

## To Be and Not to Be

We ordinarily think of the birth of a living organism as the coming into being of something that did not exist before. And we often refer to the death of a person as his or her passing away.

In Aristotle's thought about the changes that occur in the world of nature and the changes that human beings bring about by their effort, the special kind of change that he calls coming to be and passing away is distinguished from all other kinds of change, such as change of place, alteration in quality, and increase or decrease in quantity.

This special kind of change in nature is more difficult to understand than other kinds of change. Why? To find out, let us begin with what is easier to understand—the production or destruction of things by human beings.

When people move things from one place to another, when they alter or enlarge them, the individual thing that they move,

alter, or enlarge remains the selfsame thing. It changes only with respect to its attributes—its place, its color, its size. It not only remains the same kind of thing that it was before it changed; after it has been changed, it also persists as this one, unique, individual thing.

The enduring sameness or permanence of the individual thing that undergoes these changes is clear to us from the fact that its identity can be named in the same way before and after the change occurs: *this* ball, *that* chair. It is not another ball or another chair, but this one or that one.

When someone takes raw materials, such as pieces of wood, and transforms those raw materials into a chair, an artificial thing—something that did not exist before—comes into existence. What before were several pieces of wood have now become this particular chair. Pieces of wood becoming a chair is certainly not the same as this green chair becoming red. The reason is that when the chair has come into being, the several separate pieces of wood no longer remain, at least not as several separate pieces of wood, though this chair remains precisely this chair when it changes in color.

Before we go from artificial production to natural generation (which is just another name for the process of coming to be), it will be helpful to us if we look a little more closely at what is happening in the easier-to-understand process of artificial production. The help will come from getting some grasp of the meaning of four words that were used in the preceding chapter. They are “matter,” “form,” “potentiality,” and “actuality.” Though what they mean can be understood in the light of common experience and in common-sense terms, the words themselves are not words we use frequently in everyday speech.

Pieces of wood that are not a chair become pieces of wood that are a chair. When the pieces of wood are not a chair, their

not being a chair is a lack of chairness on their part. They lack—they are deprived of—the form of a chair. Let's use the word "privation" for this lack of a certain form.

There is more in these pieces of wood than the privation of chairness. If that was all there was to it, these pieces of wood could never be made into a chair. In addition to lacking chairness, these pieces of wood must also have the capacity to acquire chairness. Their capacity is inseparably connected with their privation, for if these pieces of wood did not lack the form of a chair, they would not have the capacity for acquiring that form, since not lacking it, they would already have it. Only when certain materials, such as pieces of wood, lack a certain form can they have the capacity for acquiring it.

Let us call that capacity a potentiality of the materials in question. Another word for *potentiality* is "can be." It makes a great deal of difference whether you say that something *is* a chair or *can be* a chair. These pieces of wood *are not* a chair, but they *can be* a chair. As I said a moment ago, if they were a chair, they could not become a chair.

However, it is not true to say that when certain materials lack a certain form, they always have the potentiality for acquiring it. For example, water and air lack the form of a chair, but unlike wood, water and air are materials that do not have the potentiality for acquiring the form of a chair. Although the potentiality for acquiring a certain form is never present in the materials unless that form is absent, the mere absence of the form—the lack or privation of it—does not necessarily mean that the materials have the potentiality for acquiring it. Men can make chairs out of wood, but not out of air or water.

When the pieces of wood that lack the form of a chair and also have the potentiality for acquiring that form take on that form as a result of a carpenter's skill and effort, we say that the

pieces of wood that were potentially a chair have now actually become a chair. Throughout the whole process of becoming, until the very moment when the chair is finally finished, the pieces of wood, undergoing transformation, were still only potentially a chair. Not until their transformation has been completed do they actually have the form of a chair.

When the pieces of wood are actually a chair, their potentiality for becoming a chair has been *actualized*; and so, of course, it no longer remains as a potentiality. The form the pieces of wood have acquired is the actuality that removes the potentiality that accompanied the lack of that form in the wood but did not accompany the lack of it in water or air.

We can now see how these four important words—matter, form, potentiality, and actuality—are related. Matter may have or lack a certain form. Lacking it, matter may also have the capacity for acquiring it, which is its potentiality for having that form. But it does not always have such a potentiality when it lacks a certain form, as we saw in the case of water and air as compared with wood. When it acquires the form for which it has a potentiality, that potentiality has been actualized. Having the acquired form has transformed the matter from being a potential chair into being an actual chair.

I have been using the words “matter” and “materials” interchangeably. But when we are referring to wood, on the one hand, and water, on the other, we are speaking of different kinds of matter. Wood is not just matter; it is a certain kind of matter—matter having the form of wood, which is different from matter having the form of water.

One kind of matter, wood, provides human beings with materials out of which they can make chairs; another kind, water, does not. The form the matter has, which makes it a certain kind of matter (wood), also gives it a certain potentiality (for



becoming a chair). Matter in the form of water does not have that potentiality.

When we understand this simple point, a simple step of reasoning enables us to grasp another important point.

Wood can become a chair, but it cannot become an electric light bulb; water can become a fountain, but it cannot become a chair.

Matter having a certain form has a limited potentiality for acquiring other forms. This is true of every kind of matter, all the different kinds of materials that people can work on to produce things—chairs, electric light bulbs, and fountains.

Now suppose there was matter totally deprived of form—utterly formless matter. It would not actually be any kind of matter. But it would also be potentially every kind of matter; since, lacking all forms, it would have the capacity to acquire any form. It would have an unlimited potentiality for forms.

You would be quite right if, thinking about this, you were to say: "Hold on, matter without any form might have an unlimited potentiality, an unlimited capacity, for acquiring forms, but lacking all forms, it would be actually nothing. What is actually nothing does not exist. Hence to talk about formless matter is to talk about something that cannot exist." Why, then, you may ask, did I bother to mention it in the first place? What's the point in thinking about it?

Aristotle would say that, looked at in one way, you are right in thinking that pure matter, formless matter, is not actually anything or, in other words, is nothing. You are, therefore, also right in thinking that formless matter does not exist. But Aristotle would add that, although formless matter is actually nothing, it is also potentially everything. It is potentially every possible kind of thing that can be.

Still, you persist in asking, if formless matter does not exist

and cannot exist, what is the point in mentioning it or thinking about it? Aristotle's answer is that there would be no need to mention it or think about it if we confined ourselves to trying to understand artificial productions and destructions—the making and unmaking of such things as chairs. But the birth and death of animals are not so easy to understand.

Let's take an animal's death first. Our pet rabbit dies—decays, disintegrates, and eventually disappears. The matter that had the form of a rabbit no longer has that form. It now has acquired another form, as would happen if the rabbit were killed and devoured by a wolf. When this happens, matter that was the matter of one kind of thing (rabbit) has now become the matter of another kind of thing (wolf).

If you think about this for a moment, you will see that what has occurred here is different from what occurred when wood, which is a certain kind of matter, becomes a chair. Becoming a chair, it does not cease to be wood. It does not cease to be matter of a certain kind. A certain kind of matter has persisted throughout this change. It can be identified as the subject of the change. These pieces of wood that at one time were not actually a chair have now become actually a chair.

But in the transformation that occurred when the wolf killed and devoured the rabbit, a certain kind of matter did not persist throughout the change. The matter of a certain kind of thing (matter having the form of a rabbit) became the matter of another kind of thing (matter having the form of a wolf). The only identifiable subject of this change is matter—not matter of a certain kind, since matter of a *particular kind* does not persist throughout the change.

Let us now turn from death to birth. That pet rabbit of yours came into being as a result of sexual reproduction. Aristotle was

as well acquainted with the facts of life as you and I are. The process that results in the birth of a living rabbit began when an ovum of a female rabbit was fertilized by the sperm of a male rabbit.

From the moment of fertilization, a new organism has begun to develop, though while it is still being carried in the female rabbit's uterus, it is not a separate living thing. The birth of the rabbit is just a phase in the rabbit's process of development. It has been developing within the mother rabbit before being born, and it goes on developing after it is born until it reaches full growth.

Birth is nothing but the separation of one living body from another—the baby rabbit from the mother rabbit. And that separation is a local motion, a movement of the baby rabbit from being in one place to being in another—from being inside the mother rabbit to being outside the mother rabbit.

Let us now go back to the beginning of the baby rabbit—the moment when it first came to be. Before that moment, there was the female rabbit's ovum and the male rabbit's sperm. Neither the ovum nor the sperm was actually a rabbit, though both together had the potentiality for becoming a rabbit. The actualization of that potentiality took place at the moment of fertilization, when the matter of the sperm was merged or fused with the matter of ovum.

Do the matter of the ovum and the matter of the sperm in separation from each other stand in the same relation to the matter of the baby rabbit after fertilization occurs, as the matter of the rabbit stands to the matter of the wolf after the rabbit has been killed and devoured by the wolf? If so, then something like what Aristotle had in mind when he asked us to think about formless matter is the subject of change in the coming to be and passing away of living organisms. It is that which we identify as persisting or enduring in this special kind of change.

This is as near as I can come to explaining why Aristotle thought it necessary to mention formless matter. You may think that he went too far—that natural generation can be accounted for in the same way as artificial production. If you do think so, let me ask you to consider one more example.

The example is one that Aristotle himself considered. He said that “nature proceeds little by little from things lifeless to living things in such a way that it is impossible to determine the exact line of demarcation.” He was quite capable of imagining the line between the nonliving and the living being crossed when the first living organisms on earth emerged from nonliving matter. In that coming to be of the first living organisms, can we identify the matter that is the subject of this remarkable change as being matter of a certain kind? Does it remain the same kind of matter both before and after the first living organisms came into being?

You may not want to go so far as to call it formless matter. But, on the other hand, you may find it difficult to identify it as matter of a certain kind, which would mean that it had and retained a certain form. If this is your state of mind, then you understand why Aristotle thought natural generation more difficult to explain than artificial production; and you also understand why he thought it necessary to mention and ask you to think about pure or formless matter, which, of course, does not exist.