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NATURAL SELECTION, SOCIAL SELECTION, AND HEREDITY.

BY PROFESSOR JOHN B. COMMONS,
Of Syracuse University, N. Y.

THE term "natural selection" is a misnomer, as Darwin himself perceived. It means merely survival. "Selection" proper involves intention, and belongs to human reason. Selection by man we call artificial. Natural selection is the outcome of certain physical facts: 1. Environment: the complex of forces, such as soil, climate, food, and competitors. 2. Heredity: the tendency in offspring to follow the type of the parent. 3. Variation: the tendency to diverge from that type. 4. Over-population: the tendency to multiply offspring beyond the food supply. 5. Struggle for life: the effort to exclude others or to consume others. 6. Consciousness of kind: the tendency to spare and coöperate with offspring and others of like type. 7. Survival of the fittest: the victory of those best fitted to their environment by heredity, variation, numbers, and consciousness of kind.

These biological facts underlie human society, but a new factor enters with novel results. This is self-consciousness. Society is based not merely on consciousness of kind, as worked out by Professor Giddings, but peculiarly on individual self-consciousness.

Self-consciousness is a product of evolution, at first biological as explained by natural selection, and second, sociological. The biological character is the prolongation of infancy, i. e. the prolonged plastic and unfolding state of the brain. This makes possible a new kind of development unknown to the animal, namely, education. Education is preëminently a social activity. I say education instead of environment. In natural selection there is a physical environment which presses upon individuals, and only those survive who are fitted to sustain this pressure. In social selection society enters between the individual and the physical environment, and, while slowly subordinating the

latter, transforms its pressure upon the individual, and he alone survives who is fitted to bear the social pressure. This pressure reaches the individual through the educational media of language and social institutions, especially the family, the state, and property. Institutions rest upon ideas and beliefs, and these are epitomized in language. Language in turn, by giving names to things and relations, and by thus transmitting to each individual the accumulated race experience, gradually brings him to the consciousness of himself. This is education.

But self-consciousness is at first only vague, capricious, and unprincipled. It grows by becoming definite, self-controlled, and conscientious; that is, more regardful both of its own higher self and of others. It thus develops into moral character, which we call personality. Personality is the final outcome of social selection. When once liberated it becomes a new selective principle to which all others are subordinated. What, then, are the social conditions which promote or retard the survival of personality?

It is a debated question where we shall place the dividing line between pre-social and social man. In view of what precedes we should look for that line at the point where self-consciousness begins to throw about itself a social covering. This covering is private property. The former view that primitive property was common property is now nearly abandoned. The supposed village communities of free proprietors were really villages of slaves and serfs. The semblance of common property in primitive times belongs to the pre-social or gregarious stage, and differs but little from the common use of a given area by a colony of beavers.

Private property involves two facts: 1. Perception of enduring value in external objects; 2. Exclusive control and enjoyment of those objects. Its psychological basis is therefore self-consciousness, which is the knowledge not of an abstracted and isolated self, but of self as related to external nature and human beings.

The first private property was animals and tools. Artificial selection begins with the domestication of animals. Soon it lays hold on man himself by means of social institutions, all of which originate as private property. The primitive social fam-

ily was not a state of promiscuity nor even the voluntary pairing of animals and birds, but it was private property in women, beginning as wife-capture and becoming wife-purchase and polygamy. Natural selection, too, is transcended when cannibalism ceases. The self-conscious victor enslaves his enemy and reduces him to property. Next, government arises as private despotism, and with it the land becomes the property of the chief. Thus the family, the state, protracted industry, and the control of social opportunities begin with that artificial selection denoted by private property.

Property in its early forms means the domination of the powerful over the weak. Social institutions develop out of this primitive tyranny, where the caprice of owners crushes the personality of the masses, towards a state of equal rights and opportunities for all. The industrial classes emerge from slavery and serfdom into a wage system, which in turn is modified in the direction of fair wages, short hours, and security of employment—fundamental conditions for personal development.

The family has arisen from the private property of a despot to the mutual coöperation of lovers, and the woman becomes a person instead of a chattel. The legal successor of polygamy—the slavery of women—is not monogamy, but prostitution, which is the wage system of the sexes, grounded on the subordinate position of women and their meagre opportunities for self-support.

Government is passing into democracy, and property in land and capital is being hedged about by the police and taxing powers, or diffused and socialized in the interest of the personal equality of all.

Social evolution is therefore the evolution of freedom and opportunity, on the one hand, and personality, on the other. Without freedom and security there can be no free will and moral character. Without exalted personality there can be no enduring freedom. The educational environment, therefore, which develops personality must itself develop with freedom. The ruling ideas of justice, integrity, morality, must move in advance, else the personality of individuals will not survive the temptations of freedom. To what extent, therefore, can education modify the individual? The answer is to be sought in the problems of heredity and degeneration.

The human degenerate is essentially different from the animal degenerate. The latter is solely a physical product, and by losing certain organs is better fitted for survival, as parasites and snakes.

Human degenerates, however, do not form a new type, but are on the decline to extinction. They are those who lack personality; that is, they are not moulded into harmony with a social environment which unfolds self-consciousness. They are strictly biological only when they are congenital and therefore not educable. They are social degenerates when they are the product of a degraded education. Both factors are radical. A born idiot can never be other than an idiot. On the other hand, the deprivation during childhood and youth of language and education, as shown by Caspar Hauser, or the wolf-boy of Agra, or the experiment of Emperor Akbar, leaves the normal natural endowments as idiotic as though they never existed. The two factors vary independently through all degrees. Education ranges from the slums to the pure firesides. The congenital equipment varies from the idiot to the genius.

The relative weight of these two factors is a matter of statistics. Absolutely speaking, heredity is everything; relatively, its social significance depends upon the actual proportion of abnormal to normal births.

The highest estimate I am able to make of the total number of degenerates, both born and induced, is five and one-half per cent of the population, as follows :

ESTIMATED TOTAL OF DEFECTIVES PER MILLION POPULATION.

Census estimate (1890).

Insane.....	1,697
Feeble-minded	1,526
Deaf and Dumb	659
Blind	805
Prisoners	1,315
Juvenile delinquents	237
Almshouse paupers.....	1,166
	7,406
Outdoor Criminals (five times the number of inmates)	7,760
Tramps (McCook, 1895, New Haven Conference of Charities and Correction, 85,768)	1,308
Drunkards (Crothers, 1893, Chicago Conference, 1,200,000, equal to about 10 per cent of voting population)	19,000

Prostitutes (weighted average of Levasseur's estimate for rural (800) and urban (11,200 to 17,200) France, in "La Population Française," vol. ii, p. 434).....	5,000
Outdoor Paupers (weighted average of report at Nashville Conference, 1894, 46 per cent in Penna. to 2.2 per cent in N. Y.)	15,000
	55,473

This estimate would make the maximum number of all degenerates 5.54 per cent of the population. From these must be deducted those who are not congenital. We can estimate the congenitals by three methods: by statistics of *atavism*, or *consanguinity*, and by *experiment*.

In the statistics of *atavism* we add together the physical abnormalities of the individual, assuming that a criminal type is found when these abnormalities reach the number of three or more. The statistical method always suffers the limitation that it indicates not identity, but probability. Yet it has an important value, provided it discovers ratios of probability which concur. This is not the case in the method by *atavism*. Sixty to seventy per cent of criminals do not belong to the assumed criminal type; and sixteen per cent of normal males are classed as criminals, whereas the actual number is less than three per cent of the males of criminal age. (See Lombroso, "The Female Offender," pp. 104, 105.)

While *atavism* itself is unquestioned, this method seizes upon rigid physical characters to measure educable qualities. And where the latter are themselves abnormal the causes may lie with education and not heredity.

The method by *consanguinity* seeks not the abnormalities of the patient himself, but the signs of disease and degeneracy in his blood relatives. It therefore greatly increases the apparent weight of heredity, for it collects symptoms from several individuals instead of one. The medical authorities ascribe fifty to eighty per cent of inebriety to heredity. This method fails as does the other, for, as seen in the Jukes or the drunkard, the child gets both its heredity and its education from the same degraded parents, and the method provides no measure for separating the two.

In sociology the method of experiment has but limited employment. The modern sociologist cannot mate the parents nor vivisect the soul, after the methods of the biologist.

He can only move the child from one education to another, and his experiment is incidental to the larger purpose of saving the child. His results, too, can appear only as a ratio of probability; but this ratio measures the mental and moral qualities themselves directly and not by inference. Elmira Reformatory and others cure eighty per cent of their charges. Model placing-out institutions and free kindergartens save nearly all. And these are taken from the most vicious and criminal parentage in the land. Our five and one-half per cent of degenerates must therefore be greatly reduced in order to find the residuum of congenitals. I have made the following deductions:

ESTIMATED DEFECTIVES NOT CONGENITAL, PER MILLION POPULATION.

Criminals (80 per cent of total)	7,369
Prostitutes (80 per cent of total)	4,000
Outdoor Paupers (80 per cent of total)	16,000
Tramps (80 per cent of total)	1,046
Drunkards (50 per cent of total)	9,500
	37,915
Which deducted from.....	55,473
leaves congenital defectives	17,558

equal to 1.75 per cent of the population. Overlappings would diminish this ratio; greater infant mortality and the omitted youthful defectives would increase it.

If less than two per cent of the births are below the normal Aryan brain level, on the other hand possibly two per cent are above the average, and should be classed as the geniuses who could achieve eminence regardless of surroundings. The remaining ninety per cent or more are born with ordinary equipment; they are hereditarily neither good nor bad, criminal nor virtuous, brilliant nor stupid. With these masses of the people the first fifteen years of infancy and youth are decisive.

We may now classify the selective forces of society. Social selection is partly natural and partly artificial. It originates artificially in the self-consciousness of dominant individuals. Struggle and conflict ensue, out of which private property survives in its various forms as an intended control over others. This control is then transmitted as the various social institutions to succeeding generations and becomes for them natural

and unintended. These social institutions then constitute a coercive environment, not over wholly unwilling subjects, but over those whose wills are shaped by education and social pressure to cooperate with the very institutions that suppress them.

Gradually, as subordinate classes become self-conscious, innovations are made which aim to check the unbridled despotism of private property; new conflicts thereupon take place and certain innovations survive, which, at first artificial, become natural for the next generations.

As society becomes more definite, reflective, and humane, as it acquires fixed laws and government, it increases the range of artificial selection; it supplants custom by statute, and remodels its inherited institutions.

It is now animated by a new motive, the development of moral character in all the people. With reference to this new motive social selection is either direct or indirect. Direct selection is highly artificial, but it is only negative. It consists in segregating the degenerates to prevent propagation. Society cannot, of course, directly interfere with the marriage choice of normal persons, for that would be to choke the purest expression of personality. But it can isolate the two per cent who will never rise to moral responsibility. This would doubtless increase the wards of the state, but it is needed both for the reason already given and, more especially, to clarify the public mind on the causes of delinquency and dependency. As long as these evils can be charged to heredity the public is blinded to the share that springs from social injustice.

The increase and classification of the custodial population here contemplated is a problem for administrative charity. Possibly the colony system would make that population mutually self-supporting and also remove the current sentimentalism against long isolation of the incurables.

With the ground cleared of the true degenerates, the operations of indirect social selection can be seen. This also is artificial, but in a less mechanical way. It consists in so adjusting the political, industrial, and social environment as to affect personality, either to suppress or develop it. The two instruments are legal rights and education. For example, the tenement-house congestion, with its significant educational environment,

is the product of laws of property and taxation which favor owners and speculators instead of tenants, and of private property in rapid transit which puts a tax on exit to the suburbs. It cannot be said of this and other selective factors, such as the profit-making saloon, long hours of work, low pay, irregular employment, that they permit natural selection to operate. They suppress personality, which preëminently is the natural fact in the human being. Social selection is therefore tending to become less and less arbitrary, but is making room for a higher natural selection — a natural selection where not brute force and cunning are the fittest to survive, but where, with freedom, security, and equal opportunity, the human personality will work out its own survival. Man alone of all the animals can rise to the angels, but he alone can fall below the brutes. This is the glory and the penalty of personality. It becomes a unique selective agency whose standard is raised with the advance of civilization. The Australian cannibal, without opium, tobacco, alcohol, or syphilis, may survive with a low morality. The American exposed to these destroyers must be a better man or perish. Personality, thus becoming a keen selective principle, is based not necessarily on overpopulation and competition, but on that self-destruction which comes from vice, disease, and drunkenness. Its degraded offspring will perish or feed the ranks of the hereditary degenerates to be properly segregated and ended.

But with education and opportunity the higher forms of human character will naturally increase and survive. With the independence and education of women sexual selection becomes a refined and powerful agent of progress. With the right to work guaranteed, the tramp and indiscriminate charity have no excuse, and the honest workman becomes secure in the training and survival of his family.

We hear much of scientific charity. There is also a scientific justice. The aim of the former is to educate true character and self-reliance. The aim of the latter is to open the opportunities for the free expression of character. Education and justice are the methods of social selection. By their coöperation is shaped the moral environment where alone can survive that natural yet supernatural product, human personality.