

## ARISTOTLE

Although his philosophy rests on the principles of logic which he developed and elaborated, Aristotle (384–322 B.C.), in contrast to his teacher Plato, is decidedly empiricist in his approach to knowledge. All things in nature, Aristotle asserts, act toward an end. Changes or motion in the physical world are explained through the principles of act and potency, and in individual existents these principles emerge as matter and form. Neither can exist separately; matter is a principle of individuation, and form a principle of intelligibility.

In living things, the form is soul, which Aristotle defines as "principle of life." Plants possess a vegetative soul which enables them to grow and reproduce; animals possess a sentient soul which enables them to propel themselves and respond to sense stimuli. In the Aristotelian hierarchy of souls, the higher organism subsumes capabilities of the lower organism, so that animals also grow and reproduce, and human beings fulfill vegetative and animal (as well as human) functions.

### Aristotle's Concept of Human Nature

What makes a human being human, according to Aristotle, is his or her rational soul, the basis for faculties of intellect and will. As rational animals, human beings fulfill their nature, or act according to their proper end, to the extent that they exercise their reason and volition. Knowledge is acquired through a process of conceptualization, or abstraction of a universal essence from a multiplicity of sense experiences. Thus, knowledge depends upon, but is not identical with, experience. Concepts are universal and immaterial; the objects of knowledge are individual and material. Since we only know forms, there is an inevitable gap between our knowledge of existent things and the things themselves.

The will, or rational appetite, inclines us to embrace an apprehended good. Where good is obtained, the result is happiness. On ethical as well as political levels, human beings act in pursuit of happiness. The universal good, which has priority over any merely

individual good, produces some degree of happiness or satisfaction for everyone, since it applies to all individuals.

Human beings are also political animals. Their natural social interactions, according to Aristotle, arise from love of the useful, the pleasant, and the good. "Perfect friendship," Aristotle maintains, "is the friendship of men who are good, and alike in virtue; for these wish well alike to each other *qua* good, and they are good in themselves." While such friendships evoke pleasure without seeking it, they occur but rarely because "such men are rare," and there must be equality between the friends.

The following selections—"On the Generation of Animals" and "Politics"—are excerpted, respectively, from *Generation of Animals*, trans. by A. Peck, and *Aristotle's Politics*, trans. by W. Bolland.

## ARISTOTLE 'On the Generation of Animals'

We may safely set down as the chief principles of generation the male [factor] and the female [factor]; the male as possessing the principle of movement and of generation, the female as possessing that of matter. One is most likely to be convinced of this by considering how the semen is formed and whence it comes; for although the things that are formed in the course of Nature no doubt take their rise out of semen, we must not fail to notice how the semen itself is formed from the male and the female, since it is because this part is secreted from the male and the female, and because its secretion takes place in them and out of them, that the male and the female are the principles of generation. By a "male" animal we mean one which generates in another, by "female" one which generates in itself. This is why in cosmology too they speak of the nature of the Earth as something female and call it "mother," while they give to the heaven and the sun and anything else of that kind the title of "generator," and "father."

Now male and female differ in respect of their *logos*, in that the power or faculty possessed by the one differs from that possessed by the other; but they differ also in bodily sense, in respect of certain physical parts. They differ in their *logos*, because the male is that which has the power to generate in another (as was stated above), while the female is that which can generate in itself, *i.e.*, it is that out of which the generated offspring, which is present in the generator, comes into being. Very well, then: they are distinguished in respect of their faculty, and this entails a certain function. Now for the exercise of every function instruments are needed, and the instruments for physical faculties are the parts of

the body. Hence it is necessary that, for the purpose of copulation and procreation, certain parts should exist, parts that are different from each other, in respect of which the male will differ from the female; for although male and female are indeed used as epithets of the whole of the animal, it is not male or female in respect of the whole of itself, but only in respect of a particular faculty and a particular part—just as it is "seeing" and "walking" in respect of certain parts—and this part is one which is evident to the senses. . . .

. . . A woman is as it were an infertile male; the female, in fact, is female on account of inability of a sort, *viz.*, it lacks the power to concoct semen out of the final state of the nourishment (this is either blood, or its counterpart in bloodless animals) because of the coldness of its nature. . . .

. . . The female, though it does not contribute any semen to generation, yet contributes something, *viz.*, the substance constituting the menstrual fluid. But the same is apparent if we consider the matter generally, from the theoretical standpoint. Thus: there must be that which generates, and that out of which it generates; and even if these two be united in one, at any rate they must differ in kind, and in that the *logos* of each of them is distinct. In those animals in which these two faculties are separate, the body—that is to say the physical nature—of the active partner and of the passive must be different. Thus, if the male is the active partner, the one which originates the movement, and the female *qua* female is the passive one, surely what the female contributes to the semen of the male will be not semen but material. And this is in fact what we find happening; for the natural substance of the menstrual fluid is to be classed as "prime matter." . . .

. . . As for the reason why one comes to be formed, and is, male, and another female (*a*) in so far as this results from *necessity, i.e.*, from the proximate motive cause and from what sort of matter, our argument as it proceeds must endeavour to explain; (*b*) in so far as this occurs on account of what is *better, i.e.*, on account of the final cause (the Cause "for the sake of which"), the principle is derived from the upper cosmos. What I mean is this. Of the things which are, some are eternal and divine, others admit alike of being and not-being, and the beautiful and the divine acts always, in virtue of its own nature, as a cause which produces that which is *better* in the things which admit of it; while that which is not eternal admits of being [and not-being], and of acquiring a share both in the better and in the worse; also, Soul is better than body, and a thing which has Soul in it is better than one which has not, in virtue of that Soul; and being is better than not-being, and living than not living. These are the causes on account of which generation of animals takes place, because since the nature of a class of this sort is unable to be eternal, that which comes into being is

eternal in the manner that is open to it. Now it is impossible for it to be so *numerically*, since the "being" of things is to be found in the particular, and if it really were so, then it would be eternal; it is, however, open to it to be so *specifically*. That is why there is always a *class* of men, of animals, of plants; and since the principle of these is "the male" and "the female," it will surely be for the sake of generation that "the male" and "the female" are present in the individuals which are male and female. And as the proximate motive cause, to which belong the *logos* and the Form, is *better* and more divine in its nature than the Matter, it is *better* also that the superior one should be separate from the inferior one. That is why wherever possible and so far as possible the male is separate from the female, since it is something *better* and more divine in that it is the principle of movement for generated things, while the female serves as their matter. The male, however, comes together with the female and mingles with it for the business of generation, because this is something that concerns both of them. . . .

. . . Just as it sometimes happens that deformed offspring are produced by deformed parents, and sometimes not, so the offspring produced by a female are sometimes female, sometimes not, but male. The reason is that the female is as it were a deformed male; and the menstrual discharge is semen, though in an impure condition; *i.e.*, it lacks one constituent, and one only, the principle of Soul. . . . This principle has to be supplied by the semen of the male, and it is when the female's residue secures this principle that a fetation is formed. . . .

. . . Why does this generative residue, then, not occur in all males, although it occurs in all females? The answer is that an animal is a living body, a body with Soul in it. The female always provides the material, the male provides that which fashions the material into shape; this, in our view, is the specific characteristic of each of the sexes: that is what it means to be male or to be female. Hence, necessity requires that the female should provide the physical part, *i.e.*, a quantity of material, but not that the male should do so, since necessity does not require that the tools should reside in the product that is being made, nor that the agent which uses them should do so. Thus the physical part, the body, comes from the female, and the Soul from the male, since the Soul is the essence of a particular body. . . .

. . . The male and the female are distinguished by a certain ability and inability. Male is that which is able to concoct, to cause to take shape, and to discharge, semen possessing the "principle" of the "form"; and by "principle" I do not mean that sort of principle out of which, as out of matter, an offspring is formed belonging to the same kind as its parent, but I mean the *first motive*

*principle*, whether it is able to act thus in itself or in something else. Female is that which receives the semen, but is unable to cause semen to take shape or to discharge it. And all concoction works by means of heat. Assuming the truth of these two statements, it follows of necessity that male animals are hotter than female ones, since it is on account of coldness and inability that the female is more abundant in blood in certain regions of the body. . . .

Now as the one sex is able and the other is unable to secrete the residue in a pure condition; and as there is an instrument for every ability or faculty, for the one which yields its product in a more finished condition and for the one which yields the same product in a less finished condition; and as male and female stand opposed in this way ("able" and "unable" being used in more senses than one); therefore of necessity there must be an instrument both for the male and for the female; hence the male has the *perineos* and the female has the uterus. Nature gives each one its instrument simultaneously with its ability, since it is *better* done thus. Hence each of these regions of the body gets formed simultaneously with the corresponding secretions and abilities, just as the ability to see does not get perfected without eyes, nor the eye without the ability to see, and just as the gut and the bladder are perfected simultaneously with the ability to form the residues. Now as the stuff out of which the parts are formed is the same as that from which they derive their growth, namely the nourishment, we should expect each of the parts to be formed out of that sort of material and that sort of residue which it is fitted to receive. Secondly, and on the contrary, it is, as we hold, formed in a way out of its opposite. Thirdly, in addition, it must be laid down that, assuming the extinction of a thing means its passing into its opposite condition, then also that which does not get mastered by the agent which is fashioning it must of necessity change over into its opposite condition. With these as our premises it may perhaps be clearer why and by what cause one offspring becomes male and another female. It is this. When the "principle" is failing to gain the mastery and is unable to effect concoction owing to deficiency of heat, and does not succeed in reducing the material into its own proper form, but instead is worsted in the attempt, then of necessity the material must change over into its opposite condition. Now the opposite of the male is the female, and it is opposite in respect of that whereby one is male and the other female. And since it differs in the ability it possesses, so also it differs in the instrument which it possesses. Hence this is the condition into which the material changes over. And when one vital part changes, the whole make-up of the animal differs greatly in appearance and form. This may be observed in the case of eunuchs; the mutilation of just one

part of them results in such a great alteration of their old semblance, and in close approximation to the appearance of the female. The reason for this is that some of the body's parts are "principles" and once a principle has been "moved" (*i.e.*, changed), many of the parts which cohere with it must of necessity change as well.

Let us assume then (1) that "the male" is a principle and is causal in its nature; (2) that a male is male in virtue of a particular ability, and a female in virtue of a particular inability; (3) that the line of determination between the ability and the inability is whether a thing effects or does not effect concoction of the ultimate nourishment; (4) that the reason for this lies in the "principle," *i.e.*, in the part of the body which possesses the principle of the natural heat. From this it follows of necessity that, in the blooded animals, a heart must take shape and that the creature formed is to be either male or female, and, in the other kinds which have male and female sexes, the counterpart of the heart. As far, then, as the principle and the cause of male and female is concerned, this is what it is and where it is situated; a creature, however, really is male or female only from the time when it has got the parts by which female differs from male, because it is not in virtue of some casual part that it is male or female, any more than it is in virtue of some casual part that it can see or hear.

To resume then: We repeat that semen has been posited to be the ultimate residue of the nourishment. (By "ultimate" I mean that which gets carried to each part of the body—and that too is why the offspring begotten takes after the parent which has begotten it, since it comes to exactly the same thing whether we speak of being drawn from every one of the parts or passing into every one of the parts, though the latter is more correct.) The semen of the male, however, exhibits a difference, inasmuch as the male possesses in itself a principle of such a kind as to set up movement [in the animal as well] and thoroughly to concoct the ultimate nourishment, whereas the female's semen contains material only. If [the male semen] gains the mastery, it brings [the material] over to itself; but if it gets mastered, it changes over either into its opposite or else into extinction. And the opposite of the male is the female, which is female in virtue of its inability to effect concoction, and of the coldness of its bloodlike nourishment. And Nature assigns to each of the residues the part which is fitted to receive it. Now the semen is a residue, and in the hotter of the blooded animals, *i.e.*, the males, this is manageable in size and amount, and therefore in males the parts which receive this residual product are passages; in females, however, on account of their failure to effect concoction, this residue is a considerable volume of bloodlike substance, because it has not been matured; hence there must of necessity be here too some part fitted to receive

it, different from that in the male, and of a fair size. That is why the uterus has these characteristics; and that is the part wherein the female differs from the male. . . .

In human beings, more males are born deformed than females; in other animals, there is no preponderance either way. The reason is that in human beings the male is much hotter in its nature than the female. On that account male embryos tend to move about more than female ones, and owing to their moving about they get broken more, since a young creature can easily be destroyed owing to its weakness. And it is due to this self-same cause that the perfecting of female embryos is inferior to that of male ones, [since their uterus is inferior in condition. In other animals, however, the perfecting of female embryos is not inferior to that of male ones: they are not any later in developing than the males, as they *are* in women], for while still within the mother, the female takes longer to develop than the male does; though once birth has taken place everything reaches its perfection sooner in females than in males—*e.g.*, puberty, maturity, old age—because females are weaker and colder in their nature; and we should look upon the female state as being as it were a deformity, though one which occurs in the ordinary course of nature. While it is within the mother, then, it develops slowly on account of its coldness, since development is a sort of concoction, concoction is effected by heat, and if a thing is hotter its concoction is easy; when, however, it is free from the mother, on account of its weakness it quickly approaches its maturity and old age, since inferior things all reach their end more quickly, and this applies to those which take their shape under the hand of Nature just as much as to the products of the arts and crafts. The reason which I have just stated accounts also for the fact that (a) in human beings twins survive less well if one is male and the other female, but (b) in other animals they survive just as well: in human beings it is contrary to nature for the two sexes to keep pace with each other, male and female requiring unequal periods for their development to take place; the male is bound to be late or the female early; whereas in the other animals equal speed is not contrary to nature. There is also a difference between human beings and the other animals with regard to gestation. Other animals are most of the time in better physical condition, whereas the majority of women suffer discomfort in connexion with gestation. Now the cause of this is to some extent attributable to their manner of life, which is sedentary, and this means that they are full of residue; they have more of it than the other animals. This is borne out by the case of those tribes where the women live a life of hard work. With such women gestation is not so obvious, and they find delivery an easy business. And so do women everywhere who are used to hard work. ■