



### **'Hume on Space and Geometry': One Reservation**

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## 'HUME ON SPACE AND GEOMETRY':

## ONE RESERVATION

In so far as Rosemary Newman<sup>1</sup> disagrees with anything said in my 'Infinite Divisibility in Hume's Treatise',<sup>2</sup> - which seems, happily, not to be so very far - I hasten to report that I am now persuaded. Thus my suggested reason for refusing to allow that an impression of blackness could give rise to the idea of extension was not, after all, Hume's.<sup>3</sup> And no doubt his conviction *that whatever is capable of being divided in infinitum, must consist of an infinite number of parts* (T26) was in part sustained by "the atomistic type of phenomenalism advanced in the first Part of Book I of the Treatise".<sup>4</sup> For to any objection that this nowadays so plainly unacceptable conviction had been accepted as obviously correct by such formidable predecessors as Berkeley and Hobbes, it could be replied that they too had their commitments to their own brands of atomism.

In her further comments upon "Hume's phenomenalist atomism" Newman notices, as "a very curious claim",<sup>5</sup> his statement that when - like the true philosopher he was! - he looked at a table: *My senses convey to me only the impressions of colour'd points, dispos'd in a certain manner* (T34). So I was sorry that she seems to have missed the bold priority claim which, referring to the same passage, I made on Hume's behalf in that article: "Anyone familiar with the theories and the paintings of Seurat might also mischievously characterize the Hume of this Section as 'the Father of Pointillisme'!"<sup>6</sup>

But at the end of her paper, although I think only at the end, Newman begins to go very wrong indeed. She says: "Turning to the Enquiry there is little to indicate any shift in Hume's opinion of geometry as a body of synthetic but necessary knowledge." After remarking that Hume does not repeat "any of his earlier arguments" against infinite divisibility "nor those in support of a system of mathematical

points", she notices that, in the paragraph characterizing propositions stating only the relations of ideas, geometry "is classed as a science alongside arithmetic and algebra (E25)".<sup>7</sup>

Next she quotes the end of that paragraph, and at once comments: "Flew thinks that in the Enquiry Hume is to be seen as 'restoring pure geometry to its place alongside the other two elements in the trinity', ..." <sup>8</sup> Newman does not, so far as I can see, offer any reason for dismissing this suggestion - apart, that is, from asserting that the paragraph from which she has just quoted "can be interpreted so as to remove any apparent inconsistency with the claim that the impossibility of conceiving the negation of a geometrical axiom has the same ground in the Enquiry as in the Treatise, namely, the invariant character of sensible space." She just tells us that "Where geometry is concerned I follow Atkinson's opinion in finding no reason to suppose that Hume abandoned the Treatise stand."<sup>9</sup>

This I find, to say the least, surprising since the very sentence of Hume's Philosophy of Belief from which she quoted my contrary opinion does provide what I still consider to be a quite decisive reason. Since she does not discuss either my reason or the Hume passage to which I was referring, I can here do nothing else or better than repeat myself; adding only and by the way that Professor Atkinson's paper 'Hume on Mathematics'<sup>10</sup> was published a year before that book:-

Besides restoring pure geometry to its place alongside the other two elements of the trinity, the Inquiry also sketches an account of applied mathematics. This is something the earlier book did not provide at all. *'Every part of mixed mathematics proceeds on the supposition that certain laws are established by nature in her operations, and abstract reasonings are employed, either to assist experience in the discovery of these laws or to determine their influence in particular instances ... Thus it is a law of motion, discovered by experience, that the moment or force of any body in motion is in*

the compound ratio or proportion of its solid contents and its velocity, and, consequently, that a small force may remove the greatest obstacle or raise the greatest weight if by any contrivance or machinery we can increase the velocity of that force so as to make it an overmatch for its antagonist. Geometry assists us in the application of this law by giving us the just dimensions of all the parts and figures which can enter into any species of machine; ...<sup>11</sup> (The word machine is of course here being used in a sense considerably wider than that now popularly current: species of machine might be rendered as mechanical relationship; where the adjective mechanical derives from the noun mechanics, used in the sense in which scientists still speak of classical mechanics.)

Nevertheless, for all the assistance geometry may give, *still the discovery of the law itself is owing merely to experience, and all the abstract reasonings in the world could never lead us one step towards the knowledge of it.* This is the situation epitomized in Einstein's famous epigram: 'As far as the laws of mathematics refer to reality, they are not certain, and as far as they are certain they do not refer to reality.' (Certain here means 'logically certain' or 'necessarily true'.)<sup>12</sup>

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1. 'Hume on Space and Geometry' Hume Studies VI 1 (April 1981), 1-31.
2. She cites the earlier version, Rivista Critica di Storia della Filosofia (1967). I prefer the revised version, D. W. Livingston and J. T. King (eds.) Hume: A Re-evaluation (New York, Fordham UP, 1976), 257-69.
3. Newman, op.cit., 15-16.
4. Ibid., p.8.
5. Ibid., p.16.
6. Flew, op.cit., p.265.

7. Newman, op.cit., p.27.
8. Ibid., p.28: the texts for Newman's Notes 14 and 15, by the way, appear to have swapped places.
9. Ibid., p.28.
10. R. F. Atkinson, 'Hume on Mathematics' Philosophical Quarterly, 10 (1960), 127-39.
11. E31.
12. Antony Flew, Hume's Philosophy of Belief (London: Routledge and Kegan Paul, 1961), 62-3.