

the moral government of the world, obedience to such laws is secured. But that no such principle of action has been impressed upon the lower animals may be inferred from the fact that there is not the same necessity for it; that no instinctive sense has been bestowed upon them to protect them from the injurious effects of its infringement (as it is reasonable to suppose would have been the case in any matter affecting the well-being and very existence of the race), and that hence in their natural condition they never conform to any such law. On the contrary, Nature, by whom "all instincts are bestowed on animals *only for their combination and preservation*," has implanted in them an original and still unchanged impulse to indiscriminate commerce between themselves, and not only so, but—with a view probably to the preservation of that harmony and correspondence of form and character so prized by our best breeders—actually dictates the expulsion or going to death of any intruder, even in the same breed, from an alien herd; a fate which, we may add, also befalls any sickly or weakly member of either sex in their own tribe.

Yet, while thus rejecting all external aid, Nature has not left to chance the selection, *from the bulls produced in the herd*, of the sires best fitted to maintain and perpetuate the tribe, but effects it by her own appointed means—wager of battle. Thus Virgil tells us how, even in the half-wild, half-domesticated cattle of his day, the doughtiest scions of the herd, impelled by female allurements, engage in furious contention for supremacy—

"While the fair heifer, balmy breathing, near,
Stands kindling up their rage ;"

and how, when the fray is over, the vanquished combatant betakes himself to exile and disgrace, leaving his hated rival lord paramount of the herd. Such conflicts would naturally terminate in favour, not of the largest and most unwieldy animal, but of the one whose superior vigour and activity almost necessarily imply superior perfection of physical structure—some well-proportioned, moderate-sized, firmly-knit, potent-horned hero, whose prowess in the field is the best guarantee for his lustiness in the harem. The victorious usurper, thus installed as sultan of the seraglio, accomplishes his destiny, by becoming—in obedience to that instinct which doubtless has regard to the perfection of the species—the sire of a numerous and vigorous progeny, from cousins of all degrees, from his sisters, his dam, and in due time, perhaps from his own daughters; until, as his physical force declines, and he becomes less fitted for the efficient discharge of his duties, he is challenged by some younger and sturdier rival, and yields his honours to a better than himself, in many cases probably his own son. The same process of selection and rejection still goes on amongst the free

denizens of the Pampas, themselves the descendants of domestic cattle introduced by the Spaniards. It may here be objected that there can be no security that any herd of wild cattle will be impregnated by the most robust and vigorous male, when there are other, perhaps immature or accidentally enfeebled, bulls in the herd; but it is well known that animals in a state of nature, do not couple precociously, and that even if the jealous vigilance of the predominant male were insufficient to guard his rights, amorous instinct teaches the female to prefer and seek out the male possessed of most vigour and beauty, while the males, in their turn, prefer the most vigorous females.

Thus, the analogy which natural animal life bears to the domesticated, affords ground for such strong presumption, as almost to amount to established proof that change of blood is not required so long as the herd can boast of robust and well-proportioned males, not too intimately allied; for we may, doubtless err in carrying the system beyond the extent to which it would be likely to occur in nature.

I am aware that the soundness of this analogical deduction has been objected to, on the ground of the difference in the external situation of wild cattle—in their natural food and habits—and in their freedom from restraint in wilds to which they are indigenous. This objection, whatever it may be worth, is at any rate tantamount to an admission of my argument, that the principle we have been considering is *not* a law of nature as regards the bovine race, unless it be contended that Nature has surrounded wild cattle with such external circumstances as will enable them to subvert her laws, or that her laws in relation to animal life are not fixed and invariable, but require, in some instances, the aid of domestication to render them operative! which is absurd.

Nor would the supposed analogy of the human race (even were we, in defiance of all sound reasoning, to admit it) appear, on due examination, to contain any positive force against the practice of the interbreeding of cattle; for the only things we are inquiring about, *form and constitution*, are not impaired by intermarriages within close degrees of consanguinity, provided the parents are corporeally sound, vigorous and well-developed. The Highlands of Scotland afford numerous proofs of this position. The deteriorating influence of alliances between lineal kindred is confined to the *mental* qualities of the children, unless either of the parents is imperfect in frame, rickety in constitution, or predisposed to scrofula, consumption or other physical infirmity, in which case it is only to be expected that similar conditions will manifest themselves in the offspring. Supposing, however, such defect or predisposition to exist in the parent in only a slight degree, it might probably be dormant for generations, until, as the result of