

species vary in this respect according to their sex. Correspondent with this difference in disposition and endowment in animals, we find the same variety in mankind, as regards both their proneness to be excited by, and to indulge, the passion of anger.

But, although animals are in general obviously endowed with both anger and terror, and in many of them these two passions are as perfectly developed as they are in man, yet it does not appear that love is possessed by them. The appetite of concupiscence is found vigorously existent in most, if not in all animals; but they are most, if not all of them, apparently wholly destitute of the passion of love,⁷ although capable of very strong feelings of attachment both towards others of their own species, and to objects of a different kind. The appetite of concupiscence, they appear however to exhibit towards each animal of the opposite sex, without any distinction or preference as to beauty, or other personal qualities; whereas in man, concupiscence is frequently stimulated in consequence of the

⁷ *Mr. A. R. Wallace, F.R.G.S.*, in a note which he has very obligingly communicated to me on this passage, remarks:—"It is necessary to define accurately what love here means." It appears to me that love between the opposite sexes, is essentially a compound of the affection and the passion;† and that this compound often exists in animals."

Professor De Quatrefages, to whose valuable work "On the Progress of Anthropology," reference has already been made in these pages, especially in regard to animal nature, has done me the honour of allowing me to consult him on certain of the topics embraced by this work, and has supplied me with an interesting note illustrative of the subject here adverted to. After alluding to the difficulties in the way of a satisfactory solution of the question, and which depends, he says, "on the manner in which we regard the differences existing between man and animals;" and referring to what he has already expressed with regard to the subject in his great work; he remarks that "Love in the higher sense of the word cannot exist in animals, inasmuch as they are wanting in religious and moral qualities; but does it exist in those among mankind who regard women merely as instruments of sensual enjoyment? And the love of a Bashaw towards a favourite, does it resemble what an intelligent and honourable man of elevated sentiment feels towards her with whom he desires to be united? I greatly doubt it. There are, then, in my opinion, several kinds of love. Taken in the sense of a marked preference, love certainly exists among animals. A cock has almost always one favourite. I have experienced an instance of attachment between a dog and a bitch, which is really curious. It was in my own neighbourhood among the Cevennes mountains, that the matter occurred. These animals lived in two villages at some distance one from the other, and separated by a mountain. Along with them lived other dogs and other bitches. These they seemed to disregard, and sought one another out so carefully, that almost every night they found the means of meeting, each of the two performing a part of the journey. It ended in their being killed and devoured by the wolves. Their remains were found, those of the one at a short distance from those of the other. These dogs had neither been brought up together, nor been able to make acquaintance, otherwise than by choice."

* *Vide ante*, p. 348.

† *Vide ante*, p. 350.

passion of love being also moved, and accompanying it.⁸ In man, neither the appetite nor the passion are called forth, unless the object of them be especially adapted to excite it. A very ugly or aged woman fails to move the appetite at all. One of a forbidding countenance fails also to stimulate the passion of love, although she may move the appetite of concupiscence. Nevertheless, although the passion, and the appetite lately referred to, are so often excited together, they are, as already pointed out, quite independent of each other, and not unfrequently act separately. Concupiscence in animals depends probably more on the material frame, than it does in man; and in some animals, its being called forth either in or towards them, is regulated entirely by their bodily condition; so that when they are adapted for the exercise of the appetite, every object of the opposite sex at once excites it, and when this is not the case, it is never called forth. This neglect in animals, to exercise any preference as regards the objects of their concupiscence, on account of their personal qualities of the nature described, is wholly owing to, and is a conclusive proof of their being destitute therewith of the passion of love, which in man causes the difference, and supplies the deficiency alluded to.⁹

In animals, the passions are excited mainly, although not entirely, by the physical emotions, and through physical causes; while in man, mental and moral causes are what mainly, though not alone, excite them. The passions generally, in man and in animals, most resemble each other as regards their intensity, when they are vehemently excited; for although the passions in man are

⁸ *Hobbes* indeed appears to regard concupiscence, or lust, and love, as the same; "but the name lust is used where it is condemned; otherwise it is called by the general name love; for the passion is one and the same indefinite desire of different sex, as natural as hunger."—*Human Nature*, c. ix. s. 15. *Sed vide ante*, pp. 348, 349, 356.

⁹ *Mr. Darwin*, however, questions whether "every male bird of the same species equally excites and attracts the female." (*Selection in Relation to Sex*, vol. ii. p. 99.) He also asserts that "stallions are so frequently capricious in their choice, rejecting one mare, and without any apparent cause taking to another, that various artifices have to be habitually used." (*Ibid*, p. 272.) But in both cases the causes of preference may be those connected with concupiscence rather than with love. Has it been shown that beauty in form at all influences their choice, which may depend on the age, health, or general condition of the female?

Nevertheless, as *Mr. Wallace* has been good enough to point out to me in the following note on this passage: "*Mr. Darwin* has supported his views by copious facts and observations. It appears to me useless to state the opposite view, without showing what facts support it." The observation and experience of each person who has paid attention to this subject, must therefore be appealed to to determine the point in his own mind. *Prof. C. J. Plumtre* supplies me with some strong facts confirmatory of *Mr. Darwin's* statement as regards birds; but as regards certain other animals, the facts which I have obtained seem to tell differently.

of themselves stronger than they are in animals,—as the soul of man is far more vigorous than the instinctive animal being;—yet, on the other hand, in man, the passions being checked by the reason, while in animals they have no such restraint, but are controlled only by the operation of opposite emotions or passions, by this means their force is reduced to nearly the same level, both in man and in animals. Nevertheless, in those animals where they are perfectly developed, as in certain of the larger carnivorous animals, the passions are much more fully and vigorously exhibited than they are in man; and are also more powerful, and more influential and energetic in their operation, inasmuch as animals possess no intellectual faculties, or moral endowments, which in man mainly restrain any excesses on the part of the passions. From this cause, both the passions and the appetites in animals, are not only less restricted generally, but are also more free to follow their own natural bent and inclination, without bias or diversion.

It appears however most probable, and absolute certainty here seems to be beyond our reach, that some of the lowest animals in point of instinctive endowment, such as worms, and oysters, and polypi, are wholly destitute of passion of any kind, and possess only sensations, and emotions, and appetites,¹ which suffice for all the exigencies of their career. These creatures are, indeed, little raised above the scale of vegetable creation; and their destitution of passion may be concluded alike from the nature of their constitution, which appears incapable of either the existence or the exercise, of such an endowment; and also from the circumstance that no actual use or necessity in their case for such a property, can be found to exist. In the case of vegetables, there is even less reason to suppose that they possess anything in the shape of passion; nor has any property even analogous to it in their constitution, ever been discovered.

From the passions of animals being unrestrained by any mental or moral endowments, as in the case of man, and being also undirected and unbiassed by these, or any other corresponding influences; the passions in animals serve more clearly and correctly to reflect, as it were, the real nature and disposition, if we may so term it, of the animal, than they do with regard to the character of man. Hence it is that animal nature often affords an insight into human nature, which is not attainable by a direct investigation of man himself. Reflected light, although comparatively dim and powerless, may be occasionally better adapted for the eyes of mortals, than the brilliant effulgence directly emanating from the sun.

¹ *Mr. Wallace*, however, asks here, "What is passion but a compound of these three?"—*Sed vide ante*, p. 340.

Wild animals appear unerringly to shun substances, such as particular herbs, which are naturally poisonous; but they do not detect and avoid those which are artificially rendered poisonous, as by the admixture with them of arsenic. This confirms the view suggested in a former page,³ that against contrivances and contingencies which are out of the order of nature, no provision has been made in the economy of animal nature.

Many animals indeed seem to be as far above us in their qualifications for earth, as we are above them in our qualifications for heaven. And yet we are able to subdue them, and make them our slaves; so superior, and so power-giving, is mental above material knowledge. Nevertheless, notwithstanding all this, we care and concern ourselves far more about animal and material, than about intellectual and celestial pursuits.

Mr. Serjeant Cox writes as follows, "The intuitive knowledge possessed by animals is extremely perplexing. They appear to possess a special (or sixth) sense, which is to them a substitute for the reasoning power with which man is endowed. I do not think it is explained by evolution, or by inheritance modifying brain structure. The knowledge of poison could not be transmitted, for it could only have been discovered by the death of the animal. But it may be that the neighbourhood of poisons produces certain painful effects upon the nervous organization, and so the animal is deterred. The suggestion of a *sixth sense* (of which we can form no conception) appears the nearest approach to the solution of the problem, and explains also many other phenomena. The addition of one new sense, would change almost the whole of our own range of knowledge, and probably the aspect of most existing things. If, for instance, we were to be endowed with a sense that could perceive atomic structure as our present senses perceive molecular structure, our knowledge of the universe and its belongings would be multiplied a millionfold."

Dr. Carter Blake expresses the following opinion: "If, as appears clear, some animals possess greater physical faculties to apprehend material objects (e. g. smell in dogs, sight in some birds, sight and smell combined in vultures), we may infer as probable that a greater knowledge of the *substantiæ* of objects may also be possessed by them. A horse or mule will discern dangers that his rider does not perceive; a goat will select plants, and choose the nutritious from amongst the deadly; a canary will reject seed which to men's eyes is indistinguishable from that he selects; so admitting the existence of *noumena* as opposed to *phenomena*, a greater knowledge of the former may be possessed by the animal than the man."

Mr. Wood assents to my opinion as to the knowledge possessed by animals of herbs and other substances, but says, "I am inclined to attribute it to instinct, and not to reason;" and which is the conclusion at which I have arrived, basing both this perception and instinct itself on the acuteness and perfection of their sensorial organs.*

Mr. A. R. Wallace however tells me that in his opinion the statement contained in the above paragraph is "unfounded and erroneous."

³ *Vide ante, Prel. Diss., s. 10, a. 2, vol. i. p. 194.*

* *Vide ante, Prel. Diss., s. 10, a. 2, vol. i. p. 194.*