

Episode Thirty - Only A Limited Number of Combinations of Atoms Is Possible

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Welcome to Episode Thirty of Lucretius Today.

I am your host Cassius, and together with my panelists from the EpicureanFriends.com forum, we'll walk you through the six books of Lucretius' poem, and discuss how Epicurean philosophy can apply to you today. Be aware that none of us are professional philosophers, and everyone here is a self-taught Epicurean. 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.

Before we start, here are three ground rules.

First: Our aim is to bring you an accurate presentation of [classical Epicurean philosophy](#) as the ancient Epicureans understood it, which may or may not agree with what you here about Epicurus at other places today.

Second: We aren't talking about Lucretius with the goal of promoting any modern political perspective. Epicurus must be understood on his own, and not in terms of competitive schools which may seem similar to Epicurus, but are fundamentally different and incompatible, such as Stoicism, Humanism, Buddhism, Taoism, Atheism, and Marxism.

Third: The essential base of Epicurean philosophy is a fundamental view of the nature of the universe. When you read the words of Lucretius you will find that Epicurus did not teach the pursuit of virtue or of luxury or of simple living. or science, as ends in themselves, but rather the pursuit of pleasure. From this perspective it is **feeling** which is the guide to life, and not supernatural gods, idealism, or virtue ethics. And as important as anything else, Epicurus taught that there is no life after death, and that any happiness we will ever have must come in THIS life, which is why it is so important not to waste time in confusion.

Now let's join the discussion with today's text:

Latin text location: Approximately [lines 661 - 729](#)

Munro Summary: [Notes on the text](#)

661—699: in this way sheep horses and cattle, eating the same grass and drinking from the same river, all keep their distinctive differences; thus grass and each river must contain most different elements: nay the parts of the same animal are quite different; and are formed therefore of different elements: then too fuel must contain elements of fire and flame and ash; then many things have divers properties, colour flavour and smell; and these have all different elements as they enter things in different ways; things therefore must be of mixed seed: again as the same letters are common to different words, so the same elements may be common to most different things, to men and corn and trees.

700—729: but all elements cannot unite in all ways: else monsters of all kinds would arise: every creature has its fixed seeds, its fixed mother; and thus is kept within its limits; and of the elements it takes as food some only remain, others are rejected as unsuitable: and so it is with inanimate as well as animate things; they have each elements different or differently combined; and the modes of action of these elements differ, so that not only living bodies, but all nature, earth sea and heaven, are kept distinct. 700 foll. this question is more fully discussed v 837—

Daniel Browne:

But to return, we see the woolly sheep, the warlike breed of horses, and horned bulls, living under the same covert of the sky, grazing together in the same field, and quenching their thirst in the same stream of water; yet they are each of a different species, and retain the nature of their sires, and every kind imitates the dispositions of the race from which they came, so different is the nature of the seeds in every herb, so various are the principles of the water in every stream. Now though blood, bones, veins, heat, moisture, bowels, nerves, go to the formation of every animal, yet of what variety of figures, widely different in themselves, do their seeds consist?

And then all bodies that are combustible, and burnt by fire, if they agree on nothing else, yet discharge from themselves such parts, by which they spread about their flame and light; from whence they raise sparkles, and scatter their embers all abroad. So if you examine other things by the same rule, you will find seeds of different kind lie concealed in all bodies within, and show themselves of a different figure.

Lastly, you observe many things that emit both smell and taste, especially those victims you offer when your mind is religiously moved for something you have unjustly acquired. These sensations, therefore, must be raised by seeds of different figure; for smell pierces through pores where taste can find no passage. The juice likewise, and the taste of things, affect the sense by proper organs, to convince that their seeds vary in their figure. Principles therefore of various shape make up every particular mass, and things in general are composed of mingled seeds; for, in these verses of mine, you may all along observe that many letters are common to many words, and yet you must confess, that some verses and some words consist of very different letters, not because the number of letters are few, or no two words are formed of the same letters, but because every verse and every word is composed of letters altogether different. So, though the same principles are common to many things, yet the things may remain very different among themselves; and it may properly enough be said that men, and fruits, and pleasant trees are made up of different seeds.

Yet we are not to suppose that all seeds of whatever figure do mutually unite to the production of beings, for then you would observe monsters springing up every day, creatures half man, half horse, the lofty boughs of trees growing out of a living body, and the limbs of land animals joined to the bodies of fish, and nature forming every where out of the earth (the mother of all things) Chimaeras from their dreadful mouths breathing out flames; but 'tis plain, nothing of this happens, since we see all things are formed from certain seeds, and regular principles, and preserve their kind as they grow up and increase.

Nor indeed can it, by the fixed rules of reason, be otherwise; for, out of the several sorts of food, the particles of that which is proper to every animal descend into the limbs, and there united, produce the motions suitable to that animal; but, on the contrary, those particles of food that are destructive, some of them, we find, nature throws off through open passages, others are, insensibly to us, forced out of the body through the pores, such as would admit of no Union with others, nor agree to promote the vital motions and purposes of life.

But lest you should think that living creatures only are bound by these laws, the same reason holds with regard to all other beings; for as all bodies are in their nature different in themselves, so it is necessary that each should consist of principles of a different figure, not but that many seeds are the same in shape, but they do not all agree in form perfectly alike. Since then the seeds differ, it is necessary that their intervals, their courses, connections, weights, strokes, concussions, and motions, should differ likewise; Properties, that not only make a distinction between animals, but divide the Earth and the Sea, and preserve the heavens separate from the earth, and secure all things from being confusedly mingled together.

Munro:

And so the woolly flocks and the martial breed of horses and homed herds, though often cropping the grass from one field beneath the same canopy of heaven and slaking their thirst from one stream of water, yet have all their life a dissimilar appearance and retain the nature of their parents and severally imitate their ways each after its kind: so great is the diversity of matter in any kind of herbage, so great in every river. And hence, too, any one you please out of the whole number of living creatures is made up of bones, blood, vein, heat, moisture, flesh, sinews; and these things again differ widely from one another and are composed of first-beginnings of unlike shape.

Furthermore whatever things are set on fire and burned, store up in their body, if nothing else, at least those particles, out of which they may radiate fire and send out light and make sparks fly and scatter embers all about.

If you will go over all other things by a like process of reasoning, you will thus find that they conceal in their body the seeds of many things and contain elements of various shapes. Again you see many things to which are given at once both color and taste together with smell; especially those many offerings [which are burned on the altars].

These must therefore be made up of elements of different shapes; for smell enters in where color passes not into the frame, color too in one way, taste in another makes its entrance into the senses; so that you know they differ in the shapes of their first elements. Therefore unlike forms unite into one mass and things are made up of a mixture of seed. Throughout moreover these very verses of ours you see many elements common to many words, though yet you must admit that the verses and words one with another are different and composed of different elements; not that but few letters which are in common run through them or that no two words or verses one with another are made up entirely of the same, but because as a rule they do not all resemble one the other. Thus also though in other things there are many first-beginnings common to many things, yet they can make up one with the other a quite dissimilar whole; so that men and corn and joyous trees may fairly be said to consist of different elements.

And yet we are not to suppose that all things can be joined together in all ways; for then you would see prodigies produced on all hands, forms springing up half man half beast and sometimes tall boughs sprouting from the living body, and many limbs of land-creatures joined with those of sea-animals, nature too throughout the all-bearing lands feeding chimeras which breathed flames from noisome mouth. It is plain however that nothing of the sort is done, since we see that all things produced from fixed seeds and a fixed mother can in growing preserve the marks of their kind. This you are to know must take place after a fixed law.

For the particles suitable for each thing from all kinds of food when inside the body pass into the frame and joining on produce the appropriate motions; but on the other hand we see nature throw out on the earth those that are alien, and many things with their unseen bodies fly out of the body impelled by blows: those I mean which have not been able to join on to any part nor when inside to feel in unison with and adopt the vital motions.

But lest you haply suppose that living things alone are bound by these conditions, such a law keeps all things within their limits. For even as things begotten are in their whole nature all unlike one the other, thus each must consist of first-beginnings of unlike shape; not that a scanty number are possessed of a like form, but because as a rule they do not all resemble one the other. Again since the seeds differ, there must be a difference in the spaces between, the passages, the connections, the weights, the blows, the clashings, the motions; all which not only disjoin living bodies, but hold apart the lands and the whole sea, and keep all heaven away from the earth.

BAILEY:

And so often fleecy flocks and he warrior brood of horses and horned herds, cropping the grass from one field beneath the same canopy of heaven, and slaking their thirst from one stream of water, yet live their life with different aspect, and keep the nature of their parents and imitate their ways each after his own kind. So great is the difference of matter in any kind of grass you will, so great in every stream. Moreover, any one living creature of them all is made of bones, blood, veins, heat, moisture, flesh and sinews: and they as well are far different, formed as they

are with first-beginnings of unlike shape.

Then once again, all things that are set ablaze and burnt up by fire, store in their body, if nothing else, yet at least those particles, from which they may be able to toss fire abroad and shoot out light, and make sparks fly, and scatter cinders far and wide. Traversing all other things with the like reasoning of your mind, you will find then that they hide in their body the seeds of many things and contain diverse shapes. Again, you see many things to which both colour and taste are given together with smell.

First of all, most of the offerings [burnt on the altars of the gods]: these then must needs be made of diverse shapes; for the burning smell pierces, where the hue passes not into the limbs, even so the hue in one way, the taste in another, finds its way into our senses; so that you may know that they differ in the shapes of their first-bodies. So different forms come together into one mass and things are made with mingled seeds. Nay, more, everywhere in these very verses of mine you see many letters common to many words, and yet you must needs grant that verses and words are formed of different letters, one from another; not that but a few letters run through them in common, or that no two of them are made of letters all the same, but that they are not all alike the same one with another. So in other things likewise since there are first-beginnings common to many things, yet they can exist with sums different from one another: so that the human race and corn and glad trees are rightly said to be created of different particles.

And yet we must not think that all particles can be linked together in all ways, for you would see monsters created everywhere, forms coming to being half man, half beast, and sometimes tall branches growing out from a living body, and many limbs of land-beasts linked with beasts of the sea, and nature too throughout the lands, that are the parents of all things, feeding Chimaeras breathing flame from their noisome mouths. But it is clear to see that none of these things comes to be, since we see that all things are born of fixed seeds and a fixed parent, and can, as they grow, preserve their kind. You may be sure that that must needs come to pass by a fixed law.

For its own proper particles separate from every kind of food and pass within into the limbs of everything, and are there linked on and bring about the suitable movements. But, on the other hand, we see nature cast out alien matter on to the ground, and many things with bodies unseen flee from the body, driven by blows, which could not be linked to any part nor within feel the lively motions in harmony with the body and imitate them. But lest by chance you should think that living things alone are bound by these laws, the same condition sets a limit to all things. For even as all things begotten are in their whole nature unlike one to the other, so it must needs be that each is made of first-beginnings of a different shape; not that but a few are endowed with a like form, but that they are not all alike the same one with another. Moreover, since the seeds are different, there must needs be a difference in their spaces, passages, fastenings, weights, blows, meetings, movements, which not only sunder living things, but part earth and the whole sea, and hold all the sky away from the earth.