

a hen with her brood, without remaining satisfied that the feeling which prompts them in these acts is of the same kind as that which attaches the Cow to her suckling, or the child to its mother? Who is the investigator, who having once recognized such a similarity between certain faculties of Man and those of the higher animals can feel prepared, in the present stage of our knowledge, to trace the limit where this community of nature ceases? And yet to ascertain the character of all these faculties there is but one road, the study of the habits of animals, and a comparison between them and the earlier stages of development of Man. I confess I could not say in what the mental faculties of a child differ from those of a young Chimpanzee.

Now that we have physical maps of almost every part of the globe,¹ exhibiting the average temperature of the whole year and of every season upon land and sea; now that the average elevation of the continents above the sea, and that of the most characteristic parts of their surface, their valleys, their plains, their table-lands, their mountain systems, are satisfactorily known; now that the distribution of moisture in the atmosphere, the limits of the river systems, the prevailing direction of the winds, the course of the currents of the ocean, are not only investigated, but mapped down, even in school atlases; now that the geological structure of nearly all parts of the globe has been determined with tolerable precision, zoölogists have the widest field and the most accurate basis to ascertain all the relations which exist between animals and the world in which they live.

Having thus considered the physical agents with reference to the share they may have had in calling organized beings into existence, and satisfied ourselves that they are not the cause of their origin, it now remains for us to examine more particularly these relations, as an established fact, as conditions in which animals and plants are placed at the time of their creation, within definite limits of action and reaction between them; for though not produced by the influence of the physical world, organized beings live in it, they are born in it, they grow up in it, they multiply in it, they assimilate it to themselves or feed upon it, they have even a modifying influence upon it within the same limits, as the physical world is subservient to every manifestation of their life. It cannot fail, therefore, to be highly interesting and instructive to trace these connections, even without any reference to the manner in which they were established, and this is the proper sphere of investigation in the study of the habits of animals. The behavior of each kind towards its fellow-beings, and with reference to the conditions of existence in which it is placed, constitutes a field of inquiry of the deepest interest, as extensive as it is

¹ BERGHMUS, *Physikalischer Atlas*, Göttingen, 1838
et seq., fol. — JOHNSTON, (ALEX. KEITH,) *Physical*

Atlas of Natural Phenomena, Edinburgh, 1848,
1 vol. fol.