



## **The Import of Hume's Theory of Time**

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## THE IMPORT OF HUME'S THEORY OF TIME

In this paper I examine the significance of Hume's theory of time for some of the more famous of the doctrines in the Treatise, and how it works as a basis for his peculiar brand of scepticism, a basis that is at least as important in this regard as his principle that all ideas are derived from some original impression.

To bring into relief some of the peculiarities of Hume's theory of time we may observe that it was not uncommon in the seventeenth and eighteenth centuries to distinguish between space and extension and between time and duration, to say, as does for example Leibniz, that "in some way extension is to space as duration is to time", and perhaps also to agree with him "that duration and extension are attributes of things, but time and space are taken to be something outside of things and serve to measure them."<sup>1</sup> Duration taken as an attribute of things or substantives connotes the permanence, or perseverance, or continuation of the existence of such substantives. Thus Descartes says, "the duration of each thing is a mode [he subsequently calls it an 'attribute'] under which we consider the thing in so far as it continues to exist" (French version) or "perseveres in existence" (Latin version).<sup>2</sup> Or Spinoza: "Duration is the attribute under which we conceive the existence of created things in so far as they persevere in their own actuality".<sup>3</sup> But though duration refers to things as persevering or continuing in existence, it applies equally, as Descartes indicates, to both changing and unchanging things.

In order to comprehend the duration of all things under the same measure we usually compare their duration with the duration of the greatest and most regular motions, which are those which create years and days, and these we call time.<sup>4</sup>

Spinoza's account of duration and time are much the same. Duration is the primary notion and time presupposes it. Going beyond Hume to Kant we find that in distinguishing

three modes of time, namely duration, succession and co-existence, Kant argues that succession presupposes duration and that all time determinations of change (or succession) presuppose substance as that which is permanent or continuant through change.

In Hume, however, we find no distinction between space and extension, nor between time and duration. These are merely two pairs of synonyms. In the case of space Hume seems to prefer on the whole to talk about extension, probably because extension lends itself more easily to discussion of divisibility. In the case of time, however, which he defines as succession, he is indeed aware of the view which we have just been considering, according to which duration is referred primarily to an object qua continuing or persevering or enduring, whether or not undergoing successive changes. This concept of duration, he says, *I take to be the common opinion of philosophers as well as of the vulgar.* (T37)<sup>5</sup> Duration in this common philosophical and vulgar sense is not a synonym of Humean time or succession, and it is for Hume, a "fiction", something falsely attributed to objects. Why is this so?

*'Tis evident, that time or duration [Hume is here taking the two terms as synonyms] consists of different parts... 'Tis also evident, that these parts are not co-existent: For that quality of the co-existence of parts belongs to extension, and is what distinguishes it from duration. Now as time is compos'd of parts, that are not co-existent; an unchangeable object, since it produces none but co-existent impressions, produces none that can give us the idea of time; and consequently that idea must be deriv'd from a succession of changeable objects, and time in its first appearance can never be sever'd from such a succession (T35, 36)*

Although Hume maintains that there is no idea which is not derived from some original impression, it would appear that this is not strictly so with the idea of time [or, for that matter with the idea of space]. Rather time is the manner or way in which impressions appear to the mind, namely that

of succeeding one another.

*Five notes play'd on a flute give us the impression and idea of time; tho' time be not a sixth impression, which presents itself to the hearing or any other of the senses. Nor is it a sixth impression, which the mind by reflection finds in itself (T36).*

All the mind can do is to take notice of the manner in which the different sounds make their appearance (T37), namely their succession.

*I know there are some who pretend, that the idea of duration is applicable in a proper sense to objects, which are perfectly unchangeable; and this I take to be the common opinion of philosophers as well as of the vulgar. But to be convinc'd of its falsehood we need but reflect on the foregoing conclusion, that the idea of duration is always deriv'd from a succession of changeable objects, and can never be convey'd to the mind by anything steadfast and unchangeable. For it inevitably follows from thence, that since the idea of duration cannot be deriv'd from such an object, it can never in any propriety or exactness be apply'd to it, nor can any thing unchangeable be ever said to have duration. Ideas always represent the objects or impressions, from which they are deriv'd, and can never without a fiction represent or be apply'd to any other. (T37, my emphasis)*

It is by a fiction that we apply the idea of duration to an unchangeable object.

It is, I believe, Hume's solution to the problem of the divisibility (finite or infinite) of space and time which results in the denial of reality to duration as continuance in time. Hume uses two standard arguments for the existence of indivisible components of space (or extension) and of time. (1) Nothing finite can be divided into an infinite number of parts, for the sum of an infinite number of parts is infinite. It follows that any finite extension must be composed of a finite number of indivisible points, and any finite time of a finite number of indivisible moments. (2) All pluralities derive their reality from the units of which they are composed. There can be a plurality

only where there are units which are not themselves pluralities, or further divisible. Space and time both have plurality of parts. What reality they have must then be devised from parts which have no parts, i.e. which are indivisible - points in the case of extension, moments in the case of time. (3) There is for time an additional argument. It is the essence of time that its parts succeed one another. None can be coexistent. If it were not possible in time to arrive at the end of division, and if each moment were not perfectly single and indivisible, there would be an infinite number of coexistent moments or parts of time, which contradicts the essential successiveness of time.

In general Hume is very dependent for his account of time upon its analogy with space. Hence it is important to look closely at the analogy. A point is indivisible by virtue of having no extension. Is a moment then indivisible by virtue of having no duration? No, if by having no duration is meant having no continuance for nothing except by a fiction has any continuance. Rather it is indivisible by virtue of having within it no successiveness. It is, for Hume, succession, not the duration of philosophers and the vulgar, which is the analogue of extension. This in turn results in a disanalogy of considerable significance for the problem of the composition of the continuum. Hume's extension, as we shall see, is a continuum - a continuum of colour or tangibility. Hume's time is not. It is a discrete series, and necessarily so, as we shall also see. Its parts are not measurable but only countable, like the five notes on the flute. Only fictitious duration is continuous and measurable. Let us suppose that the notation for the five notes indicates, in this order, two half notes, a quarter note, and two eighth notes (or to use the language which Hume might have used, two minims, one crotchet, and two quavers). As heard, each of the five notes is equally a perfect and indivisible moment in Hume's time theory for

none contains any succession within itself. Succession applies only to the notes together. It is by a fiction or falsehood that we say that the first two notes are each sustained for twice as long as the third will be and four times as long as each of the fourth and fifth notes will be. The measurable continuum of extension is real for Hume. The measurable continuum of duration is not. It is a fiction.

The successiveness with which Hume identifies time does not in itself, of course, imply discreteness or discontinuity. The law of continuity of Leibniz and Kant maintains that all change is continuous. But then both these philosophers would deny Hume's thesis that points are parts of extension and moments are parts of time. For them, as for Aristotle, they are limits, not parts. From their point of view it might be argued that if Hume's moments are incapable by addition of producing duration considered as a continuous magnitude, no more so should his points be able to yield the continuous magnitude of extension. There is, however, for Hume, a marked phenomenological difference between the two, namely that in extension the indivisible units are indiscernible, but in succession they are discernible and necessarily so. He argues that while it is true, and obvious, that two lines or two surfaces are equal if the number of points in each are equal, this arithmetical equality is a standard incapable of any application in practice

*for as the points, which enter into the composition of any line or surface, whether perceived by the sight or touch, are so minute and so confounded with each other, that 'tis utterly impossible for the mind to compute their number (T45).*

This is very close to Leibniz's account of extension as "a certain indefinable repetition of things in so far as they are similar to one another or indiscernible" as, for example, the extension or diffusion of whiteness in milk or that of hardness in the diamond,<sup>6</sup> in short Hume's colour and tangibility. The continuity of extension arises from indiscernibility. But for Hume indiscernibility can characterize

only what coexists. It cannot characterize the successive.

*Time or succession, tho' it consists likewise [i.e. like extension] of parts, never presents to us more than one at once...The parts of extension [because coexistent] being susceptible of an union to the senses...and...the appearance of one part excludes not another...On the other hand, [because of] the incompatibility of the parts of time in their real existence... every part must appear single and alone. (T429, my emphasis).*

Thus time unlike space is discontinuous and its parts (moments) are discrete.

The fictitious duration which we attribute to unchangeable objects has remarkable consequences for the remainder of Book I of the Treatise. Out of this fiction are generated in a logically ordered series the basic metaphysical categories in terms of which the mind thinks, and all of them are fictitious. There are two main types of fictions in the Treatise. The first is a particular kind of 'mistake', 'confusion', 'deception', or 'illusion', consisting in the misapplication of an idea derived from some original impression to something other than its proper object. *Ideas always represent the objects or impressions, from which they are deriv'd, and can never without a fiction represent or be apply'd to any other* (T37). The other kind of fiction is not derived from some original impression, nor is it a mistake, it is a pure invention of the imagination designed to resolve a contradiction - a contradiction to which the first type of fiction gives rise. This invented fiction now in turn gives rise to a new fiction of the kind consisting in a mistake or misapplied idea. Out of it is then generated a contradiction demanding resolution by the invention of a still further fiction and so on in an extraordinary alternating progression from the one kind of fiction to the other.

The first kind of fiction originates in certain dispositions and consequent actions of the mind. Hume lays down a general rule which governs these actions.

*Nothing is more apt to mistake one idea for another, than any relation betwixt them, which associates them together in the imagination, and makes it pass with facility from one to the other. Of all relations, that of resemblance is in this respect the most efficacious; and that because it not only causes an association of ideas, but also of dispositions, and makes us conceive the one idea by an act or operation of the mind, similar to that by which we conceive the other. This circumstance I have observ'd to be of great moment; and we may establish it for a general rule, that whatever ideas place the mind in the same disposition or in similar ones, are apt to be confounded. (T202,203)*

Acts of the mind have ideas as their objects. The act is described here as the conceiving of an idea. Hume goes on to refer to *the disposition of the mind in viewing any object*, or to *a fix(ing) our thought on any object*. (T203) It is worth recalling here that among the actions of the mind Hume includes belief. Belief as "a particular manner of forming an idea" Hume calls "an act of the mind" (97n, 629, 631). When Hume refers to the mind as "nothing but a bundle or collection of different perceptions" mental acts are not included in the bundle, for they have the members of the bundle under their view, as when, for example, the action of the mind makes the "smooth transition" or "slides along" the succession of related objects or perceptions which compose the bundle. And it is precisely because two mental acts can be "almost the same to the feeling" that the confusion of one idea for another will occur, thus producing a fiction. Hume's several descriptions in the Treatise of this "smooth transition" along the succession of related perceptions give these mental actions a temporal continuity which is forcibly denied to the perceptions themselves which are the objects of the actions; i.e. there is continuous action along a discrete series of perceptions.

The general rule according to which mental actions cause the confusion of one idea with another is first introduced into the Treatise at the point at which Hume

considers the idea of a vacuum. There he makes it clear that mental actions occur in the brain. The mind *dispatches the spirits into that region of the brain, in which the idea is plac'd; these spirits always excite the idea, when they run precisely into the proper traces, and rummage that cell, which belongs to the idea.* (T61) It is these actions of the mind in the brain which, when they feel the same to us, cause confusion, and produce that *fictitious distance* (T62) belonging to the notion of a vacuum or that *fictitious duration* (T65) which we attribute to *stedfast objects*.

The single unchangeable object to which we attribute the fictitious idea of duration now confronts us with a contradiction, for there will be two conflicting ways in which the enduring object can be considered. On the one hand we can consider two moments of this duration and the object which is at each of these different moments, and this will give us the idea of number. On the other hand, in following a succession of objects we are able to follow a succession of time, and then to imagine the time as continuing to change without any change taking place in the object. In this way we get the idea of unity. To reconcile unity and number, we form an *idea, which is a medium betwixt unity and number; or more properly speaking, is either of them, according to the view, in which we take it: And this idea we call that of identity* (T201).

Hume speaks of the "idea" of identity. It differs however from the "idea" of duration in that it is not the misapplication of an idea derived from some impression or object. A single object can convey only the idea of unity. A multiplicity of objects can convey only the idea of number. The idea of identity is a pure product of the imagination invented to mediate between unity and number.

The next fiction consequent upon the identity we attribute to an unchangeable object of which we have an uninterrupted view is the identity we attribute to a set of

resembling objects between whose appearances there may be long intervals. This new fiction originates in the resemblance between two mental acts; on the one hand the act of the mind in surveying an uninterrupted, unchanging object, *i.e.*, an identical object, and on the other the act of the mind in surveying a succession of resembling objects. The second mental act is so similar to the first that its object is confused with the object of the first, in other words it *confounds the succession with the identity or mistakes the one for the other* (T204).

But now the mind finds itself confronted with a contradiction, and once again it resolves the contradiction by a new invention. We ascribe a "perfect identity" to the interrupted images. But the interruption is contrary to the identity. *The perplexity arising from this contradiction produces a propensity to unite these broken appearances by the fiction of a continu'd existence...* (T205).

Two further steps are required before we arrive at the next fiction, that of substance. Though a body has several distinct sensible qualities *'tis certain we commonly regard the compound, which they form, as ONE thing, and as continuing the SAME under very considerable alteration* (T219). With sameness we are once again with the fiction of identity. We have had the identity attributed to an unchanging object through a fictitious duration. Then the identity attributed to similar objects whose appearances are interrupted. And now the identity attributed to *the changeable succession of connected qualities*. (T220). Once again Hume appeals to the resemblance of mental acts, and the resulting confusion to which it gives rise.

*'Tis evident, as the ideas of several distinct successive qualities of objects are united together by a very close relation, the mind, in looking along the succession, must be carry'd from one part of it to another by an easy transition, and will no more perceive the change, than if it contemplated the same unchangeable object....The smooth and uninterrupted progress of the thought, being*

*alike in both cases, readily deceives the mind, and makes us ascribe an identity to the changeable succession of connected qualities (T220).*

But having achieved this fiction the mind finds itself up against a contradiction which it will seek to resolve by a still further fiction. For while the mind easily attributes identity where the changes are gradual, if the succession is interrupted and the change is considerable the identity seems to be destroyed. *In order to reconcile the contradiction between identity and diversity, the imagination is apt to feign something unknown and invisible, which it supposes to continue the same under all these variations; and this unintelligible something it calls a substance...* (T220). Hume makes use of the similarity of mental acts to account also for the simplicity of substances whereby they are called one thing in spite of the diversity they contain. Again the mind finds itself up against a contradiction when it stops to consider the diversity and separability of those qualities. To reconcile the unity with the diversity the imagination "feigns" an unknown something or substance as *a principle of union or cohesion among these qualities, and as what may give the compound object a title to be call'd one thing...* (T221).

The account of substance in Section III of Part IV, entitled *Of the Ancient Philosophy* is about material substance. Section VI entitled *Of Personal Identity* is about the notion of a soul, and self, and substance (T254). Here we find the same two fictitious components which are found in material substance, namely simplicity and identity. Simplicity is accounted for in the same way as in Section III by substance as substratum or subject of inhesion - we *feign a principle of union as the support of this simplicity* (T263). Here we have merely a reiteration of the account in Section III. The account of identity is enormously expanded from the earlier account. Hume begins by repeating the earlier account of the confusion arising from

the similarity of two actions of the mind, of the contradiction which then ensues and its resolution by feigning some new and unintelligible principle, self, soul, or substance. What Hume now proceeds to add to the earlier account is an examination of what kinds of relation in *the succession of related objects* (T258) facilitate the action of the mind and render its passage smooth. He considers various things to which we attribute identity through change, of which the most important for treating of the mind are artifacts like ships, living organisms, and republics or commonwealths. There is, however, an anomaly in Hume's crucial examples, for in none of them does the mind *feign something unknown and invisible, which it supposes to continue the same under all these variations* (T220). On the contrary what remains the same in these examples is something observable and identifiable. In the case of the ship what gives it identity through change is *a reference of the parts to each other, and a combination to some common end or purpose*. Parts can be changed and every plank be replaced in the passage of time, but *the common end, in which the parts conspire, is the same under all variations* (T257). In the case of animals and vegetables Hume regards them as teleological systems in which we find *a sympathy of parts to their common end and the reciprocal relation of cause and effect in all their actions and operations* (T257). Again, as with the ship, whatever change the organism undergoes, that which remains the same and gives the object its identity is not "something unknowable and invisible" but perfectly observable by the anatomist. Republics or commonwealths were also regarded by Hume as teleological systems (TA89-92) with the kind of identity such systems have. He says, *The identity, which we ascribe to the mind of man, is only a fictitious one, and of a like kind with that which we ascribe to vegetables and animal bodies* (T259). Then for the second comparison Hume says,

*We may observe, that the true idea of the human mind, is to consider it as a system of different perceptions or different existences, which are link'd together by the relation of cause and effect.... In this respect, I cannot compare the soul more properly to any thing than to a republic or commonwealth... (T261).*

Thus in his treatment of personal identity Hume is not talking about the identity of substances at all, but about the identity of systems. But if the identity of substances is a fiction there is nothing comparable to it in the identity of systems which can be called a fiction. The conclusion of the section *Of Personal Identity*, and even more clearly the Appendix, show that what Hume has in mind when speaking of the soul as substance is not the factor of identity in the soul, but the factor of simplicity, i.e. substance qua substratum or subject of inhesion. This is the respect in which the conception of the soul can be included among his series of fictions. The question remains, however, whether the conception of the soul as the simple subject of inhesion is compatible with the conception of it as a system of causally interrelated parts.

Finally there is the idea of necessary connection Hume says that the notion of accident is the necessary consequence of the notion of substance as the subject of inhesion. It is the notion of a quality as inhering in a substance and as fictitious as the latter. So far as concerning the vulgar beliefs in which we all share, necessary connection is treated by Hume as a quality inhering in the cause. Efficacy, agency, power, force, energy, necessity, connexion, and productive quality, are all nearly synonymous (T157). He refers to *the efficacy of causes, or that quality which makes them be follow'd by their effects* (T156) *cause or productive quality* (T157); *power or connexion* (T163). When Hume tracks down the impression from which the idea of necessity is derived, he claims to have found the origin of our idea of power, force or productive quality.

The original turns out to be an impression of reflection, but "the mind has a great propensity to spread itself on external objects and to conjoin with them any internal impressions which they occasion". An example of this propensity which Hume cites is the location of tastes and smells in external objects - we "feign" their location in the objects. The expression "feign" would thus be equally appropriate for the locating of necessary connection, power, agency, productive quality in the external object. The idea of it is, however, not a fiction of the inventive imagination, but a fiction of the kind which has its origin in an original impression and which is then misapplied.

*Thus upon the whole we may infer, that when we talk of any being, ... as endow'd with a power or force..., when we speak of a necessary connexion betwixt objects, and suppose, that this connexion depends upon an efficacy or energy, with which any of those objects are endow'd, in all these expressions, so apply'd, we really have no distinct meaning... But... 'tis more probable, that these expressions do here lose their true meaning by being wrong apply'd, than that they never have any meaning... (T162).*

Thus through a lengthy series of fictions we arrive at power as a quality in a substance which endures as the same substance, though undergoing change.

When we denude the world of all its fictions we are left only with perceptions. They are *whatever can be present to the mind* (T647). They must necessarily appear in every particular what they are, and be what they appear (T190). They are "objects" - self-subsistent and as such answering perfectly to the classic definition of a substance as something, that can exist by itself (T244). But they are not the bearers of qualities and accordingly do not undergo any qualitative changes. There is, of course, constant change in the world of these objects, for as perceptions the objects *succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement* (T252). But change is never a change in objects, but only of objects,

one succeeding another. Allow, however, that outside the world, transcending all the objects in it, there are mental acts, then a fictitious duration will be attributed to objects and by a progressive compounding of fictions mental actions will give the world the ontological structure which it has for the vulgar belief we all share. It is a structure which has its entire foundation in duration.

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1. "Conversation of Philarite and Ariste". 1711 Leibniz: Philosophical Papers and Letters. ed. L. E. Loemker, Dordrecht 1969, 621-2.
2. The Principles of Philosophy I, 55.
3. Cogitata Metaphysica, I, 4.
4. Op.cit., I, 57.
5. Bracketed numbers refer to the pages of A Treatise of Human Nature, ed. L. A. Selby-Bigge, Oxford 1978.
6. Op. cit. 621.