would have been deemed wild chimeras and hopeless impossibilities. But instinct reaches its full perfection at once; and never afterwards receives, or admits of, any improvement. The structure and contrivances of a chronometer, a loom, a steam-engine, have grown and advanced forward, from rude essays to high perfection of complex parts: and these and similar products of human ingenuity may yet make advances, as much beyond their present perfection, as they now excel their early rude prototypes. But the texture and shape of a bird's nest, or of the cells and masses of honeycombs, are now what they ever were; and ever will be, without variation of improvement, or degeneracy. This shows, that the faculties of which these works are respectively the results are of a widely different order.

Again: the powers of reason are developed in widely different degrees in different individuals. But in every single individual of each tribe of irrational creatures there is exactly the same perfect qualification for such labours as are peculiar to its species. *Reason* acquires its knowledge and contrivances by labour, and gradually improves by repeated efforts. *Instinct* in its full perfection is native in the creature, from the commencement of its existence.

Yet it is undeniable, that all the actions of the inferior tribes of creatures are not universally the result of instinct. It is observed that some tribes have much more native sagacity than others. And so, too, in numerous cases that occur, affecting the ease or wants of domesticated creatures, we find them not so destitute of a capacity of thought and contrivance, but that they can form a plan suitable to the occasion. Sometimes, of course, they are baffled; but in many instances they are successful; and those instances must be sufficient to prove that the creatures do not act from instinct only. Besides which, many animals possess a strong imitative faculty—they will do what they have seen done by others of their species, or even by men. Now, pure instinct is not an imitative faculty. In those processes of instinct which are most difficult and surprising, it is impossible any part of the skill possessed by the creature performing them should have been gained by imitation; especially in the case of numerous insect tribes, which never knew their parents, nor ever witnessed any such process as they, undesigning and untaught, execute. As, the caterpillar in weaving its cocoon, and the butterfly in depositing its eggs. But imitation seems invariably associated with reason; is one of the most powerful laws by which it acts; and one of the most effectual means of its acquisitions and advancement.

Moreover, animals are capable of education: they may be, and often are, taught things that greatly surprise every beholder. Now, instinct is neither knowledge gained by instruction, nor a faculty capable of being improved by instruction. No bird could be taught to built a better nest; no hare to adopt a mode of repose better adapted for its security than sitting in its form, or a posture in which it would sooner gain notice of approaching danger, or be better prepared for immediate flight. But reason is essentially a faculty for improvement by education. As the instructor presents knowledge to its attention, it opens its powers to receive it; each acquisition strengthens and enlarges its capacity for further progress. If, then, animals can acquire knowledge by education, and that too of a nature exceedingly diverse from any they possessed by native instinct—then it is certain they must possess powers of perception to understand the meaning of the lesson proposed by the instructor—of