

Episode One Hundred Nineteen - Letter to Herodotus 08 - More On Perception Through The Atoms

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Welcome to Episode One Hundred Nineteen of Lucretius Today.

This is a podcast dedicated to the poet Lucretius, who wrote "On The Nature of Things," the only complete presentation of Epicurean philosophy left to us from the ancient world.

I am your host Cassius, and together with our panelists from the EpicureanFriends.com forum, we'll walk you through the ancient Epicurean texts, and we'll discuss how Epicurean philosophy can apply to you today. We encourage you to study Epicurus for yourself, and we suggest the best place to start is the book "Epicurus and His Philosophy" by Canadian professor Norman DeWitt.

If you find the Epicurean worldview attractive, we invite you to join us in the study of Epicurus at EpicureanFriends.com, where you will find a discussion thread for each of our podcast episodes and many other topics.

Today we continue our review of [Epicurus' letter to Herodotus](#), and we move further into fundamental physics.

Now let's join Martin reading today's text:

Bailey

Moreover, hearing, too, results when a current is carried off from the object speaking or sounding or making a noise, or causing in any other way a sensation of hearing. Now this current is split up into particles, each like the whole, which at the same time preserve a correspondence of qualities with one another and a unity of character which stretches right back to the object which emitted the sound: this unity it is which in most cases produces comprehension in the recipient, or, if not, merely makes manifest the presence of the external object.

[53] For without the transference from the object of some correspondence of qualities, comprehension of this nature could not result. We must not then suppose that the actual air is molded into shape by the voice which is emitted or by other similar sounds — for it will be very far from being so acted upon by it — but that the blow which takes place inside us, when we emit our voice, causes at once a squeezing out of certain particles, which produce a stream of breath, of such a character as to afford us the sensation of hearing.

Furthermore, we must suppose that smell too, just like hearing, could never bring about any sensation, unless there were certain particles carried off from the object of suitable size to stir this sense-organ, some of them in a manner disorderly and alien to it, others in a regular manner and akin in nature.

[54] Moreover, we must suppose that the atoms do not possess any of the qualities belonging to perceptible things, except shape, weight, and size, and all that necessarily goes with shape. For every quality changes; but the atoms do not change at all, since there must needs be something which remains solid and indissoluble at the dissolution of compounds, which can cause changes; not changes into the nonexistent or from the non-existent, but changes effected by the shifting of position of some particles, and by the addition or departure of others. For this reason it is essential that the bodies which shift their position should be imperishable and should not possess the nature of what changes, but parts and configuration of their own. For thus much must needs remain constant.

[55] For even in things perceptible to us which change their shape by the withdrawal of matter it is seen that shape remains to them, whereas the qualities do not remain in the changing object, in the way in which shape is left behind, but are lost from the entire body. Now these particles which are left behind are sufficient to cause the differences in compound bodies, since it is essential that some things should be left behind and not be destroyed into the non-existent.

Moreover, we must not either suppose that every size exists among the atoms, in order that the evidence of phenomena may not contradict us, but we must suppose that there are some variations of size. For if this be the case, we can give a better account of what occurs in our feelings and sensations.

[56] But the existence of atoms of every size is not required to explain the differences of qualities in things, and at the same time some atoms would be bound to come within our ken and be visible; but this is never seen to be the case, nor is it possible to imagine how an atom could become visible.

Besides this we must not suppose that in a limited body there can be infinite parts or parts of every degree of smallness. Therefore, we must not only do away with division into smaller and smaller parts to infinity, in order that we may not make all things weak, and so in the composition of aggregate bodies be compelled to crush and squander the things that exist into the non-existent, but we must not either suppose that in limited bodies there is a possibility of continuing to infinity in passing even to smaller and smaller parts.

HICKS

"Again, hearing takes place when a current passes from the object, whether person or thing, which emits voice or sound or noise, or produces the sensation of hearing in any way whatever. This current is broken up into homogeneous particles, which at the same time preserve a certain mutual connexion and a distinctive unity extending to the object which emitted them,

and thus, for the most part, cause the perception in that case or, if not, merely indicate the presence of the external object.

[53] For without the transmission from the object of a certain interconnexion of the parts no such sensation could arise. Therefore we must not suppose that the air itself is moulded into shape by the voice emitted or something similar; for it is very far from being the case that the air is acted upon by it in this way. The blow which is struck in us when we utter a sound causes such a displacement of the particles as serves to produce a current resembling breath, and this displacement gives rise to the sensation of hearing. "Again, we must believe that smelling, like hearing, would produce no sensation, were there not particles conveyed from the object which are of the proper sort for exciting the organ of smelling, some of one sort, some of another, some exciting it confusedly and strangely, others quietly and agreeably.

[54] "Moreover, we must hold that the atoms in fact possess none of the qualities belonging to things which come under our observation, except shape, weight, and size, and the properties necessarily conjoined with shape. For every quality changes, but the atoms do not change, since, when the composite bodies are dissolved, there must needs be a permanent something, solid and indissoluble, left behind, which makes change possible: not changes into or from the non-existent, but often through differences of arrangement, and sometimes through additions and subtractions of the atoms. Hence these somethings capable of being diversely arranged must be indestructible, exempt from change, but possessed each of its own distinctive mass and configuration. This must remain.

[55] "For in the case of changes of configuration within our experience the figure is supposed to be inherent when other qualities are stripped off, but the qualities are not supposed, like the shape which is left behind, to inhere in the subject of change, but to vanish altogether from the body. Thus, then, what is left behind is sufficient to account for the differences in composite bodies, since something at least must necessarily be left remaining and be immune from annihilation. "Again, you should not suppose that the atoms have any and every size, lest you be contradicted by facts; but differences of size must be admitted; for this addition renders the facts of feeling and sensation easier of explanation.

[56] But to attribute any and every magnitude to the atoms does not help to explain the differences of quality in things; moreover, in that case atoms large enough to be seen ought to have reached us, which is never observed to occur; nor can we conceive how its occurrence should be possible, i. e. that an atom should become visible. "Besides, you must not suppose that there are parts unlimited in number, be they ever so small, in any finite body. Hence not only must we reject as impossible subdivision ad infinitum into smaller and smaller parts, lest we make all things too weak and, in our conceptions of the aggregates, be driven to pulverize the things that exist, i. e. the atoms, and annihilate them; but in dealing with finite things we must also reject as impossible the progression ad infinitum by less and less increments.

YONGE

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