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Arthur L. Peck
Christ’s College Cambridge University

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Aristotle on Κίνησις

Arthur L. Peck, Institute for Advanced Study
(Christ's College, Cambridge)

(1) This paper is zetetic rather than expository. The chief question to which I shall be seeking to suggest an answer is, Can we define the field in which Aristotle believed Κίνησις to operate? For me personally the importance of this question became apparent from my work on Aristotle's zoological writings, where Κίνησις seemed to play a much more important part in his thought than I had previously realised. This in itself was suggestive, for we know how Aristotle, once he has got hold of a valuable idea, tends to make use of it wherever he can, and sometimes, we may feel, where perhaps he ought not, or at any rate where he does so less convincingly. One such idea obviously is that of matter and form, or, stated otherwise, potentiality and actuality. In the latter of these two formulations Aristotle believed he had produced an indispensable instrument for philosophy, one after which his predecessors had been vaguely groping. The application of this principle reaches its apex when he speaks of the active and passive νοῦς; and although, or perhaps because, there are obscurities in his exposition of this subject, we may sometimes wonder whether here Aristotle has not allowed his enthusiasm for a useful principle to run away with him. However, I do not wish to raise this particular point at the moment. I would merely like to remark in passing that, in order to do justice to the observed phenomena, or what he believes to be the observed phenomena, or to the facts of the case, or what he believes to be the facts of the case, Aristotle is willing to throw over a carefully worked-out scheme. There are several instances of this: I will mention here the one which concerns the contrast which I was speaking of, viz. that of potentiality and actuality. These two, which have accompanied each other pari passu all through Aristotle's system, from prime unclothed matter and its first rags of form upward, at the highest and final moment part company; potentiality is dropped, and in the Unmoved Mover there is no potentiality at all, but only pure unmixed actuality. It is significant for my question that the scene where potentiality disappears is in the unmoved Mover. Has Κίνησις also been following potentiality all along, and is it too dropped at this point, and not until this point? In other words, is Κίνησις as pervasive in Aristotle's system as potentiality is: does it extend over the same field, and reach its limit at the same point?

(2) To begin with, it may be useful to recall some fundamental definitions. In Met. 1019a15 ff. Aristotle defines the primary and fundamental sense of θύναμις in the following words: θύναμις is ἀρχὴ κινήσεως ἢ μεταβολῆς ἐν ἔτερῳ ἢ ἔτερον: potentiality is a principle or source of movement or change—a principle subsisting either (a) in some other thing than that which is to be affected by the movement or change, or (b) in the thing itself quâ other than changeable in that respect. But in fact Aristotle seldom uses θύναμις in this sense, the potentiality of acting, of causing movement or change; it is the complementary sense which he normally employs, the θύναμις of being acted upon; and he describes this as the ἀρχή, in the thing which is acted upon, of a passive change
caused either by some other thing or by itself quâ other (ἡ ἐν αὐτῷ τῷ πάσχοντι ἀρχῇ μεταβολῆς παθητικὴς ὑπ’ ἀλλὸν ἢ ἡ ἄλλο). Agree-
ably to this definition of ὑμαῖς in terms of κίνησις, we find
Aristotle defining κίνησις in terms of ὑμαῖς, at Physics 201a11 ff.
´ν τοῦ δυνάμει ὄντος ἐνεπελέεσθαι, ἢ τοιούτου, κίνησις ἔστιν: Move-
ment is the realising of that which is potentially X, quâ poten-
tially X. For example, to take the case of the type of κίνησις
called ἀλλοιωσις, 'alteration', or qualitative change, κίνησις is the
qualitative altering of a thing which is qualitatively alterable,
quâ qualitatively alterable. And so with the other modes of poten-
tiality.

(3) In the passage of the Metaphysics Aristotle is using
κίνησις and μεταβολή as interchangeable terms. But we cannot dis-
miss κίνησις as a mere synonym for μεταβολή. On the face of it,
κίνησις seems to be a more precise term than μεταβολή, perhaps more
informative. In some of its departments, as distinguished by
Aristotle, this is indeed quite obviously so: for although the change
or κίνησις denoted by ἀλλοιωσις, alteration, change of quality, may
be somewhat obscure, the change or κίνησις denoted by αὐξησις καὶ
φθορά is at any rate observable—change in size or quantity: things
wax and wane, swell and subside; and the κίνησις known as φθορά,
locomotion, is obviously and patently 'movement' even in our own
normal sense of the word.

(4) But perhaps this does not get us very far. It is not at
first sight obvious what these various modes of κίνησις have in
common: Alteration, Growth and diminution, Movement from one place
to another. They are, of course, as Aristotle points out, all based
on locomotion; and this may be pertinent towards formulating an
answer to the question I raised at the beginning. But I do not feel
that I am yet in a position to estimate clearly the contribution
which this consideration may have to make.

(5) Perhaps before passing on we should note that sometimes
Aristotle adds a fourth department of κίνησις in addition to the
κίνησις which affects already existing things, that is to say
κίνησις which concerns ὕμα for itself: this has two complementary
divisions: (a) γένεσις, which is change from non-existent to exist-
ent, and (b) φθορά, change from existent to non-existent.

(6) Now it would no doubt be inexact to say that every κίνησις
is concerned with the realisation of a form. It is certainly true
of some κίνησις, for instance γένεσις: this is the realisation of
a form in matter which is capable of receiving and exhibiting that
form. And there can be no doubt that in a great many cases the
connexion between form and κίνησις is very close. After all, is
not the Greek for the efficient Cause ὄθεν ἢ ἀρχῇ τῆς κινήσεως—
that whence comes the source of the movement? And, says Aristotle,
(Phys. 202a10) the thing which causes the movement will always
bring with it some form (maybe some ὕμα, maybe some quality,
maybe some quantity—thus naming three of the modes of κίνησις just
mentioned), which will be a 'principle' and a cause of movement.
In other words, every such κίνησις will be informed, determined,
characterised in a definite way, so as to produce as a result a
thing which has a certain ὕμα, or a certain quality or quantity.
Thus the agent, or the efficient Cause, will set up in the matter a movement of a definite and specific kind, which will result in the matter which is potentially X becoming X in actuality, i.e. in acquiring the form to which the specific movement was proper. And this result is brought about generally by the use of an intermediary, an instrument (ὀργανόν), to which the agent or efficient Cause imparts the movement for transmission.

(7) To take an illustration. How is a table made? Certain appropriate matter, in this case wood, is required, which is capable of being fashioned into a table, i.e., which is potentially a table. An efficient Cause is required, in this case, a carpenter. In his soul the carpenter apprehends the form 'table.' He then imparts to his hands, and they in turn to his tools, the κινησεις proper to the form 'table,' and in this way the matter, the wood, becomes actually the table which to begin with it was potentially. If the carpenter had moved his hands and his tools with the κινησεις proper to the form 'piano' the wood would not have been made into a table.

(8) This is, of course, a simple case, and we can almost see what is going on, although without a slow-motion film it would be difficult to analyse and record the details of the κινησεις. When we go on to examine an example of biological γένεσις, we find the pattern is precisely the same, although there are modifications and complications, and the precise character of the κινησεις involved is much more difficult to envisage. In the first place, the efficient Cause here is different from the efficient Cause in the case of the carpenter and the table in one important respect: in biological γένεσις, the efficient Cause, i.e. the male parent, itself exhibits the form which is to be transmitted: in the former case the carpenter was not himself a table, but in this case the dog is himself a dog. But as far as our present enquiry is concerned that is a minor modification; otherwise the general pattern of the scheme is the same. We find the same transmission of the appropriate κινησεις through the intermediary of a tool or instrument. 'It is probable,' says Aristotle, (G.A.5.789b6), 'that Nature makes the majority of her productions by means of πνεῦμα used as an instrument.' And he explicitly draws the parallel between this and the craftsman. 'Πνεῦμα serves many uses in the things constructed by Nature, just as certain objects do in the arts and crafts, e.g., the hammer and anvil of the smith' (ibid.). We thus have the κινησεις proper to the form 'dog' transmitted by the πνεῦμα contained in the γονή of the male parent to the matter provided by the female parent, and these κινησεις which are proper to the form 'dog' fashion the matter which is potentially a dog into what is actually a dog.

(9) But this, although an interesting and important example of the working of κινησεις proper to a form, is really only an extended application of a principle which is operative all the time in living creatures. The production of a new living creature is only an extension of the maintenance of an already existing one. Except in a rudimentary and superficial way, tables and pianos do not require continuous maintenance. There is, of course, such a thing as wear and tear, and occasionally pianos have to be tuned, but this is child's play compared with the maintenance of a living organism from day to day and from hour to hour. Once made, the table or the piano is there: the efficient Cause has done its work,
the κινήσεις have been transmitted, and the matter has acquired
the intended form. Not so the living body. It must continually
be kept going, and kept going as such. In other words, its form
must be continually maintained. And to do this the appropriate
κινήσεις must be continually supplied. Where do they come from,
and how are they distributed throughout the body of the living
organism?

(10) The first answer to this question is, From the heart.
For Aristotle, the heart was the first part of the embryo to be
formed; and in the developed animal the heart was the seat of soul,
and soul is the 'form' of the animal. The heart is also important
as containing vital heat: this will concern us again later on. I
here omit a number of details which are irrelevant for our present
purpose, and say at once that an important function of the heart is
to 'concoct', by means of heat, the nourishment taken by the body--
to concoct it into its ultimate state, the ἔσχατη πρωτην, viz. blood.
But Aristotle does not leave the matter there. He distinguishes two
grades of nourishment, according to the functions they perform. The
business of the lower-grade nourishment is to bring about increase
of bulk (G.A. 744b3 ff.), and is therefore described as αὐρητικὸν
(note: this itself involves a κινήσεις, as we have seen); the business
of the higher-grade nourishment is to provide the whole organism and
its parts with being (τὸ εἶναι), and this nourishment is described
as ὑπερτικὸν (not a very satisfactory term, but Aristotle's meaning
is perfectly clear). At de anima 416b11 ff. Aristotle again tells us that this higher-grade nourishment maintains the organism's being.
In other words, it is concerned with the maintenance of the form or
specific character of the organism. It is also, says Aristotle, 'productive of generation'; i.e. it is concerned with the provision
of 'being' for another creature similar to the original organism.
(We may perhaps notice here that the description ὑπερτικὸν is not
inappropriate from Aristotle's point of view, since the lowest grade
of soul is both γεννητικὸν and ὑπερτικὸν.)

(11) This maintenance, then, is effected by the blood: how? As
we should expect, by the transmission from the heart, the seat of
the 'form', of the κινήσεις proper to that form. As the heart concocts,
by means of heat, the nourishment into blood, which is its
ultimate stage or state, the heart pneumatizes the blood; that is
what its pulsation indicates: it is a phenomenon similar to that of
boiling water in a vessel, when we see bubbles rising up in the
liquid: the heart charges the blood with πνεῦμα, and, by means of
this πνεῦμα which is carried in the blood, the heart transmits the
appropriate κινήσεις to all parts of the body, thereby maintaining
its being as such. This πνεῦμα, of course, is not the breath which
is breathed in from outside, but is connate (ὀύμφυτον), there from
the start. It is important, as Aristotle himself insists, to
distinguish it clearly from πνεῦμα breathed in from outside.

(12) There are other functions which the ὀύμφυτον πνεῦμα has
to perform besides acting as the instrument of soul for the mainte-
nance of the living organism's being. It is also the instrument
which soul uses in its appetitive aspect (ὑπερτικὴ ψυχὴ) for moving
the limbs of the body. Here, too, ἀλλοιωσις (another mode of
κινήσεις) is involved; but we cannot now examine the details of this.
In addition, this πνεῦμα is the vehicle for κινήσεις received from

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outside, through the senses: i.e., it not only conveys from the heart the κίνησις of form to the various parts of the body and also to the matter out of which an embryo is to be fashioned, but it conveys to the heart κίνησις received by the sense-organs, κίνησις set up by some exterior object, which κίνησις in their turn are appropriate to, and emanate from, some specific form; and that, in fact, is what is meant by saying that in sensation we apprehend a thing's form without its matter: we receive the κίνησις proper to the form. That is how the soul is 'informed' and in a sense becomes that which it perceives.

(13) We must now consider what happens between the sensible object and the sense-organ of the living creature. In a way, the pattern is very much the same as it is in the case of the carpenter making the table. I will take the most interesting and most complicated example, the case of sight, i.e. the apprehension of a coloured sense-object. Just as in the other case we had (1) the carpenter, or rather, the form as apprehended by the carpenter, (2) the instrument, and (3) the matter, so here we have (1) the colour, (2) a medium, and (3) the χρώμα in the eye. Colour is 'that which has the power to set in movement that which is actually transparent', and the latter acts as the medium. Examples of transparent media are air, water, and certain solids. Their transparency is due not to themselves, but to the fact that they contain a certain substance which is also found in 'the eternal substance of the upper cosmos'—in other words, in the αἰθήρ, the fifth element. This substance can be actualised, and its actualisation is what we call light. This actualisation is brought about by the agency of Fire or something of a similar kind as the substance of the upper cosmos. When this substance in the medium, therefore, has been actualised by light, it can be set in movement by colour, and in that way can transmit the κίνησις proper to whatever colour is involved. This takes us as far as the eye. Obviously there must be light in the eye as well as in the external medium, so the eye will have to be transparent; so the eye, or rather the pupil of the eye, is made of water. Thus both the external medium and the internal constituent of the pupil are transparent. And it is the movement of this watery part, not qua fluid, but qua transparent, which constitutes sight. It is capable of picking up the κίνησις which have been conveyed by the external medium. These κίνησις now have to be transmitted to the heart. This is done by means of certain πόροι, passages, which connect the eyes with the φλέβες round the brain; and as these φλέβες (because they contain blood) contain σύμφωνον χρώμα, we have here an internal medium capable of transmitting the κίνησις along the final stage of their journey, to the heart.

(14) We notice here that right from the coloured object to the heart there is a substance—either the stuff in the transparent medium outside, or the σύμφωνον χρώμα within the organism, both of which are in some way analogous to the αἰθήρ—capable of transmitting the κίνησις appropriate to form. What precisely these κίνησις are Aristotle does not tell us; but he must have conceived them to be in some way comparable with the κίνησις set up in the tools of the carpenter and the smith, though of course the stuff in which they are conveyed is of much greater fineness and subtlety than the metal which is used for these craftsmen's operations.
(15) Up to now I have been speaking of forms which for their realisation require matter which is already in a fairly advanced state of 'information'. This is obviously true of the form of a living organism, which requires very highly informed 'matter'—indeed, it requires matter which is already informed by the lower grades of soul. But there are many degrees of information, or to put it in another way, many degrees of matter, and one question which arises is: How far down can we trace this association of χίνησις with form?

(16) I do not intend now to deal exhaustively with that mode of χίνησις known as locomotion, fundamental as that may be; though a few observations on the subject may be useful. It is well known that according to Aristotle the four so-called elements each have their proper place in the universe. They are not, of course, elements in the proper sense according to Aristotle, but that does not concern us here. The proper place for Fire is at the circumference, for Earth at the centre, for Air and Water in between, Air next to Fire, Water next to Earth. This means, for Aristotle, that to be in those places is part of their 'form'. If they are not in those places, their form has not been completely realised, their potentiality has not been completely actualised, their τέλος has not been attained. Hence, if they are not in those places, or have been shifted from them forcibly, they will naturally try to get to them, and that is what is meant by saying they have a natural movement: their natural movement is their means of getting to their proper places, of attaining their form. This is stated quite plainly by Aristotle at de celo 4.3, 310a34: the movement of each body to its own place is movement towards its own form, to εἰς τὸν αὐτὸν τόπον φέρεσθαι ἔκαστον τὸ εἰς τὸ αὐτὸν εἶδος ἐστὶ φέρεσθαι. Such movement, such χίνησις, therefore, is exactly on a par with other χίνησις: it is as ridiculous to ask why fire moves upwards (away from the centre of the universe) and earth moves downwards (towards the centre) as it is to ask why a thing which is curable, healable (τὸ υγιαστὸν), when it is moved (changed) quâ healable, attains health and not e.g. whiteness. And so with all other modes of χίνησις. De celo 310a20: 'The local movement of each body into its own place must be regarded as similar to what happens in connexion with the other instances of generation and change' (περὶ μὲν οὖν τοῦ φέρεσθαι εἰς τὸν αὐτὸν τόπον ἔκαστον ὁμοίως ὑποληπτέον ὠστε καὶ περὶ τῶς ἄλλος γενέσεως καὶ μεταβολῆς). Similarly, in the famous phrase transliterated by Dante, each thing becomes what it is: things γίνεται as they do because they εἶστι what they are.

(17) Nevertheless, the φύσις of Earth, Air, Fire, and Water is inferior to the φύσις of living creatures; and in living creatures the form, and therefore the place, and therefore the movement, of Earth, Air, Fire, and Water has to give way to higher forms and their requirements. In living creatures, these 'elements' are not in their natural places. Nature, acting in a higher and more important rôle, makes use of them and of their characteristic properties, maybe, and to a very great extent she can bend them to her purpose, can make them subserve her τέλος; but not always: though it is surprising how wide is the field which Nature can claim for the dominion of the final Cause. But not the whole; and where Nature with her final Cause is defeated Necessity comes into play. 'In the field of natural objects' says Aristotle (Physics 202a32), 'Necessity is
what we call matter and the \( \kappa \nu \nu \theta \varepsilon \varepsilon \iota \varsigma \) of matter. Nature is not quickly beaten, and can often make good use of the results of Necessity, e.g., the surplus earthy matter in living organisms can be turned to good use by way of hair, teeth, and nails. But there is a residuum which cannot be controlled or put to purposive use; and if Nature sets certain movements going for her own purposes she may find certain other movements produced which she does not need: this is simple or absolute Necessity. Similarly, we sometimes find monstrosities produced, when Nature cannot gain complete control over the material owing to its indeterminateness or its uneveness: here Necessity has won, and the form has not got embodied in the matter. The two sets of \( \kappa \nu \nu \theta \varepsilon \varepsilon \iota \varsigma \) have contended together, and the \( \kappa \nu \nu \theta \varepsilon \varepsilon \iota \varsigma \) of the higher form have failed to prevail.

(18) A comparable contest (in some ways) is described by Aristotle when discussing heredity: the movements from the mother and father, or the movements from more remote ancestors, are pitted against each other. The details of this I must omit, but I should like to take up one point which is prominent in this particular discussion (G.A., 766a18)—what Aristotle has to say about heat, \( \tau \theta \varepsilon \mu \varnothing \). It is quite clear that he considers heat to be of capital importance in the formation of living things, and he can even say that it is through deficiency of heat that the material does not get brought into the form it should attain. The action of heat he describes as concoction (\( \pi \varepsilon \varsigma \iota \varsigma \)); and there is no doubt that here, at any rate, the action of heat is thought of as the communication or transmission of the movements proper to form. I am not sure precisely what is implied here; whether Aristotle is thinking again of the \( \sigma \upsilon \mu \phi \varphi \omega \tau \omicron \nu \pi \omega \mu \omega \alpha \varsigma \) which he sometimes describes as a special sort of \( \theta \varepsilon \mu \varnothing \), or not. Possibly he means a \( \theta \varepsilon \mu \varnothing \) upon which other \( \kappa \nu \nu \theta \varepsilon \varepsilon \iota \varsigma \) have been superimposed. But there are at least two interesting passages in this connexion which are relevant to our subject. In G. and C.II.2 Aristotle points out that the elements must be \( \pi \omega \iota \gamma \iota \varsigma \kappa \alpha \) and \( \pi \alpha \theta \varepsilon \iota \kappa \alpha \kappa \) because in fact they act and react mutually. But it is not the quality of heavy and light which we associate with such action and reaction: it is the qualities hot and cold, moist and dry. Hot and cold are terms which imply poetical capability: when we say things are hot and cold we imply that they are \( \pi \omega \iota \gamma \iota \varsigma \kappa \alpha \), when we say they are dry and moist we imply that they are \( \pi \alpha \theta \varepsilon \iota \kappa \alpha \kappa \). The two former are active principles; the two latter are passive, determinable. But this statement must not be overdone. However poetical any sort of matter may be, it is a characteristic of matter not so much to move as to be moved; to undergo, not to initiate, movement (335a, end, G. and C.II.9). This is true in the arts and crafts, and in nature too, animate and inanimate. These sorts of matter are not initiators, but instruments, of movement. We must beware of speaking of them \( \lambda \iota \nu \varepsilon \omicron \gamma \varepsilon \nu \alpha \iota \kappa \omega \varsigma \), as though they were self-operating instruments. Fire, it is true, \( \pi \omega \iota \gamma \iota \varsigma \kappa \alpha \) and \( \kappa \nu \nu \\varepsilon \iota \varsigma \), but it does so in a manner very inferior to the artist's tools and instruments; and of course it has to be subject to the control of Form. A blowpipe is active enough, but it needs a man to hold it and control it in order to achieve a rational purpose. So Nature will use \( \tau \theta \varepsilon \mu \varnothing \) to cause the digestion of food or the development of the embryo; but she has to supply the controlling direction of Form before the \( \theta \varepsilon \mu \varnothing \) can be a useful instrument for her purposes. Nevertheless, Nature can leave quite an amount of work to the hot and the cold: in fact, the first stage of \( \sigma \upsilon \theta \varepsilon \varepsilon \iota \varsigma \), composition, in living creatures can be dealt with by them. This stage is the
formation of τά ὀμοιομορφή, the 'uniform parts' of the body, such as flesh, bone, hair, sinew, etc., all of which are differentiated by such qualities as hardness, softness, ability to be stretched, pulled, broken up, etc.: all of these features are derived from the hot and the cold and the commingling of their χίνησις. Thus the movements set up by the hot and cold, as bodies are solidified by them, are sufficient to form these uniform parts. But hot and cold are not sufficient to account for the next stage of composition and development, i.e., the formation of the 'non-uniform parts' (τά ὀμοιομορφή), such as head, hand, foot and so on. Similarly he says, in another field, we may admit that the hot and the cold may be reckoned to account for the formation of metals such as copper and silver, but not for the formation of a saw, or a bowl, or a box.

Thus their sphere of useful operation is strictly limited, both in the natural realm and in the realm of art. It is in the first stage, the stage immediately above the four elements, that they can act without the control of a directing formal Cause; beyond that they cannot. But if they can act within those limits, must they not be possessed of certain proper χίνησις? It may be true that the dry and the moist, which are the other two ultimate constituents of the four physical elements, are just δύναμις, potentiality—παθητικά only; but hot and cold, surely, if they can do as much as they seem able to do, surely they must be characterised by χίνησις? And may we not say that at this lowest level, the point at which form is first imposed upon matter, (the hot, the cold, the moist, the dry, imposed upon prime matter), even here, that the difference between them is, as in the higher levels, a difference which is constituted by different χίνησις? This seems probable; and if so, we should not be justified in classing Aristotle with the pre-Socratic Ionians, and their most extreme representative Anaxagoras, who made sensible characteristics in some guise or other fundamental and elementary, but we should after all have to put him a little nearer Plato's Timaeus, with his fundamental and elementary geometrical shapes and the ever-moving receptacle.

(19) I have omitted a great deal, and I have not even attempted so far to tackle another question which I raised at the beginning, one which concerns the other end of the scale of reality, viz. the problem of the active and passive reason, though I do not think this is the only field where difficulty may arise. I will put the question in this way: Can the contrast, or (better) the combination of form and matter be satisfactorily applied in cases (if any) where the matter is not physical, i.e., where it would be difficult to conceive of, or to find a place for, even the subtle χίνησις which go on in the transparent media required for the transmission of colour, and in the mysterious though still material ςύμφωνον πνεύμα in the blood of living creatures? Or to ask the question in another way, Is there a point short of the Unmoved Mover at which Form no longer needs χίνησις for its expression? Or perhaps that is putting the question too simply. Perhaps we should not say 'needs χίνησις for its expression' (implying that we are concerned only with the transmission of form into new matter), but 'can be independent of χίνησις, or can be dispensed from the function of transmitting its own appropriate χίνησις—or even from having one'?
It is, of course, true that the form 'table' has to be apprehended by the carpenter in his ψυχή, but the κινήσεις which he sets up in his hands and tools are κινήσεις appropriate to the form 'table'. We cannot, however, say this is true in all cases; there are some in which it is not true, e.g. in the case of the Unmoved Mover causing φορά in the πρῶτον κινούμενον, and of the Sun causing γένεσις and φθορά by its approach and recession, or causing spontaneous generation of animals by the heat its friction sets up, or even perhaps in the case of the human ψυχή itself causing movement, or growth, of the limbs—unless we are to think of these agents as in some way comparable with the carpenter's soul, enabling a potential matter to realise its capability. Are these agents simply the servants of some Form other than their own, and if so, what is their status with regard to it? It seems clear that in the case of the hot and the cold producing the ὄμοιομερη such as flesh and blood and so on, we can hardly suppose that the κινήσεις possessed by hot and cold are those proper to the Forms of flesh, bone, etc.: what controls and determines—and what supplies—the κινήσεις here? Aristotle actually says on one occasion that there are some fields (he refers to spontaneous generation) where matter can of itself supply the κινήσεις which we should normally find supplied by Form. In view of this, what are we to make of Aristotle's official contrast of Form and Matter?

It looks then as if we ought perhaps to distinguish various classes of κινήσεις—not the classes we originally distinguished (as Aristotle himself does), viz. those relating respectively to γένεσις and φθορά, to ἀλλοιώσις, αὐξησις, and φορά, but using a different principle of classification, somewhat as follows:

1. κινήσεις proper to the form which is being realised, whether those κινήσεις are set up by an agent itself possessing the form concerned (as in the case of an animal generating an offspring) or by an agent not itself possessing the form but apprehending it (e.g., the carpenter). These will be κινήσεις εἰς οὐσίαν, processes leading to a complete and finished product.

2. κινήσεις which also are, but in another sense, κινήσεις εἰς οὐσίαν: the movements of the four elements to their own proper region of the universe: these κινήσεις are also closely associated with form, because it is part of the proper form of the four elements to go to certain regions of the universe; and they apparently need no agent to bring these κινήσεις about, though Aristotle seems to feel himself obliged to provide one, at least in some instances, e.g., the removal of an obstacle making the movement possible.

3. κινήσεις which also are κινήσεις εἰς οὐσίαν, set up by an agent which has no sort of connexion with the form which is being realised—e.g., hot and cold producing τὰ ὄμοιομερη, the Sun producing γένεσις and φθορά, the Unmoved Mover producing φορά in the πρῶτον κινούμενον, etc.

4. κινήσεις which effect not the attainment of an οὐσία but the maintenance of an οὐσία, as in the case of the fully-grown animal. These are no doubt closely related to those in class (1.), the κινήσεις which produce a new individual of the same form; and according to Aristotle both are brought about by one and the same 'part' of the soul, viz. the lowest and most
basic part, τὸ γεννητικὸν καὶ θερμητικὸν—i.e., they are κινήσεις transmitted by the ούσια in the blood.

Perhaps under this same heading (4.) of maintenance of ούσια we ought to include the fundamental κινήσεις with which prime matter is charged, which distinguish e.g. τὸ θερμὸν from τὸ ψυχρὸν—for how else are we to suppose these two to be distinguished from each other? What else can be meant here, at this very first combination of form with matter, except that certain different κινήσεις subsist in the matter? Whether these κινήσεις which distinguish θερμὸν and ψυχρὸν are the same as those which enable θερμὸν and ψυχρὸν to produce τὰ όμοιομερή in a living organism may be a subject which needs investigation.

(22) All the κινήσεις which I have mentioned so far in this reclassification are κινήσεις proper to some form, whether being realised, or already realised, in some matter; and it might therefore seem that the only way in which a form can be realised or maintained is by means of κινήσεις in matter. But then we are confronted with Forms which appear to be wholly independent of matter, and hence have no κινήσεις proper to them to set up in matter—the Unmoved Mover (and the 55 unmoved movers?), and rational soul. And this raises in a different and more acute way the question, What have the various sorts of κίνησις in common? viz., What have the various parts of Soul in common? We find them setting up such different sorts of κινήσεις, some of which (e.g. those set up by the Unmoved Mover) appear to have little resemblance or none to the forms which set them up.

(23) And finally, we have to ask what is the status, from the point of view of κινήσεις, of things like tables whose manufacture has been completed, and of earth when it is at the centre—i.e. of things which have reached their οὐσία as the result of some κίνησις, and do not (as animals do) require to have their οὐσία maintained by some κίνησις. Is this condition of having attained οὐσία as a result of κίνησις comparable with the condition of fully-actualised οὐσία (such as that of the Unmoved Mover) which is not the result of any process of κίνησις? And does this give us any clue towards the solution of the problem of the active and passive reason?