

*I derive my sixth argument in support of the general principle from organic reaction.*

Few persons, save the zoologist and comparative anatomist, have any idea of the great nicety and delicacy of the relations that exist between all the species of animals and plants, so that what affects one affects all the rest. Perhaps the subject may be illustrated by supposing all the species of organic beings to be distributed at different distances through a hollow sphere, while between them all there is a mutual repulsion, and the whole are retained in the form of a sphere, by an attracting force directed to the centre. By such an arrangement, if one species be taken out of the sphere, or its repellency become stronger or weaker, the relative position of all the rest would be altered. No matter how many millions of species there are, the movements of one will cause a reaction among all the rest.

Now, this illustration, although an approximation, falls short of representing the actual state of things in nature. It is no exaggeration to say that a relation similar to the supposed one exists throughout the vast dominions of animate beings; so that you cannot obliterate or change one species without affecting all the rest. Often the change is effected so slowly and indirectly that the beings experiencing it are unconscious of it; or they may realize some slight disturbance of the balance in organic nature, and yet be unconscious of the cause. By the illustration above given, when one or more species is removed from the supposed sphere, or its repellent force weakened or strengthened, although an influence will reach all the other species, yet a new equilibrium will soon be established, and no permanently bad effects seem to follow. But not so in nature. There the balance originally fixed between different beings by infinite wisdom is the best possible; and every change, not intended by Providence, must be for the worse. It was intended, for instance, that man should subdue forests and extirpate noxious plants, as well as ferocious and noxious animals; and, therefore, such a change operates to his advantage, but to the injury of the inferior animals. Yet often he pushes this exterminating process so far as to injure himself also. Thus the farmer wages a relentless war against certain birds, because of some slight evils which they occasion. But when they are extirpated, opportunity is given for noxious insects to multiply, and to