The Process of Change
Aristotle — Metaphysics 8, 7

The process of change and transition which had been a puzzling problem throughout Greek thought is analyzed by Aristotle in terms of matter and form. His statement of the case is to be found in the following passages. (They are printed here in inverted order because out of their setting they read somewhat more easily):

8. Everything which comes into being is brought about by something, that is, by a source from which its generation comes. And it is composed of something. Now this latter is best described not as the absence of the thing but as the matter from which it comes. We have already defined what we mean by this. And it becomes a particular thing, as a sphere or a circle or some other thing. Now one does not 'make' the material — as the bronze — of which a thing is composed; so one does not make the sphere, except in a secondary sense, in so far as the bronze circle is a circle and one makes it. For the act of making a particular thing is a process of making it out of some material in general. I mean that to make the bronze round is not to make the 'round' or the 'sphere', but quite a different thing— that of putting this form into what did not have it previously. If one made the 'form', out of what different substance could one make it? There would have to be some substance underlying it, as when one makes a sphere out of bronze. This is done by making of a particular kind of substance, namely bronze, a special sort of thing, namely a sphere. And if one made this 'sphere' also in the same way, it is evident that he would make it in the same manner, and there would be an infinite regress of such processes. It is evident therefore that the form, or whatever one ought to call the shape of the perceived object is not 'made'. It does not have an origin. Nor is there any for the essential conception of a thing. For this is what is implanted in another entity, either by training or by nature or by force. But one does cause the 'bronze sphere' to be. For one makes it out of the bronze and the form of 'sphere'. One puts the form into this matter, and it is then a bronze sphere. But if there were an origin for 'the idea of sphere in general' out of what would it come? That which is generated would have to be analyzed again in turn, and each reduced to something further, then that to something else; I mean in one aspect into matter, in another into form. A sphere is a figure whose surface is everywhere equally distant from a center. One aspect of it is the material into which the form is to be put; the other the form which is to be put into it. The whole is what results, namely,
the bronze sphere.

It is evident from what we have said that the part which is spoken of as the form or the essence does not originate; but the combination which derives its name from this does; and in everything which originates there is substance, and one aspect of the thing is the matter, the other the form. Is there then a 'sphere' beside the particular spheres? Or is there a 'house' beside the houses of brick? Or would there ever be any particular things if this were so? The genus gives the general character, but is not a definite particular thing. But one makes and produces such and such a thing out of 'this' particular substance. And when it has been produced it is 'this thing of such and such a kind'. This concrete existing thing is 'Kallias' or 'Socrates',

just as the other was ‘this bronze sphere’, but it is man and animal in general just as the other was a bronze sphere in general. It is evident then that the conception of forms, as some are accustomed to speak of forms, if they are something aside from the particulars and beside the acts of generation and the essences, is of no value. For not by virtue of them would there be particular instances of them. In some cases indeed it is evident that that which causes is the same sort of thing as that which is caused, yet not identically the same, nor one numerically, but in form, — as in the case of the products of nature. Man begets man, (and so in other instances), except where something arises of different nature, as when a horse begets a mule. Yet these cases also are really similar to the others; but what is common to a horse and an ass has not been given a name as a ‘proximate genus’; perhaps it would be ‘mule’.

So it is evident that it is not at all necessary to supply forms as patterns, (for they would have to be found in these cases especially, since these are certainly substances). The begetter is adequate to the production of the effect and to the embodiment of the form in the matter. And the compound — such and such a form in this flesh and these bones, — is Kallias or Socrates. They differ because of their matter, for it is different, but they are the same in form. For the form is indivisible.

7. Of things which come into existence some are generated by nature, some by art, some by chance. And all things which are generated are generated by something and from something and as of some kind. When I say ‘as of some kind’ I speak with reference to some category, such as substance, quantity, quality or place. Origination by nature occurs in the case of those things whose origin is through the processes of nature. The substance of which they are formed is matter; the source from which they arise is something in nature; the kind of thing which they become is ‘man’ or ‘plant’ or some of the other things which we call ‘substances’ in a special sense. All things which have an origin, whether by nature or by art, have a material. Each of them might exist or not exist; and the reason for this double possibility is the material part of them. In general that out of which and in accordance with which they arise is some natural thing. For that which comes into being is of some natural kind, as a plant or an animal. And that under the influence of which it arises is a natural object which with reference to its form may be said to be homogeneous. And this form is found in another individual ; as one man begets another man. In this way arise the things which come about by nature; but other originations are called artificial creations. Artificial creations result from acquired skill, or external power, or deliberate planning. Some of these also come about spontaneously and by chance, just as some things are generated by nature. For there some of the same kind of things arise in some instances from seed, in other instances without seed. Into these things we shall have to look later; but those things arise by art, the forms of which are in some one’s mind. And by form I mean the essential conception of the thing and its fundamental essence. And indeed in a certain sense opposites have the same form. The opposed essence is that of the absence of the given thing, as health is the absence of disease. For by the absence of the former disease becomes manifest. But health is the determining principle, in the soul and in knowledge. The healthy condition of one who has been ill comes about as follows: since such and such a condition is health it is necessary, if there is to be health, that some other condition exist, as uniform temperature, and if there is to be uniform temperature then warmth. And in this manner one continues one’s analysis until one arrives at a certain thing which one can do as the first step. The activity which comes from this is an artificial productivity, in this case the production of health. So in this sense it is true that health comes from health, and a house from a house, that form which exists without matter produces that which does have it. The heart of the physician’s art and of the builder’s art is the form of health and the form of the house. And the essence without matter I call the essential conception.

One aspect of the processes of production and of action is called the intellectual contemplation, the other the practical effecting of them. The one which has to do with the principle and the form is intellectual contemplation. That which refers to the aim of the intellectual contemplation is the practical application. And each of the intermediate steps has the like phases. For instance, if one will be healthy it is necessary to have an even temperature. What does the maintenance of an even temperature involve ? This : it will result if one is kept warm. And what will do this? The following; but this exists only as a possibility. Yet it is in one's power. So then the action and the source from which the development of the healthy state springs, if it is from an artificial source, is the 'form' in one's mind; but if from chance, still it results from something which at some time or other is the source of activity used by him who acts with conscious skill. In the case of medical treatment perhaps the source is in causing warmth, and one produces this by rubbing. So the warmth in the body is either a part of health or there follows it something which is a part of health, though only after some intermediate stages. And this last step is what causes the essential part and what is thus a part is to health as the stones are to a house; and likewise with other things.

As we have said, nothing can arise unless something pre-exists. Therefore that some part necessarily exists is evident. For the material part is a part. And it enters into a thing and pervades its changes. And so it is also with the things mentioned in our statement. We tell what bronze circles are by distinguishing two phases; saying of the material that it is bronze; and of the form that it is this special kind of shape. And this is the genus under which it is placed first. The notion of the brazen circle includes the matter. Some things receive names from the matter out of which they come when they arise, being said, of course, to be not 'that substance' but 'of that substance', as the image of a man is said to be not 'stone' but 'of stone'. But a healthy man is not designated from that out of which he has come. The reason for this is that he has come from a condition opposite to his present one, as well as out of a substance which we call his material being. Thus it is both a man and a sick man who becomes well. But the statement is made rather with reference to the negative state; one becomes healthy from being ill rather than from being a man. Consequently the well person is not said to be ill, but a man and a healthy man. But in those things to which there is no evident opposite, or none with a name, as of any kind of form in bronze, or the bricks or boards of a building, the process of generation is referred to these, as in the other case it was to the condition of illness. Wherefore, as in that case that from which this comes is not used in the name, so here the image of the man is not called 'wood' but is styled 'wooden', or 'brazen' not 'bronze', or 'stony' not 'stone', or a house 'of brick' not 'bricks'. Nor does the image come from wood, nor the house from bricks, if one looks at the matter exactly ; and one could not say this without qualification, for it is necessary that generation come through the changing of a source, — through its not remaining permanent. For these reasons then we use such modes of expression.

Aristotle. "Metaphysics" 7.8-7. *Readings in Philosophy*. Ed. Albert Edwin Avey. Columbus, OH: R.G. Adams and Company, 1921.