itself. Furthermore, in *IP21* Spinoza describes certain "eternal and infinite" modes that follow immediately "from the absolute nature of any of God's attributes"; and in Epistle 64, he specifies that motion and rest is an example, for the attribute of extension, of such an immediate infinite mode. Yet this characterization seems to imply that motion and rest is somehow a single pervasive feature of the one extended substance.

Nor is this all. As we have seen, Lemma 1 states that all bodies are "distinguished by reason of motion and rest," and the Scholium to Lemma 7 states that the "simplest bodies* (corpora simplicissima) are "distinguished from one another only by motion and rest" (emphasis added; the latter claim also occurs in the paragraph just prior to the Definition). Yet as Jonathan Bennett points out, these two passages threaten Spinoza's theory with incoherency if they are interpreted as referring to motion and rest in the ordinary sense (as characteristics of extended bodies consisting in their change or retention, respectively, of spatial relations). For how can motion and rest give rise to the metaphysical distinction of numerically different bodies if motion and rest themselves cannot exist except as characteristics of different bodies? Moreover, if at the ultimate level there is no qualitative diversity other
than differences of such motion and rest by which bodies can be distin-
guished, then it seems that the extended world must be entirely homo-
geneous at any single moment, so that there cannot be any synchronic
variety at all. And it will then be difficult to conceive of mere motion
and rest as producing any distinction of bodies—or, indeed, of any real
motion as having actually taken place—through time either, since the
extended world will always remain an entirely homogeneous and seem-
ingly undifferentiated whole from one moment to another. Thus, it
seems that motion and rest, as ordinarily understood, cannot coher-
ently do the job that Spinoza’s theory seems to assign them.

This interpretive situation is difficult, but not hopeless. Spinoza
wrote his first published work, Principles of Cartesian Philosophy (cited
henceforth as “PP”), as an explication of Descartes’s philosophy, not as
a presentation of his own. As such, it contains a number of doctrines
with which Spinoza clearly disagrees—for example, the doctrine that
individual bodies are “really distinct” in the technical Cartesian sense
that entails their being different substances from each other (PP
IIP8S). (The Preface to the work, written by Lodewijk Meyer, mentions
other examples.) The work is, nevertheless, a useful guide to Spinoza’s
own understanding and use of the standard Cartesian terminology
from which his own terminology is often derived; and it is particularly
helpful in the present case.

In Part II of that work, Spinoza, following Descartes, defines ’local
motion’ as “the transfer of one part of matter, or one body, from the
vicinity of those bodies that touch it immediately, and are considered
as resting, to the vicinity of others” (PP IID8). However, in a note to the
definition, he distinguishes this “transfer” from the “force or action”
that moves the thing said to be in motion; and he also uses the term
’motion’ for this force (e.g., PP IIP22). The quantity of this force is the
“quantity of motion”;; this is also a crucial magnitude of Cartesian
physics, where it is equivalent to mass (or volume) times velocity. Spin-
oza asserts, in accordance with this Cartesian doctrine, that the
quantity of motion is greater in a body of greater size than in a body of
lesser size but equal speed (PP IIP21); and that it is greater in a body
with greater speed than in a body of lesser speed but equal size (PP
IIP21). A body has not only a quantity of motion, but also a quantity of
rest, which varies inversely to its quantity of motion (PP IIP22 and C1;
see also Short Treatise Appendix II.15); and when one body transfers a
portion of its motion to a second, the second body at the same time
transfers an equal portion of its rest to the first (PP IIP18 and D). Force
considered as quantity of motion can be distinguished from force con-
sidered as quantity of rest: “Note that here, by force in moving bodies,
we understand a quantity of motion. . . . But in bodies at rest we understand by force of resisting a quantity of rest" (PP II22S). Nevertheless, in another way, these two forces or quantities can, it seems, ultimately be considered manifestations of the same force:

It is commonly thought that this force or action is required only for motion, and not for rest. But those who so think are thoroughly deceived. For as is known through itself, the force which is needed to impart certain degrees of motion to a body at rest is also required to take away those certain degrees of motion from the body so that it is wholly at rest. (PP IIID8S)

Given these features of Spinoza's use of 'motion and rest' in *Principles of Cartesian Philosophy*, it becomes possible to reconcile his uses of the term elsewhere. For it now becomes comprehensible how he could see not only motion-and-rest as a force that constitutes a single pervasive feature of the extended universe—as his apparent claim that motion and rest is an immediate infinite mode of extension implies—but also as one that manifests itself in two different and complementary ways, as quantity of motion (in varying degrees) and as quantity of rest (in inversely varying degrees). (Descartes, too, speaks of "quantity of motion" as "force" or "power," although he resists giving it the ontological status needed to make it function as a true explanation of local motion; this resistance is related both to the role of God's will in the behavior of bodies and to Descartes's desire to treat local motion as relative. No such resistance need be attributed to Spinoza, however. On the contrary, the passages already cited strongly suggest that he does treat quantity of motion and quantity of rest as a force that explains local motion and rest.) Furthermore, these dual quantities of force need not be distributed to a plurality of individual substances, but rather could be distributed differentially throughout the one extended medium that is Spinoza's extended substance. This differential distribution of the dual manifestations of force would, of course, introduce synchronic diversity into his one extended substance, for even at a single time one region of the extended substance might contain greater force as quantity of motion and correspondingly lesser force as quantity of rest than another. From this diversity, in turn, there might arise the distinction among different bodies, as required by Lemma 1.

In particular, the "simplest bodies," which are said to be "distinguished from one another only by motion and rest" (Lemma 7 Scholium), might be supposed to be, at any given moment, constituted of those regions of the one extended substance that are, at that time,
entirely homogeneous with respect to the distribution of quantity of motion (and, correlative, quantity of rest). They might, in effect, be such homogeneities. And the changing positions—what Spinoza calls the "local motion"—of these simplest bodies might be constituted simply by the changing distributions of these homogeneities in the force of motion-and-rest, changing distributions that are required by what he elsewhere calls "the laws of motion and rest" (e.g., IIIP2S).

Bennett’s discussion of what he calls Spinoza’s “field metaphysics” provides a very useful account of how this constitution might work: the spatiotemporal path of bodies would be a function of momentary qualitative variety together with the continuous temporal “passage” of certain aspects of this momentary qualitative variety through contiguous regions of an extended medium. Much as the spatiotemporal path of a “thaw” through the countryside is determined by the continuous temporal passage of certain qualitative features through the medium of the countryside, so the path of a body will be determined by the passage of certain qualitative features through the one extended substance. But whereas Bennett implies that the qualitative features on whose variety the field metaphysics depends must be unknown for Spinoza, and are called “motion and rest” probably through confusion with the behavior of the individuals to which they give rise, I have suggested that Spinoza does have at least some conception of the nature of these underlying features—as a force manifesting itself (in varying proportions) as the quantity of motion and quantity of rest familiar from Cartesian physics—and that his use of the term ‘motion and rest’ for them is thus coherently related to his other uses of that term to designate the ‘local motion’ and ‘local rest’ of particular bodies. For what Spinoza calls the “local” motion or rest of the simplest bodies will be both the consequence of, and a measure of, the force or quantity of motion (and correlative quantity of rest) that belongs to them and, indeed, constitutes them.

It is worth noting that, on this account, the particular quantities of motion and of rest constituting a simplest body need not remain the same throughout its spatiotemporal path, even if the size or volume of the body itself does not change; it will suffice that the path be continuous and that distribution of quantity of motion—and corresponding quantity of rest—remain homogeneous throughout the body. And indeed, the second axiom of the Digression asserts that “each body moves now more slowly, now more quickly,” while the Demonstration of Lemma 2 asserts that this is a respect in which all bodies agree. It is also worth noting that, on this account, a single simplest body may change sizes (and hence also that different simplest bodies may be of
different sizes). But this changeability seems in any event required by the conjunction of Lemma 5, which states that the parts composing an individual may "become greater or less," with the Scholium to Lemma 7, which states that in the preceding lemmas "we have conceived an Individual . . . composed of the simplest bodies."

Given the existence of simplest bodies, Spinoza's individuals will just be, as the Definition states—composites of such simple bodies, composites that maintain a fixed ratio of this same force of motion and rest among their parts, even as their particular component parts change. Some of the characteristics of these composites will be derived from characteristics of their constitutive fixed ratio, while other characteristics will be derived from other, more variable, aspects of the motion and rest of their component parts—just as suggested by the Scholium to Lemma 7.

In this way, then, 'motion and rest' can refer sometimes to local motion and rest, sometimes to the closely related underlying force(s) of motion and rest that produce local motion and rest, and sometimes—since the former are a function of the latter—to either one indifferently. At the same time, motion and rest, as forces, can be conceived as directly characterizing the one extended substance, and also as being possessed by the simple and composite bodies that they serve to constitute and whose local motion they explain, in accordance with the laws of motion and rest. This provides one account of how motion and rest could consistently be said to be (1) an infinite mode, and hence a single pervasive feature of the one extended substance; (2) two different features of the one extended substance; (3) two different features of particular bodies; (4) that which ultimately distinguishes all bodies; and (5) the only respect in which simple bodies are distinguished from one another. This account is naturally suggested by Spinoza's use of the terms 'motion' and 'rest' in Principles of Cartesian Philosophy; and it is difficult to see what other account could so fully explain his various uses of those terms. Thus, I conclude that it is the most probable interpretation. If it is correct, then Spinoza's conception of motion and rest as a principle of individuation is an eminently coherent one.

FIXED RATIOS

Although the preceding account provides a likely interpretation of what the fixed ratios of motion and rest that constitute the forms of individuals are ratios of, it does not yet say what the ratios themselves are. Some commentators have claimed that Spinoza is referring to the
specific mathematical ratio between an individual’s own quantity of motion and its own quantity of rest; and this ratio, in turn, is often identified with the mathematical ratio between the sum of the quantities of motion of the individual’s parts and the sum of the quantities of rest of the individual’s parts. The Preface to the Second Part of the *Short Treatise* strongly suggests that Spinoza has just such a specific mathematical ratio in mind:

So if such a body has and preserves its proportion—say of 1 to 3—the soul and the body will be like ours now are; they will, of course, be constantly subject to change, but not to such a great change that it goes beyond the limits of from 1 to 3. . . . But if other bodies act on ours with such force that the proportion of motion (to rest) cannot remain 1 to 3, that is death, and a destruction of the soul.

There are, however, a number of difficulties with this proposed interpretation. For example, according to *Principles of Cartesian Philosophy*, when a body is accelerated (say, by impact with another body), its quantity of motion thereby increases and its quantity of rest decreases, other things being equal (PP IIP22 and C1), thus greatly altering the ratio between the two. Yet individuals can generally survive acceleration, just as Lemma 7, and also the second axiom of the Digression, imply. It will not help to suggest that when acceleration increases the total quantity of motion of an individual, the quantity of rest of its parts will almost always increase proportionately. For according to *Principles of Cartesian Philosophy*, a body can only acquire rest from another body giving up rest (PP IIP18); and it is not easy to see how or why other bodies should be counted on to give up precisely the correct quantity of rest in every case of an individual’s acceleration. Yet these doctrines from *Principles of Cartesian Philosophy* are almost certainly principles that Spinoza himself would accept. They are practically constitutive of the concepts of ‘quantity of motion’ and ‘quantity of rest’; and they are both involved in his derivation of Descartes’s seven laws of motion (PP IIP24–31), all but one of which he accepts (Epistle 32).

Second, Spinoza indicates in his correspondence with Oldenburg (Epistles 6 and 13) that the difference between water and ice (and between nitre and spirit of nitre) is one of the amount of “agitation” of the parts. He should thus be at least willing to consider the possibility that lesser differences in temperature—differences that do not yet produce such radical changes as that between liquid water and solid ice—also involve different degrees of agitation of the parts. Moreover, he
appears to agree with Boyle's claim that heat is "nothing but a various and nimble motion of the minute particles of bodies" (see note 24 in the Curley edition). And Short Treatise Appendix II.15 offers a related account of heat perception. But from this view of heat, it follows that the ratio of the quantity of motion of the parts to the quantity of rest of the parts would change very considerably when an individual became even slightly warmer; in fact, however, individuals can evidently survive even some quite considerable changes of temperature. It might be replied that the parts agitated in heating are not the primary parts of the individual itself, but only parts of its parts (or parts of those parts, etc.). If, however, the ratio of motion and rest of an individual is to be identified with the mathematical ratio of the sum of the quantities of motion of its parts to the sum of the quantities of rest of its parts, then presumably the quantities of motion and rest of the primary parts are, by the same token, to be identified with the sum of the quantities of motion and rest of all of their parts, and so on.

Alexandre Matheron offers a proposal that might overcome both of these objections. If we can construe the motion of a body as composed of one or more different motions, then we might regard only some of the motions of the parts of an individual as contributing to the relevant sum of quantities of motion. The particular motions of parts resulting from acceleration of the individual as a whole, or from its increase in temperature, might then be excluded. This proposal, while helpful, is not without problems of its own. In the first place, it is not obvious how this proposal should treat the quantities of rest that also go to make up the ratio. (Matheron himself explicitly identifies the quantity of rest with mass, but this seems not to take into account the requirement that quantity of rest vary inversely with velocity.) Furthermore, if that problem were solved, it seems likely that any collection of bodies (of constant size) could be then construed as "preserving the same ratio of motion to rest" by abstracting out all motions whatever. Even if we put both of these problems aside, however, there remain difficulties with the original interpretation that Matheron's proposal does not touch.

For example, organic individuals can, it seems, lose one or more parts (a strand of hair, a tooth, a hand, or a leg) without losing their identity. These parts must either have the same mathematical ratio of motion to rest as the individual as a whole (for whatever motions are relevant for determining this ratio), or else a different ratio. But if the ratio is different, then the loss would presumably result in a change in the mathematical ratio of motion to rest of the remaining individual, and hence a change in its form and identity, contrary to the appearance
that the individual can persist through such a loss. If, on the other hand, the ratio is the same, that entails the strange conclusion that a man has the same nature or form as a strand of hair, a tooth, a hand, or a leg. Since Spinoza claims at the end of the Preface to Part IV that a horse would be destroyed if it were changed into an insect or man only on the grounds that it would thereby lose its form, it would also follow that a man might be changed into a strand of hair; a tooth, a hand, or a leg without thereby losing his identity. Of course, it might be replied to this that the relevant mathematical ratio of motion to rest allows for a certain margin of variation. And certainly, the larger the margin of variation, the less likely it is that the loss of a single part will result in a loss of form. But no matter how large the margin, if the individual happens already to be near one of its limits, a very slight loss (say, of a single strand of hair) might still be enough to make the difference. Furthermore, the larger the margin is, the more likely it becomes that a man, for example, could after all share the same form as one of his parts.

Finally, and most important, even if it were true that every individual somehow retains the same mathematical ratio of motion to rest for its entire duration, it is difficult to see how Spinoza could think himself to be in a position to know this fact. If this principle were merely an arbitrary stipulation of what is to be meant by the term 'individual', then of course the problem would not arise. But Spinoza intends the term 'individual' to apply at least to human beings and animals (including horses, fish, and insects) (E IIIP57S). By what argument can he be assured that the total mathematical ratio of motion to rest in these organisms never changes outside narrow bounds, so that increased motion in some parts is always compensated by properly proportional increased rest in others? Matheron provides a nice example: in running, the muscles are stimulated and the brain dulled, while in intoxication the brain is stimulated and the muscles dulled. But to suppose that such compensations always occur, and occur in the right proportion, can only be sheer speculation. And the same epistemological problem also has a converse expression. Spinoza claims, as just noted, that a horse would be destroyed by transformation into an insect or a man; but by what argument can he be assured that the quantity of motion to rest of the parts of a horse is always different from the mathematical ratio of the quantity of motion to rest of the parts of a man or an insect? Once again, increasing the margin of variability of the mathematical ratio partially alleviates the first version of the problem only at the price of greatly exacerbating the latter.

Thus, if Spinoza is committed to requiring definite mathematical ratios of quantity of motion to quantity of rest as the forms of individu-
als, then he is committed to an implausible and unreasonable position. However, it is possible to give a less restrictive interpretation of the term ‘fixed ratio of motion and rest’. For the Latin term ratio is not nearly so specific as the English term ‘ratio’; it can mean simply “pattern” or “relation.” Thus, Samuel Shirley’s translation, for example, proposes ‘relation’ or ‘mutual relation of motion-and-rest’; R. H. M. Elwes gives ‘relation’ or ‘mutual relations of motion and rest’; and W. H. White and A. H. Sterling offer ‘proportion’ or ‘kind of motion and rest’.

Accordingly, Bennett treats the phrase ‘ratio of motion and rest’ as designating simply a “coherence of organization”; the term ‘fixed ratio’, he suggests, is “just a placeholder for a detailed analysis which (Spinoza) had not worked out, perhaps because it might involve a detailed anatomical and physiological theory of organisms which he knew was not yet available.” Knowledge of the specific character of the relations of motion and rest among the parts composing particular kinds of individuals does, no doubt, require detailed knowledge of a kind Spinoza is not prepared to provide. That fact does not, however, rob the phrase ‘ratio of motion and rest’ of all content, nor would Bennett suppose that it does. Given the requirement of the definition and Lemmas that the parts continue to “communicate” their motions to one another in a given “fixed” manner, we can interpret the definition as imposing at least two minimal conditions on individuals when it appeals to ratios of motion and rest: first, an individual must consist of parts whose quantities of motion and rest do not vary entirely independently of the motion and rest of the remainder of the parts; and second, the manner in which the motion and rest of these parts is interrelated must conform to some enduring pattern—even though the identity, size, number, position, direction, and motion of the parts playing these roles may change. Presumably any such pattern could ideally be expressed by a mathematical formula describing the relations of quantities of motion and rest among parts that must be preserved; but the formula need not be so simple as a fixed ratio of quantity of motion to quantity of rest. On the other hand, a fixed ratio of quantity of motion to quantity of rest would be one such pattern. Evidently, it is just such a ratio that characterizes the individual constituting the “whole of nature,” described in the Scholium to Lemma 7, since Spinoza writes in Epistle 62 that “there is preserved in all together, that is, in the whole universe, the same ratio of motion to rest” (eodem ratione motus ad quietis; my translation). (The preservation of this mathematical ratio is, of course, required by Descartes’s principles of the conservation of motion and conservation of rest [PP III1]). Spinoza’s use in the Short Treatise of the example of “3 to 1” to describe the ratio of
motion and rest characterizing a human body may be understood, not as a serious hypothesis about the nature of the human body, but simply as an arbitrary example of a pattern, chosen from the simplest kind of pattern available.

This less restrictive interpretation, according to which ratios of motion and rest are simply fixed patterns of communicated motion and rest among parts, can thus accommodate everything that Spinoza says about fixed ratios of motion and rest. It also ascribes to him views that he would be far more likely to accept than those that must be ascribed on the alternative interpretation. I conclude, therefore, that it is the more likely interpretation; at the same time, it also renders the resulting theory of metaphysical individuation far more reasonable.

THE SCOPE OF 'INDIVIDUAL'

I have argued that, on the most plausible interpretation, Spinoza's conception of ratios of motion and rest provides a coherent and reasonable content to the theory of metaphysical individuation he proposes in the Physical Digression. Still unresolved, however, is the question of the theory's scope and completeness. In particular, it may be questioned whether the theory applies to substances; to infinite modes; and to such finite modes as minds, inorganic objects, and the "simplest bodies" mentioned in Lemma 7—and, if it does not, whether those restrictions undermine the completeness of the theory.

There is a very broad sense in which substances may be considered individual things. Thus, in Ethica IP8S, Spinoza sets forth a principle concerning "individuals" ("no definition involves or expresses any certain number of individuals") that he then explicitly applies to substances. (The 1677 Dutch translation adds the explanatory note that "by individuals are understood particulars which belong under a genus," presumably in order to distinguish this sense of the term from that introduced in Part II.) But, while a substance may be an individual in this broad sense, it cannot be an individual in the sense defined in the Physical Digression, for two reasons. First, as already noted, the definition speaks of unum corpus, sive Individuum (see also Lemma 4), thereby implying that individuals are bodies, and hence (by ID1) modes of substance. Second, the definition requires that individuals be composed of parts, whereas substances (by IP12S and IP15S; see also Epistle 12) cannot be composed of parts.

But although a substance is not an individual in the sense defined, this is not a serious lacuna in Spinoza's theory of metaphysical individu-
uation; for to the extent that such a theory is needed for substances, it can easily be inferred from Part I of the Ethics. Presumably, to the extent that a substance is an individual thing, it is so simply in virtue of its being a substance. A substance persists as the same individual thing simply by continuing to instantiate its definition, a definition that captures its nature or essence (IP8S). There cannot be more than one substance instantiating that definition (IP8S), and any substance that does so exists necessarily and so cannot fail to exist eternally with that nature or essence (IP7 and ID8). Finally, Spinoza's monism—the doctrine that there is only one substance (IP14 and C1)—obviates the problem of distinguishing substances, either metaphysically or epistemologically. Hence he writes at IP10S: "If someone now asks by what sign we shall be able to distinguish the diversity of substances, let him read the following propositions, which show that in Nature there exists only one substance, and that it is absolutely infinite. So that sign would be sought in vain."

The Scholium to Lemma 7 states that "the whole of Nature is one Individual, whose parts, i.e., all bodies, vary in infinite ways, without any change of the whole Individual." Since Spinoza also identifies nature with God, the only substance, in the recurrent phrase 'God or Nature' (Deus sive Natura), it may thus appear that a substance must, after all, be an individual. However, as Spinoza's distinction between Natura naturans and Natura natura at IP29S indicates, the sense in which "nature" is identical with God is only one sense of that term. After citing motion and rest as an immediate infinite mode in Epistle 64, Spinoza continues by citing as an example of a mediate infinite mode: "the face of the whole Universe (facies totius Universi), which, although it varies in infinite modes, yet remains always the same; on this subject see Scholium 7 to the Lemma before Proposition XIV, Part II." The reference to the Scholium of Lemma 7 leaves little doubt that the individual identified there as the "whole of Nature" is the "face of the whole Universe" of Epistle 64 and hence an infinite mode of substance, rather than a substance in its own right. Yet, on the other hand, Spinoza also seemingly implies that infinite modes cannot be individuals. For he claims in the Demonstration of Lemma 3 that "bodies (by IID1) are singular things"; and singular things, by IID7, are "things that are finite and have a determinate existence." Thus, if all individuals are bodies, it will follow that all individuals are finite. And as we have seen, the Definition's reference to one "body or Individual" (corpus, sive Individuum) implies that all individuals are bodies. Thus, either the "whole of Nature" must be regarded simply as an exception to this implication, or else the Definition must be regarded as using the phrase corpus, sive
*Individuum* to broaden slightly the sense of 'body', so as to include at least one infinite mode.

Could any other infinite modes be individuals as well? As already noted, Individuals are by definition composed of bodies; and any compound of bodies that lacked some bodies as members could hardly be "infinite," in Spinoza's sense of that term, which means "unlimited" (ID2). This is confirmed by the demonstrations of IPP21–25, which treat infinite modes as pervasive throughout the attribute of which they are modes. Thus, no other infinite mode could be an individual, unless it shared all of the same parts as the "whole of Nature." The possibility of different individuals sharing the same parts is a topic to which I will return; but in any case, any infinite modes that do not have all bodies as parts must be pervasive features of substance that are not compounds of bodies at all. But although such infinite modes will thus not be individuals, this is not a serious limitation on the scope of Spinoza's theory of individuation. For such infinite modes are also unlikely to be anything that would ordinarily be construed as individual things; they will instead be such universal entities as general features of an attribute as a whole, laws of nature, and eternal essences of things.

Because the definition specifies that individuals are composed of bodies, they are by definition extended things. Nevertheless, IIP7S states that a mode of extension and the idea of that mode are identical; and according to IIP21D, this entails that "the Mind and the Body, are one and the same Individual." And in fact, throughout the remainder of the *Ethics* Spinoza consistently identifies human beings—whether conceived under thought or extension—as individuals. Moreover, in IIA3, he writes of different *ideas* as being "in the same Individual." Thus, it seems that, for Spinoza, things are individuals not only insofar as they are extended but also insofar as they are thinking. Presumably, then, he restricts the Definition to extension only because it occurs in a discussion that is devoted explicitly to bodies and extension, rather than to minds and thought. Spinoza does not offer a theory of metaphysical individuation for individuals insofar as they are thinking; but given the parallelism of the attributes and the identity of ideas with their objects (IIP7 and S), it is not difficult to infer what that theory would be: a thinking thing is an individual in virtue of being the idea of a composite body with a fixed ratio of motion and rest; it persists as the same individual through time in virtue of being the idea of the same composite body, constituted by the same fixed ratio of motion and rest; and it is distinguished from another thinking individual in virtue of being the idea of a (numerically) different union of bodies, where each such union is constituted by a fixed ratio of motion and rest.
Spinoza’s Theory of Metaphysical Individuation

Spinoza states explicitly that human beings are individuals; and IIIP57S implies that animals are also individuals. Postulate I entails that the organs of the human body, and even the primary parts of the organs of the human body and their primary parts, are individuals. Moreover, it appears that a group of human beings can also be an individual, as Spinoza indicates at IVP19S:

For if, for example, two individuals of entirely the same nature are joined to one another, they compose an individual twice as powerful as each one... Man, I say, can wish for nothing more helpful to the preservation of his being than that all should so agree in all things that the Minds and Bodies of all would compose, as it were, one Mind and one Body.

If a group of persons can be an individual, of course, then it follows that an individual can be spatially discontinuous. This need not violate the requirement that motion and rest be communicated among the parts in a fixed pattern, however, for the parts may communicate motion and rest to one another by various media that are not themselves parts of the individual. In the case Spinoza is envisaging, human beings who live in accordance with reason have natures that agree with one another, or have a great deal in common. To the extent that such individuals are in (say, written or spoken) communication with one another, they tend to maintain one another in existence, and to maintain one another in the reasonable nature that they share. Hence the motion and rest of the parts of one such person consistently help determine the motion and rest of the parts of the others in a given fixed pattern—namely, that pattern characteristic of reasonable persons.

Although persons and animals are clearly identified as individuals, it is less obvious whether nonliving things, such as rocks or planets, tables or books, can be individuals. Thus Bennett, for example, while not positively asserting that only living things can be individuals, writes that ‘individuals’ means “something like ‘organisms’” for Spinoza; that “the paradigmatic individuals are organisms”; and that Spinoza usually reserves the term ‘individuals’ for “things having organic unity—organisms or parts of organisms such as organs and cells.”

There are several reasons for thinking that Spinoza does intend the class of individuals to include ordinary nonliving things. As we have seen, the whole of nature is an individual, even though it is not obviously a living thing in the ordinary sense. Spinoza’s use of the phrase ‘body or Individual’ (corpus, sive Individuum) in the definition implies not only that every individual is a body, but also that every body is an
individual. Moreover, he claims at IIP13S that all individuals are animate "in varying degrees"; if every body is indeed an individual, this suggests that the living/nonliving distinction itself may be only a matter of degree for him. (See also his definition of 'life' as "the force through which things persist in their being" at Principles of Cartesian Philosophy, Appendix ("Metaphysical Thoughts"), Part II, Chapter 6; this, together with IIP6, entails that everything has life.) Perhaps most important, though, nonliving things do in fact generally satisfy the definition of 'individual' as we have interpreted it. To take a simple example: although some pages of a book may move a certain distance, in a certain direction, without moving the rest of the book, there is a definite limit to such motion; when part of a book is moved beyond this limit in a given direction, the other parts are compelled to move as well, by a communication of motion among the parts in a manner that remains constant throughout the duration of the book's existence. There is thus a definite fixed pattern to the relation of motion and rest among its parts involving mutual dependence of motions; and the same holds for other ordinary nonliving individual things.

Is there any reason to suppose that nonliving things are not individuals for Spinoza? One reason, of course, is Spinoza's failure to mention them explicitly as individuals. However, this failure is easily explained given that Spinoza's ultimate concern in the Ethics is for human beings, and that the topic of "individuals" is introduced primarily for the light it can shed on the relation between the human mind and the human body.

A more complicated reason, however, may be found in IVP39S, where Spinoza makes it clear that when the human body dies and is transformed into a corpse, this constitutes the destruction of the human body as an individual. For if such nonliving things as rocks and books are individuals, then so presumably is the corpse, since the parts of the corpse maintain fixed mutual relations of motion and rest among themselves of much the same kind as those maintained by the parts of a rock or a book. Furthermore, it seems reasonable to say that the individual that is the corpse does not come into existence at death, but rather is the continuation of an individual that also existed before death, since these fixed mutual relations of motion and rest (supplemented, to be sure, by others of a more organic kind) already held prior to death. Yet the parts of this seeming-individual were the same as those of the living human body; hence, unless two individuals can consist of the same parts at the same time, there follows the contradictory conclusion that death both is and is not the destruction of the individual that is the human body. One way to avoid this contradiction would
be to deny that the corpse is an individual at all; and if the corpse is not an individual, consistency would seem to require that other nonliving objects, such as rocks and books, not be individuals either. 18

This is not, however, the only way to avoid the contradiction. For one thing, Spinoza might well hold that the individual that is now the corpse did not exist prior to death. For although the pattern of motion and rest that now characterizes its parts also characterized them before, it did so only as a part of a larger and hence different pattern of motion and rest constituting the life of the human being. Alternatively, Spinoza might well deny the principle that two different individuals cannot be composed of the same parts at the same time. In IVP39S, he writes that:

I understand the Body to die when its parts are so disposed that they acquire a different proportion of motion and rest to one another. For I dare not deny that—even though the circulation of the blood is maintained, as well as the other (signs) on account of which the Body is thought to be alive—the human Body can nevertheless be changed into another nature entirely different from its own. For no reason compels me to maintain that the Body does not die unless it is changed into a corpse.

And, indeed, experience seems to urge a different conclusion. Sometimes a man undergoes such changes that I should hardly have said he was the same man. I have heard stories, for example, of a Spanish Poet who suffered an illness; though he recovered, he was left so oblivious to his past life that he did not believe the tales and tragedies he had written were his own. He could surely have been taken for a grown-up infant if he had also forgotten his native language.

If this seems incredible, what shall we say of infants? A man of advanced years believes their nature to be so different from his own that he could not be persuaded that he was ever an infant, if he did not make this conjecture concerning himself from others. But rather than provide the superstitious with material for raising new questions, I prefer to leave this discussion unfinished.

In this deliberately indeterminate passage, Spinoza’s language seems to imply both that the Spanish poet is the same individual who wrote the tales and tragedies (“oblivious to his past life”) and that he evidently is not (“indeed, experience seems to urge a different conclu-
sion . . . a man undergoes such changes that I should hardly have said he was the same man"). Similarly, Spinoza implies both that men of advanced years are not the same individuals they were as infants (by writing with seeming approval of the difficulty of being persuaded of an identity, given the great difference of nature involved), and also that they are the same individuals (by suggesting that one's observation of others shows that such an identity nevertheless does hold). One possible interpretation of the passage is that, in such cases as that of the Spanish poet, there is an individual that does continue, constituted by the particular fixed ratio of motion and rest involved in continuation of the same animal functions, and another individual that does not, one for which the more complex fixed pattern of motion and rest involved in retaining memory and similarity of higher mental functioning is essential.

I therefore conclude that there are several strong reasons to suppose that ordinary nonliving things in general are individuals for Spinoza, and no strong reasons to suppose that they are not. Still, even if ordinary nonliving things are individuals for Spinoza, it may appear obvious that at least one class of nonliving things cannot be—namely, the "simplest bodies" (corpora simplicissima) mentioned prior to the definition and in the Scholium to Lemma 7. For according to the definition, individuals are composite bodies; and according to the Scholium, individuals of the lowest level of composition are themselves composed of simplest bodies. Despite this appearance, however, Matheron suggests that we may regard simplest bodies as "composite" bodies with only one part.19 They would thus constitute a subset of the class of individuals of the lowest level of composition. Of course, if the fixed ratio of motion and rest constituting the form of such an individual were interpreted as a mathematical ratio of motion to rest, this would entail—as Matheron observes—that simplest bodies could not survive a change of speed (at least, unaccompanied by a corresponding change of size). And this consequence is contrary to the demonstration of Lemma 2, which states that "all bodies agree in that . . . they can move now more slowly, now more quickly, and absolutely, that now they move, now they are at rest." On the less restrictive interpretation of 'fixed ratios', however, the fixed ratio may consist simply in the continued homogeneity of the distribution of force as quantity of motion and of (corresponding) force as quantity of rest throughout these simplest bodies.

This way of treating the fixed ratio of motion and rest of simplest bodies suggests, in turn, another way of construing those bodies as satisfying the definition: we may regard them as being composed of smaller simplest bodies all of which share a completely uniform distrib-
ution of force as quantity of motion and of (corresponding) force as quantity of rest. For by 'simplest bodies' Spinoza need not mean "bodies that are absolutely simple," but only "bodies of the simplest kind there are." If the universe contained ultimate simple atoms, of course, then composites of those simplest bodies could not themselves be bodies of the simplest kind. Atoms, however, are incompatible with Cartesian science as Spinoza presents it (PP IIP5). And if every body can be construed as a compound of other bodies, which are themselves compounds of other bodies, and so on, then the simplest bodies will be those that are internally homogeneous. Subregions of such bodies will, of course, themselves be homogeneous, and hence may also be construed as simplest bodies.

There are thus at least two ways of interpreting simplest bodies as individuals. Such an interpretation is desirable, for as already noted, the Definition implies that all bodies are individuals. But even if the simplest bodies are not individuals, this would still not be a fatal objection to the completeness of Spinoza's theory of metaphysical individuation. For we have already seen, in the second section of this chapter, how he can account for the identity, persistence, and distinction of simplest bodies as bodies distinguished "only by motion and rest," even without the supposition that they are themselves individuals in the sense he defines.

Spinoza's ontology contains only substances (in fact, of course, only one substance) and modes (IP6C); modes, in turn, are either infinite or finite. I have argued that, although substances are not individuals in Spinoza's sense, this fact does not constitute a serious limitation on the scope of his theory of metaphysical individuation. I have also argued that the only infinite modes that could be regarded as individual things are individuals for him and hence fall within the scope of the theory. Furthermore, I have argued that all bodies, including non-living and "simplest" bodies, are also individuals for him, and hence also within the scope of the theory. Since all finite modes of extension are bodies (ID1), and since (as I argued) the ideas of individuals are also individuals, it follows that all finite modes of the attributes of extension and thought are included within the scope of his theory. Of course, Spinoza also allows for at least the possibility of other attributes of substance (ID6, IP11) with other modes. Nevertheless, since his account of the human mind entails that we cannot have any knowledge of such additional attributes (IIP13), his silence on the individuation of their modes cannot be regarded as a serious limitation. Thus, I conclude that Spinoza's theory of metaphysical individuation is not only coherent and reasonable, but also broadly inclusive.20
INDIVIDUALS AND SELF-PRESERVATION

At least as striking and original as the theory of metaphysical individuation presented in *Ethics* Part II is the application that Spinoza appears to make of fundamental considerations about the nature of individual things in *Ethics* Part III. At IIIP4, he appeals simply to the general concept of ‘the definition of a thing’ to argue for the proposition that “no thing can be destroyed except through an external cause”:

Dem.: This Proposition is evident through itself. For the definition of any thing affirms, and does not deny, the thing’s essence, or it posits the thing’s essence, and does not take it away. So while we attend only to the thing itself, and not to external causes, we shall not be able to find anything in it which can destroy it, q.e.d.

From IIIP4, he derives IIIP5, the claim that “things are of a contrary nature, i.e., cannot be in the same subject, insofar as one can destroy the other”:

Dem.: For if they could agree with one another, or be in the same subject at once, then there could be something in the same subject which could destroy it, which (by P4) is absurd. Therefore, things etc., q.e.d.

And finally, he appeals to both IIIP4 and IIIP5 in his demonstration of IIIP6, the pivotal claim that “each thing, as far as it can by its own power, strives to persevere in its being”:

Dem.: For singular things are modes by which God’s attributes are expressed in a certain and determinate way (by IP25C), that is, (by IP34), things that express, in a certain and determinate way, God’s power, by which God is and acts. And no thing has anything in itself by which it can be destroyed, or which takes its existence away (by P4). On the contrary, it is opposed to everything which can take its existence away (by P5). Therefore, as far as it can, and it lies in itself, it strives to persevere in its being, q.e.d.

IIIP6, in turn, provides the foundation both of his psychology and of the ethical theory for which the *Ethics* is named.

But how—if at all—is the argument at IIIPP4–6 related to the the-
theory of metaphysical individuation presented in the Physical Digression of Part II. Spinoza himself makes no formal connection between the Part II theory of individuation and the Part III argument for the doctrine of self-preservation that he bases in large measure on the concept of "the definition of a thing." Accordingly, it can easily appear that the theory presented in Part II, though perhaps interesting, is largely irrelevant to the overall structure of the Ethics.21

But although the argument of IIIP4–6 does not formally appeal to any part of the theory of metaphysical individuation found in the Physical Digression, that theory nevertheless has a crucial bearing on the argument and its final conclusion, in at least two ways. First, the rejection of substance as a principle of individuation helps to motivate and to render more plausible Spinoza's attempt to deduce strong conclusions about the behavior of individual things simply from the fact of their being individual things. From the claim that a thing is a Cartesian substance, nothing whatever follows about its behavior—it follows only that it has qualities and is capable of existing without dependence on any other thing except God. Thus, consider Descartes's own closest correlate to IIIP6: his claim at Principles of Philosophy II.37 that "each and every thing, in so far as it can, always continues in the same state," to which he adds the remark that "nothing can by its own nature tend towards its . . . own destruction." He deduces this claim not from the nature of individual things, but rather from God's (volitional) immutability. In contrast, Spinoza argues in effect at IIIP4–6 that nothing can be an individual thing unless it tends to persevere in its own existence. While a full evaluation of that argument is beyond the scope of the present chapter,22 Spinoza's rejection of substance as a principle of individuation at the very least clears the way for an alternative conception of individuality, one from which such a powerful conclusion about individual things might be derived. (There is an interesting comparison between, on the one hand, the way in which Spinoza derives a proposition closely related to the just-cited Cartesian metaphysical claim of Principles II.37, but without employing the Cartesian premise of God's volitional immutability; and, on the other hand, the way in which Spinoza appropriates the Cartesian epistemological principle that "clear and distinct ideas are true," but without employing the Cartesian premise of God's volitional nondeception.23)

Second, the theory of metaphysical individuation presented in the Physical Digression serves to confirm the conclusion of IIIP6 by providing a plausible instantiation of it. That is, it describes a very large class of individual things (namely, the class of individuals—which is, I have argued, a very large class indeed) that arguably will tend to perse-
vere in their own existence. For individuals, by definition, have as their form or nature a fixed ratio or pattern, in which motion and rest can continue to be communicated. The maintenance of this continuing ratio can thus be understood as the proper activity of the individual that has this form or nature. The disruption of this ratio, in contrast, can always be understood as the intervention of something not strictly pertaining to the individual's own form or nature, and hence as external to it. The theory thus provides specific content to the otherwise empty conception of the 'self' that every self-preserving thing endeavors to preserve; and it shows how the distinction between an individual thing's own nature or essence, on the one hand, and that which is "external" to it, on the other, can be applied.

In both of these ways, then—by motivating and rendering more plausible the argument of IIIPP4–6, and by instantiating and thus confirming its conclusion—Spinoza's theory of individuation makes an important contribution to his larger ethical project. At the same time, the theory also bears directly, of course, on the question of personal identity (IVP39S), on the relation of the mind and the body, and on the philosophy of physics. I conclude that it is a theory of considerable importance and power in Spinoza's overall philosophy.

In this chapter, I have tried to provide the most likely interpretation of Spinoza's theory of metaphysical individuation. I have also argued that that theory has a number of important virtues: consistency, reasonableness, inclusivity, and power. It is important to emphasize, therefore, that I have not argued that the theory is true. Although the theory has many virtues, it can hardly be true just as it stands, since both the specific Cartesian physics and the resulting physical conceptions of motion and rest on which it relies are now in many ways out of date. Yet despite this fact, readers of the Ethics are often struck by a sense that modern science will eventually lead us to something very much like Spinoza's approach to individuation. This need not be as surprising as it may initially seem. For Spinoza's replacement of substance by motion and rest as the principle of metaphysical individuation is the result of his deep reflection on the best science of his time—a science that, though distant, is still largely continuous with our own. Ironically enough, and yet appropriately too, the specific features of his theory that render it most outdated are thus the direct result of a method that renders it most modern—a method that is most worthy of emulation.
NOTES


2. This approach to individuation also occurs in the preface to the second part of the *Short Treatise on God, Man, and His Well-Being*: “Each and every particular thing that comes to exist becomes such through motion and rest. The same is true of all modes in the substantial extension we call body. The differences between [one body and another] arise only from the different proportions of motion and rest, by which this one is so, and not so, is this and not that.”

3. This is the most natural reading of such passages as *Meditation II* and *Principles of Philosophy* I 51–64, among others, in which Descartes gives individual bodies as examples of substances. See *The Philosophical Writings of Descartes*, 2 vols., ed. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985). It is, of course, widely questioned whether Descartes consistently treats individual bodies or “parts of matter” as substances. In particular, Descartes’s synopsis of the *Meditations* is often read as implying that only body in general is a substance, and that particular bodies are not. It is worth noting that Spinoza himself presents Descartes as committed to the view that individual bodies and parts of matter are “really distinct” from one another (PP IIP8S), which entails that they are different substances. I have also ignored any complications resulting from Descartes’s doctrine that the human mind and body constitute a substantial union.


6. Bennett, *Spinoza’s Ethics*, chapter 4. In a paper presented to the Pacific Division of the American Philosophical Association in 1987, Edwin Curley usefully distinguishes two aspects or levels of Bennett’s “field metaphysics”: first, an attempt to understand individual extended things as consequences of local diversity in the characteristics of a single extended substance; and second, an attempt to somehow reduce propositions whose logical subjects are regions of the extended substance to propositions about substance that do not refer to its regions. Spinoza is, I believe, committed by what he says about motion and rest and its role in individuation to the first of these projects. I am not convinced that he is committed by anything he says to the second of these two projects; at any rate, I am not concerned with it here.

8. In Epistle 32, Spinoza corrects Oldenburg's suggestion that he rejects Descartes's other laws of motion. He also states that "there is preserved in all together, that is, in the whole universe, the same ratio of motion to rest" (eadem ratione motus ad quietis; my translation), which would certainly be the case if the total quantity of motion and the total quantity of rest were conserved. Leibniz reports showing Spinoza, during their interview in the last year of Spinoza's life, the error of Descartes's principle of the conservation of total quantity of motion. (It is force as mass times acceleration that is conserved, not mass times velocity.) Guéroult shows that his interpretation of the 'fixed ratios of motion and rest' preserved by the individuals of the Ethics is generally incompatible with the Cartesian principle of the conservation of motion (Guéroult, Spinoza II, Appendix 8). I take this to be a reason to reject Guéroult's account.


10. Ibid., p. 40.


13. De Nagelate Schriften van B. D. S. (Amsterdam, 1677), published by Spinoza's friends. It is uncertain to what extent Spinoza reviewed the translation prior to his death.

14. The crucial premise in Spinoza's proof of monism is IP5, which states that there cannot be two or more substances of the same attribute. I discuss his argument for this claim in “Ethics IP5: Shared Attributes and the Grounds of Spinoza's Monism,” in Essays in Honor of Jonathan Bennett, ed. Mark Kulstad and Jan Cover (Indianapolis: Hackett, 1990), pp. 69–107. I argue there that Spinoza's unwillingness to allow substances to share attributes is in large part a consequence of his view that all metaphysical differences must be epistemologically conceivable, and that attribute-sharing would violate this requirement.


17. Bennett, *Spinoza’s Ethics*, pp. 33, 107, 321, respectively.

18. Guéroult, *Spinoza II*, Appendix 6, argues that the corpse is not an individual; however, Guéroult is guided by a more restrictive interpretation of ‘fixed ratios of motion and rest’.


20. IID7 states: “By singular things I understand things that are finite and have a determinate existence. And if a number of individuals so concur in one action that together they are all the cause of one effect, I consider them, all, to that extent, one singular thing.” The concept of a ‘singular thing’, unlike that of a ‘body’ or a ‘mind’, thus potentially applies across all attributes. The second sentence of the definition may also seem to suggest that there are extended singular things that are not individuals. For it seems that a number of individuals may concur in producing an effect without entering into any fixed pattern of motion and rest among themselves; and it is implausible to regard such collections of individuals as true individual things in their own right. Spinoza is better interpreted simply as engaging in a terminological maneuver. Thus, for example, he can say in Lemma 3 that each body is “determined to motion and rest by another singular thing,” when in fact the determination of the motion and rest of a given body is generally due to a very large number of different bodies that do not themselves compose any single individual thing.

21. Among commentators who have stressed at least some important relation of the Physical Digression to IIIP6 are Matheron and Lachterman.


23. For an account of the latter, see my “Truth, Method, and Correspondence in Spinoza and Leibniz,” *Studia Spinozana* 6 (1990), 13–43.

24. See Bennett, *Spinoza’s Ethics*, p. 250. Bennett argues that ratios of motion and rest cannot solve the problem of the emptiness of “self-preservation” as a criterion of individuality, because such ratios “concern diachronic counting of individuals, whereas we are asking about synchronic counting.” I take it that Spinoza would reply that we can distinguish individuals at a given moment only by taking account of how that momentary state of the universe contributes, under the laws of motion and rest, to the preservation of such fixed ratios.