

acid, impure, or tuberculous milk greatly aggravates, and renders poisoning with diseased milk from unhealthy cows more common than it is popularly known.

Neimeyer says that the predisposition to consumption is strongest in persons of feeble and delicate constitution, and especially that children poorly nourished are most subject to the disease. The children fed on the milk of tuberculous cows must, of necessity, suffer in a twofold sense—from bad food, and poisonous food also. From a seventh to a fifth of all deaths are caused by consumption, and nearly half of the *post mortems* show the traces of nutritive disorders from which pulmonary consumption proceeds, and “consumption of the bowels” is the more frequent form of the disease in children, as a result of bad food and diseased milk.

It has always been my aim to be suggestive in my papers rather than exhaustive, and, as lawyers say, “I here rest my case.”

VI. NATURAL SCIENCE AND MORALITY.

By S. TOLVER PRESTON.

“I say that Natural Knowledge, in desiring to ascertain the laws of comfort, has been driven to discover those of conduct, and to lay the foundations of a new morality.”—HUXLEY, *on the Advisableness of Improving Natural Knowledge.*

THE view that happiness must be the standard of morality has recurred again and again, as if by inevitable logical sequence, to the leaders of thought in all time; and this doctrine is so well in accordance with the most advanced modern ideas that it will not be our task to inculcate this maxim here, but rather to attempt to reconcile some of the difficulties which appear to beset its universal adoption as a standard of morality.

The grand difficulty that has stood in the way of this has been the opinion that the pursuit by the individual of his own happiness, or a regard to his own interests, clashes with the interests of others, tends to make the individual prey upon the rest of society, and is subversive of all harmony

and concord ; in fact that self-interest and selfishness are synonymous, and that by such a moral standard that desirable consummation, the greatest happiness of the greatest number, would be rendered an impossibility. The late John Stuart Mill, in his celebrated work "Utilitarianism," while fully recognising the worth of happiness as a standard of morality, was nevertheless probably led by the above-mentioned difficulty to advocate the maxim that each one was to make his own happiness *subservient* to that of the greatest number,—a dogma that must fail in practice, owing to the absence of logical incentive to carrying it out. Our task will be to show that, so far from the greatest happiness of the greatest number being inconsistent with each individual consulting his own happiness, this desirable consummation can only be attained by that means.

One hundred and sixty-six years have elapsed since Bernard de Mandeville argued that self-interest being the guide of action, "those creatures would flourish most which are least possessed of understanding ; for the more they know, the more would their appetites to be satisfied *at each other's expense* be increased, and therefore the more would they war with and exterminate each other." Whence man, by reason of his understanding, would be least fitted to agree long together in multitudes.*

The Grand Jury of Middlesex of that day were seized with a panic : they seem to have feared that De Mandeville's theory, that society rested upon a fiction, was true, and therefore to have burned the book in which that fiction was exposed. The panic has not yet subsided. Many worthy people dread the theory of the Survival of the Fittest, because, while they recognise that the fittest are those who can best provide for themselves, they are still chained to the old error which supposed selfishness to be the ideal practice of self-interest.

Before the dawn of Political Economy there was some plausibility in the theory that the wealth of the individual could only be increased at the expense of his neighbour, and that consequently true happiness was only to be found in a

* "An Enquiry into the Origin of Moral Virtue," appended to the republication (1714) of "The Grumbling Hive." It is interesting to notice that although self-interest is recognised here as the incentive to conduct, there is a failure to reconcile it with order and stability in society, or only *half* the truth is recognised. This was the same with Hobbes (as related in the "Leviathan"), and with many others. For an admirable and lucid sketch of some of the more important systems of morality, the reader may be referred to LANGE'S notable historical work "Geschichte des Materialismus" (of which we believe an English translation is now published).

“small and peaceable society, in which men, neither envied nor esteemed by their neighbours, should be contented to live upon the natural products of the spot they inhabit.”* But now that we have to face the fact that a savage who lives solely on the produce of the chase is tolerably reckless of the life which requires some 78 square miles for its sustenance, while a Belgian clings to that which is supported on 2 acres,† we are driven to the inference that there must be some flaw in Bernard de Mandeville’s conclusion. For the purpose of his argument De Mandeville, in analogy with Hobbs and others, took the wealth to be extracted from a given area as a constant quantity, left out of account man’s labour, and estimated the happiness of the individual in any country by dividing the uncultivated (or natural) products of the country by the number of inhabitants. Political economists have reversed all this; they recognise labour as a source of wealth whose value varies with the intelligence and sociability of the labourer; so that the wealth of *each* individual may be greatly increased by co-operation of numbers.

If De Mandeville had been right in assuming the total wealth to be constant and independent of man, he would, of course, have been correct in the deduction that through self-interest each individual would increase his own wealth at the expense of his neighbour; but when the facts are known that in the most wealthy countries the proportion derived from natural or uncultivated products is almost insignificant compared with that which can only be obtained by the co-operation of numbers of individuals, it is certainly remarkable that some Utilitarians of the nineteenth century should fall into the error that the pursuit by man of his own self-interest would be synonymous with selfishness, or would tend to make him isolate himself from his neighbours, and prey upon them; whereas we may see, from the above considerations, that precisely the reverse of this may be true, or that sociability and co-operation may be in reality the highest forms of self-interest.

Nor can that purely passive selfishness which stops short of actual dishonesty (the ordinary selfishness of private life) be carried out in an intelligent society without great loss to the individuals who practise it. For it is an every-day occurrence for A, by relinquishing a small pleasure, to be able to render a large service to B; and when under such circumstances A does so sacrifice his own immediate smaller

* BERNARD DE MANDEVILLE, *Fable of the Bees*.

† LUBBOCK, *Prehistoric Times*, 4th ed., p. 607.

happiness, his action should be determined not by the dogma that, "between his own happiness and that of others, Utilitarianism requires him to be as strictly impartial as a disinterested spectator,"* but because he clearly perceives that if all agree to act similarly, all, including therefore himself, will be benefited. To-day A relinquishes a small pleasure, and B gains a great one: to-morrow B may do the same for C, C for D, and so on, until ultimately Z may sacrifice his own immediate smaller happiness for the greater happiness of A. Seeing, then, that by the practice of unselfishness each individual in our mutual-benefit society has succeeded in exchanging a smaller pleasure for a larger one, it seems but natural to describe unselfishness as self-interest, and it appears to be only by a most unfortunate oversight that the late John Stuart Mill persisted in repudiating the idea that it was desirable for individuals to act each for his own interest.†

But if selfishness is the opposite of self-interest, by the practice of which civilised man would quickly reduce himself to the condition of brute beasts, it becomes easy for the naturalist to conclude that man may have evolved himself from some lower form simply by virtue of improvement in power to detect his own self-interest. Dimly perceiving the advantages of association, mankind has in this view gradually drifted by the rude method of trial and error into codes of written and unwritten laws, which, less or more efficiently, make selfishness immediately disadvantageous to the individual who practises it, so that the simple guide of action for each and all may be self-interest. Thus, to take a simple case for mere sake of illustration: if an intelligent man, influenced solely by the desire to obtain certain goods

* Utilitarianism, 1863, pp. 24, 25.

† "I must again repeat what assailants of Utilitarianism seldom have the justice to acknowledge, that the happiness which forms the Utilitarian standard of what is right is not the agent's own happiness, but that of all concerned."—MILL, *Utilitarianism*, 1863, p. 24. The important word "but" is italicised by ourselves: it implies the incompatibility of two interests which, as we contend, actually coincide. Mill also remarks that there is "happiness in absolutely sacrificing one's own happiness to the happiness of the greatest number."—(Pp. 24, 25.) This apparent contradiction, or seemingly irreconcilable statement, can be due to nothing else than the failure to realise that the happiness or interest of the individual need not be incompatible with that of the greatest number; but that it may be to the interest of the individual to forego certain benefits for the sake of gaining the esteem and friendship of his fellows, the reward of whose esteem would more than compensate the privation undergone, so that no absolute "sacrifice" of happiness would occur. Indeed, no doubt one of the principal rewards of the labours of unselfish people is to be found in the inestimable prize of the real and cordial friendship of their neighbours and companions.

at the least possible expenditure of labour, could earn them in ten days, acquire them in an underhand manner in one, the risk of detection in the latter case being, say, one to ten—then a penalty (fixed by society) of something more than 100 days' labour, in the event of detection, would be sufficient to make him see that it was to his interest to adopt that method of obtaining the said goods which was concurrent with the interests of his neighbours. Or again, if one man, observing that his neighbour never dreamed of going a step out of his way to help anyone else, himself resolutely determined not to move so much as a little finger to his neighbour's assistance, it would not be long before passive selfishness died out. For not to retaliate would be to offer a premium on selfishness, just as not to punish a theft would be to offer a premium on thieving, or to encourage it. Selfishness is analogous to thieving (in kind at least), since by it an individual obtains an unfair advantage at the expense of his neighbour. The course taken by society must obviously be to act so towards selfish persons that selfishness (like thieving) is rendered unprofitable, or against the interests of the individual who practises it. This is tacitly done; but unfortunately, as regards *doctrine*, the contrary maxim is commonly preached, though in practical life it never can be and never is acted upon, as indeed it would be highly undesirable if it were. The apparently amiable doctrine that one should return good for evil, love one's enemies, &c. [like some other maxims that may recommend themselves on a superficial view], shows itself on analysis to be highly dangerous, constituting the strongest possible incentive to selfishness, and consequently the general practice of which would ruin society. From the very fact, however, that the ideal aimed at in this kind of doctrine is unattainable [on account of its inherent defects], it unfortunately comes on that account to be looked upon as something nobler and above this world, and forms a never-ending resource for sermonising and for characterising mankind as "miserable sinners." It may be safely concluded that the larger proportion of the asserted wickedness of this world is of clerical imagination. Without inquiring too closely into (perhaps unconscious) motives, it is none the less obvious that the more degrading the picture drawn of humanity, or the blacker the colours in which this world is painted, the brighter must the painters inevitably appear by contrast, and the stronger must seem the motive for their *raison d'être*. This is unavoidable, and it must at least be admitted that the colours selected to paint humanity are of sufficiently sable hue.

If, instead of preaching the "wickedness" attendant on breaches of the law, society were to take care to inculcate on its members the advantage which accrues to each from the general practice of honesty, and to point out the efficacy of the arrangements it has made accordingly to prevent an occasional selfish man, residing among unselfish neighbours, from advancing himself at their expense,—in short, if it were taught that the question of honesty and dishonesty was one of profit and loss (or that knaves in the long run *are* fools),—then probably less machinery would suffice for the repression of crime. Unfortunately, however, popular religious doctrine seems to dissociate rather than to identify the path of virtue with that of self-interest; as, for example, we have the saying about the "thorny and difficult path of Virtue," and the "broad and easy path of Vice,"—which, of course, is tantamount to setting a premium on vice. And yet what could be more contrary to the truth than the spirit of this kind of doctrine? Also there can be no doubt that the holding out of rewards and punishments in a future world is a strong incentive to crime; for it is justly argued by the would-be delinquent that if virtue require a future reward, it cannot therefore be remunerative in this life, or the practice of virtue cannot be consistent with self-interest. Since, therefore, the belief in a future world is necessarily very shadowy, the criminal naturally infers that it is desirable to tread the "broad and easy" path of Vice. Moreover, when it is commonly taught that such and such a course is "wicked," one may be inevitably led to conclude that in the absence of any more tangible reason than this against it the course must be advantageous.*

* There can be little doubt that one of the main causes for war may be reasonably traced to the continual preaching that it is "wicked," a vague phrase whereby a sort of attraction is attached to it, and the fact pushed out of sight that self-interest is the principle to appeal to here (or that it is futile to attempt to dissociate right from self-interest). For since the principle of co-operation and association is the very essence of the morality of self-interest, it would be seen that, from the fact that war strikes directly at the root of this principle, it violates the fundamental groundwork of the self-interest morality. Indeed men have already learnt this fact in their individual relations, and its influence has always been spreading wider and wider. We know that formerly, in feudal times, people inhabiting small tracts of country, or even families and near neighbours, used to arm themselves and be in continual war with each other; and even the croakers [or "parrots of society," as the late Charles Dickens called them], who think the world goes backwards, and say that disarmament is impossible, laugh at the folly of the feudal times. It can only be a question of lapse of time for an appreciation of this folly to extend to larger tracts of country (or nations). Certainly the self-interest morality will have a great field here. The total violation of interests indicated by the self-inflicted punishment of the crushing armaments under which nations groan at present, affords a pitiable instance of the absence of self-help in reasoning beings (or

A little power of penetration should suffice to discover that a civilised man (or a man of high intellect) is capable of more happiness than a savage, and that in a civilised society an individual is more or less directly dependent upon the goodwill of his neighbours for almost all his pleasure in life; whence it follows that desire for happiness on the Earth alone would itself induce all intelligent people so to conduct their lives as to secure the friendship of their fellows. For this purpose the strictest honesty and sincerity, practised as an undeviating *principle*, is obviously indispensable. For where would be friendship without sincerity? When one considers that a man must have a *character* for honesty and sincerity in order to secure the pleasure of the real esteem and goodwill of his fellows, and that a *single* act of dishonesty or deceit may destroy his entire character (or reputation), one may see how utterly insignificant the temporary gain due to such an act would be compared with the prospective loss attendant thereon, and therefore on how firm and impregnable a basis stands the morality of self-interest.*

It is only to the absence of adequate appreciation of this fact, and the sort of fear that society rests upon a fiction, that some of those monstrous and terrifying doctrines unfortunately identified with religion can be attributed. To select a single example as a representative case: could any greater incongruity be imagined than the coupling of a God of Love with *eternal* punishment? *i. e.*, a punishment which (measured by its duration) is *infinitely* greater in amount than that which the most implacable hatred could devise or

the absence of power to come to an agreement for their own advantage). The time may not be far distant when such a state of things will come to be looked back upon with something like contempt.

* It is a noteworthy fact that if the lives of those men who have accumulated such *exceptional* fortunes as to call for biographies be examined, it will be found that *exceptional* integrity and honesty were the main characteristics of all their transactions, which was the secret of the unbounded confidence inspired in their business relations. These men possessed sufficient power of penetration to see that that superficial sharpness which imagines an advantage in a little deceit or duplicity is in reality no more than stupidity. The parable of the unjust steward, who attempted to deceive by inducing his lord's debtors to falsify their accounts, contains exactly that exterior of superficial shrewdness which may be well adapted to mislead the unthinking; but it will scarcely injure a man of intellect. He will see plainly enough that, so far from unjust stewards being "*wiser in their generation*," they are in reality fools (irrespective of any time or epoch). Nevertheless, can we wonder that dishonesty and underhand dealings are still so rife, when doctrine of this kind is actually included in the code of moral instruction.

the most outrageous injustice invent.* Dogmas of this nature are simply illustrations of the lengths to which doctrines may go without universal repudiation, when society has an instinctive dread that to disclaim them openly would affect injuriously its own stability. It is the old instance of the baneful influence of the false idea that good can ever come out of error. In short, it is only necessary for anyone to reflect impartially on the subject (especially from the points of view indicated) in order that the evil which has resulted from such doctrines may make itself plainly apparent; and their retention after the true groundwork of morality is recognised could not be palliated by even the semblance of an excuse. Indeed such dogmas constitute an evident insult to the justice and goodness of the Deity: that they are precisely of that character which is calculated to allow Clericalism to predominate over the rest of society is unquestionable, whether that motive had any part in their original invention or not.†

At the same time, is it not a melancholy consideration that doctrines of the above character (though happily excluded from our Board Schools) are still taught to young children, at the very dawning of their mental faculties, before they are sufficiently matured to distinguish truth from error, and without experience to know representative opinions (especially those of the unbiassed and intellectual few) on these subjects. Thus the child imagines himself isolated in his opposition to these doctrines, and years may be miserably spent and intellectual energy wasted in fruitless

* According to this dogma of infinitely lasting punishment, the punishment for vice in this life would be *infinitely* inadequate, which is practically tantamount to teaching that the pursuit of vice must be infinitely profitable in this life.

† Putting the case as an *à priori* problem (as is sometimes usefully done in physics),—then, in order to predominate over the rest of society, the condition fundamentally required is to appeal in the strongest possible way to the interests of mankind, by inventing some startling and terrifying danger, together with some remedy or means for escape equally startling and exceptional (if possible); when the rest of society will naturally run after those offering the remedy as their rescuers and benefactors. [It almost unavoidably reminds one of the story of the bees who offered their comrades Heaven, and took the honey.] If, in the attempt to strain the magnitude of the danger to an extreme pitch (illustrated by making the punishment *eternal*), the limits of justice be passed, this is a matter of secondary consequence; since the very incongruity of the doctrine, especially if coupled with an affectation of mystery (which applies equally to the scheme of escape proposed), may tend to make it fascinate all the more, from its seeming originality. It is a well-known fact that it is the policy of men who exercise an ascendancy over others never to be sparing on the side of boldness, since the very audacity of the incongruities indulged in may tend to cause additional cringing rather than revolt. The more intelligent portion of mankind may not be disposed to examine the error too closely, from a sort of undefined idea that it may conduce to the stability of society.

efforts to reconcile the impossible, in the vain attempt to put in practice unnatural and ridiculous moral maxims,* or in the struggle with beliefs that disintegrate the mind. Of this one of the authors of this essay† can speak from personal experience (as no doubt many others could); and all this is assumed to be necessary to benefit society in general, as if society rested upon an unstable basis that required fictions to support it. Fortunately the majority escape this evil of young days, simply because they do not inquire into or realise what is taught them; and it would be all the same, in their case, which of the thousand and one creeds of the world were inculcated.‡ Youthful minds of an exceptionally penetrating and inquiring character run the greatest risk of becoming hopelessly entangled here, or it is reserved for the most inquiring and thoughtful, and therefore probably those who would have exceptional capacities for becoming useful members of society, to bear the brunt of this, in order to sustain a system for the fictitious benefit of the many.

That there is no limit to the depths of absurdity and superstition to which even men of education will descend (and in this nineteenth century) in matters wrongly termed "religion,"—especially where sectarian interests are involved,—is fortunately not without such instructive illustration as will serve to keep the thoughtful on their guard. The never-

* Mill makes a remark bearing on this point ("Utilitarianism," p. 44):—"Unhappily it [the moral faculty] is also susceptible, by a sufficient use of the external sanctions [*i.e.*, eternal punishment, &c.] and of the force of early impressions, of being cultivated in almost any direction; so that there is hardly anything so absurd, or so mischievous, that it may not, by means of these influences be made to act on the human mind with all the authority of conscience."

† The other author, a friend formerly largely associated in the thought and preparation of the scheme of this essay, and who had an equal (perhaps greater) share in the development of the main principle, has reasons for remaining anonymous for the present. The work and study connected with the essay has extended, from time to time, over some three years. This is mentioned to avoid any idea of the publication having been entered on prematurely.

‡ The fact that religious belief is a mere unrealised dead letter (or profession) with the majority, so as to have no practical effect on their lives, is well illustrated by Mill in his celebrated essay on "Liberty." At the same time, is it not a sad thought, in view of the enormous number of diverse creeds in the world (each sect maintaining its own to be the only *true* one), to contemplate the means for the brain-poisoning of youth that the prevalence of so much error must afford? It would not be of so much consequence if these doctrines were not instilled before the intellect is sufficiently developed to distinguish truth from error. For if ignorance be a great evil, how much greater must be the scourge of false doctrine! For it is indeed far more difficult to *un*-learn than to learn. Moreover, does not the prevalence of so many diverse creeds in the world afford a signal illustration of the recklessness of invention on the one side, and of credulity on the other?

to-be-forgotten spectacle (only a few years since) of the Cardinals—men who had passed through Universities—sitting in numbers in solemn Council on the Infallibility of the Pope, remains a standing warning that there is no fable, however wild and absurd, no superstition, however monstrous and incredible, which, under the guise of “religion,” will not gain masses of adherents; and therefore this shows, with incontrovertible logic, how necessary it is to inquire into everything and be on the alert if we would keep clear of error. No one could say that this is not a fair illustrative case, or that the warning it contains in regard to the doctrines of Clericalism may not be as applicable to one country as to another.

One would not desire to prohibit speculation on so-called “religious topics,” but let us take especial care that speculations are not at any time made up into a book and taught as *truths*, and above all let us be on our guard that the speculations are not irreconcilable with each other, or directly opposed to the attributes of goodness and justice that are ascribed to the Deity.

Let speculations and scientific inductions be carefully distinguished from each other. While a relic of barbarous tradition tells the degrading narrative of the Fall of Man, inductive science points to the ennobling view of his Rise, thus opening out a practically limitless field for a greater rise in the future, progress in the past being the best guarantee and incentive to progress in the future.

Surely there could be no nobler doctrine than that inculcated by the self-interest or individual happiness morality, viz., that man's interests and happiness lie in the practice of virtue, or that the path of virtue and that of self-interest are identical with each other. What higher incentive could there be to an upright life than this? Those who oppose this doctrine must be prepared to contend [as some superficial people, who imagine they are sharp, do] that virtue or strict integrity is *not* its own reward.* There would seem to be a sort of cringing or slavish disposition to some extent prevalent which thinks that virtue can only be attached to privation and absence of freedom, as if it were thought that the Deity took a pleasure in seeing his creatures practise

* The follower of the morality of self-interest is contented with the reward that virtue brings with it; not looking to an enormous (infinite) reward in the future. He also does his best to lead mankind by teaching them that right conduct is in accordance with self-interest, not to coerce them by a degrading system of terrorism.

a course of conduct that made them miserable.* Instead of ennobling virtue by regarding its practice as the privilege and interest of a free man, there is often rather a tendency to degrade it by identification with the abject "duty" of a slave.

The natural or un-sectarian morality (grounded on Natural Science) constitutes the very ideal of liberty, the freedom of contributing to one's happiness. This morality might therefore be termed with equal propriety the morality of liberty; and the very fact of its constituting the perfection of liberty might be viewed as an additional confirming illustration of its truth, in so far as the complete achievement of liberty is justly regarded as one of the last conquests of human progress.

Morality in Relation to Evolution.

If the morality of self-interest be brought under the test of the theory of Evolution, we think that it will not fail to become clearly apparent that the two harmonise in a remarkable manner. For Natural Selection has been recognised to adapt a living being to the conditions of life, and accordingly tends to produce in animals such "instincts" as are adapted to protect them from danger. "Sociability" (by which animals congregate in troops) is one of these instincts. Natural Selection may therefore be said to tend to develop such instincts in animated creatures as to cause them to act in a way conducive to their *interests* (which is the self-interest morality).

It becomes evident, therefore, that in the case of man—if the power of reason (attendant on brain development) be sufficiently augmented—this may largely replace (in regard to conduct) the "instincts" formerly established by the rough drill of Natural Selection. While the lower animals blunder, and Natural Selection corrects their errors by working upon the brain to develop instincts which check the repetition of errors; man, on the other hand, by using his reason aright, may avoid blundering, and thus may emancipate himself, to a great extent, from the rough discipline of Natural Selection.

There is evidently a great difference (in degree) in this respect between man and the lower animals. For self-interest being the guide of conduct, one of the highest

* The animated coffin-like types of humanity, immured in the cloisters of the Jesuits, may serve as instructive illustrations of this principle carried out to an extreme degree.

attainments of knowledge must therefore be *to know one's interests*.* It could not therefore be expected that the lower animals would have advanced anything like so far as man in this respect. That most important of interests, "Sociability," which requires some penetration and thought to appreciate its value and consequences beforehand, is where the lower animals notably fail; and it is a significant fact that the higher the animals stand in the scale of intelligence the more do they appreciate the value of sociability. Thus the ant, various mammals, the higher apes, &c., associate in communities, and are known to be distinguished for their exceptional brain development. Man therefore has progressed in proportion as he has discovered the value (interest) of sociability; *i.e.*, he has advanced in the same ratio as he has gained a knowledge of his own interests (all blunders being errors against one's interests).†

It forms a noteworthy confirmation of this to consider the progress of any civilised nation in the past. At first we may observe that the knowledge of self-interest had only developed so far as to cause small communities or tribes to associate together, who, however, were in continual war with neighbouring tribes. If we thence look at the feudal times, then the knowledge of self-interest had spread further, and there was much greater harmony and association; but still the parts of a single nation were in frequent strife and contention. At the present day the harmony has extended itself to whole nations; but still these are occasionally at war: nevertheless the violation of mutual interests here involved is becoming every year more and more clearly seen. Thus we may perceive that the advance in intelligence, by affording a clearer appreciation of self-interest, has always coincided with the development of association,

* This fact may make it cease to be surprising that people may run after the most pernicious sectarian delusions and imagine them to be to their interests.

† As in some respects an instructive illustration of the opposition of selfishness and self-interest, Free Trade might be mentioned. At one time, when intellect was perhaps not quite so highly developed as now, a species of commercial suicide (called by irony "Protection") is known to have been largely practised, by which it was sought to derive benefit at the expense of one's neighbour by taxing his goods. The strangulation of trade and violation of self-interest thus resulting might be compared to the condition of the selfish individual who isolates himself from his neighbours, and who makes no true friends, and, nevertheless, whose intellect is often of so low an order as to be unable to discover the cause of his unhappiness. It is notorious that selfish individuals are generally of inferior intellectual capacity. No one will probably doubt for one moment that selfish persons who isolate themselves, and miss the great benefits of sympathy and friendship, are unhappy. If so, the morality of self-interest (as the opposite of selfishness) must commend itself as an irrefragable truth.

in order to gain the inestimable benefits of co-operation and friendship among mankind.

Mr. Darwin, in his work "The Descent of Man," appears to consider that man (in relation to the principle of Evolution) may be still influenced to a certain extent by some of the more important "instincts" which formerly belonged to a lower state, such as "Sociability" for instance. But it would not seem to follow necessarily from this (and perhaps this would not be essentially implied) that man might not now, by the light of his reason, test these instincts, in order to see whether they are desirable or not. At least it may probably be conceded that it would not be a thing to be wished that man should be dominated by "instinct" without the control of reason, or this would surely be a somewhat low (and undefined) basis on which to rest morality. It becomes only necessary, therefore, to trace an "instinct" [shown to be dependent on Natural Selection] up to its rational basis, in order to see that this is self-interest. This amounts to no more than taking the final step of advancing the undefined "*instinct*" up to its definition. We must not shrink from this through fear of discovering the bogey Selfishness behind it. The worst of this confounding of self-interest with selfishness is that it has caused inquirers to fear reason. It would be a pitiful state of things if we were afraid to look Reason in the face. Morality thus loses all its dignity. While a lower animal may act by such and such an "instinct" ("sociability" for instance) without being able to appreciate the *cause* of the "instinct," man, on the other hand, may be able to define the reasons for it, and even to say beforehand whether a given course of action is desirable or not.

There cannot, we think, be a shadow of a doubt, on analysing the question impartially, that the extraordinary fact of no generally recognised standard of conduct existing—in spite of the immense advance of the other sciences—is mainly due to the mistaking of self-interest for selfishness (its opposite). For it is a notorious fact that the self-interest morality has been driven home by hard logic again and again, by the ablest minds from the Greeks downwards, but its fitness or suitability has escaped appreciation, or the bugbear of Selfishness has always intruded itself and prevented its adoption. Nevertheless, it may be observed that the only escape from selfishness is by recourse to the morality of self-interest. If a man by practising unselfishness earns the immense benefit of the high esteem and friendship of his neighbours, is he to forego this benefit and become

selfish in order to avoid following his interests? What other course would be possible? Herein lies surely the impossibility of escape from the self-interest morality, and (may we not add) the absurdity of the attempt to do so. This unfortunately perverted tendency to exterminate self (owing to the mixing up of selfishness with self-interest) has no doubt tended to stunt and wither some of the best impulses of our nature, viz., those which urge us to earn the praise and esteem of our fellows by good actions. Where, indeed, we might ask, would even love or friendship be without self? Abolish self (in the form of the happiness enjoyed) on each side, and where would be the friendship or the love?

It may be safely concluded that all great systems have a *simple* principle on their basis, and morality makes no exception to this. The turgid or diffuse discussions that one sometimes finds on this question may be doubtless the not unnatural result of the immense difficulties inevitably encountered in wandering from the truth, under the frightening influence of the bugbear of Selfishness. The very ingenuity (sometimes almost desperate) of the attempts made to avoid basing morality on self-interest are surely themselves among the best illustrations of its validity. It is hardly likely that so fundamental a truth could have eluded general recognition, had it not been for this peculiar oversight. Indeed it has been ably argued, by many reasoners of admitted ability, that a man *cannot* act excepting by something which affects his interests, or touches his individuality in some way; for that which does not affect *him* cannot make *him* act (or is not a rational *motive*). Hence it would result that the morality of self-interest (or individual happiness) always is—tacitly, or even unconsciously—followed. It only therefore remains to recognise its *fitness*, officially and openly, in order to derive that benefit which attends the appreciation of any great truth.

It might possibly be thought by some that we have criticised unnecessarily some dogmas and (so-called) "moral" precepts, which are sometimes unfortunately taught as part of education. But it should be noticed that truth cannot be effectively illustrated excepting by contrast with error; and it will be sufficiently clear that some of the dogmas and points of doctrine referred to are, beyond question, highly dangerous. Moreover, only a few instances have been selected for analysis, where many might have been noticed; and we have every ground for confidence that a good purpose will be served thereby.

The more the question is examined, the more apparent

will it surely become that the neglect to identify morality with self-interest has caused great evils. It has acted as the strongest discouragement to virtue, by making it appear *against* one's interests, and has given rise to the invention of those pernicious dogmas (above referred to) which are worse than vain attempts at terrorism. If in the general system of education it were invariably taught that the path of virtue, or strict honesty and sobriety, was absolutely in accordance with self-interest (in fact that virtue is its own reward), and that such practices as intemperance, thieving, or deceit were to be avoided, because they were *against one's interests*,—instead of the absurd statement that they are “wicked” (which only makes them more attractive, from the intangible nature of the reason), there can be no question that immense good would result. In fact it would be doing more than making morality stand upon reason,—its only sure basis.

Responsibility and Physical Causation.

It has been argued by some that from the fact of the original formation of man's character having been determined by causes beyond his control (or because a person is not responsible for his inherited brain structure), that therefore he cannot be made accountable for his actions. Mill notices this view in his “Utilitarianism,” p. 83, viz.: “The Owenite invokes the admitted principle that it is unjust to punish anyone for what he cannot help.” But we think it may be made clear that the supposed absence of responsibility under the above conditions is a fallacy, and that in addition to this, the doctrine of strict causal sequence in nature may enable us to arrive at what might be capable of forming a rough basis for a scientific penal code. We will endeavour to point this out in as clear terms as possible.

When any crime is contemplated, the eventuality of punishment is taken into consideration beforehand, and balanced against the direct material gain that would ensue from the crime, the chances of escape being duly allowed for, and it is this balancing process that accompanies the decision of the wrong doer to commit the offence. The additional punishment, consisting in forfeiture of position in society (which would probably be of itself more than sufficient to deter any respectable member) does not of course influence the habitual criminal. If therefore the punishment fixed beforehand by society (*i.e.*, by the penal code) be such that when the criminal has duly allowed for the chances of

escape, the amount of punishment (as a contingency) seems in his judgment to be less than the direct material gain derivable from the crime, then he is led to commit the offence. He therefore, of course, *deserves* the punishment if detected, because this was precisely what he contemplated beforehand, and which entered in as a factor in determining his decision. To remit the punishment would be exactly like remitting afterwards the loss sustained in a lottery which was contemplated as an eventuality beforehand (the injustice of which would, of course, be self-evident). Since crime is committed for the sake of the material gain that attends it, to repeal the punishment would be to offer a reward for wrong doing. The absurdity of society offering a premium for misdemeanours is too evident to need further comment. Indeed, the removal of penalties for crime would precisely resemble (in principle) the cancelling of prizes in an honest contest, the prospect of earning which had induced the competitors to contend.

No doubt the criminal (like the case of the lottery) may miscalculate somewhat beforehand the value of the material gain attendant on an evil action, when balanced against the contingent loss (represented by the punishment), and, doubtless, society is obliged to fix beforehand the punishment somewhat higher than the value of the prospective gain accompanying the misdeed, in order to deter from evil actions. But on this account the criminal is by no means a subject for unmitigated pity. At the very outside (even if this concession were perfectly above suspicion) he could only deserve the relatively insignificant amount of pity due to the *surplus* of punishment over its true contingent value, which society is obliged to put on in order to make dishonesty unprofitable—and the existence of which *surplus* (in the penalties) the criminal has failed to see beforehand, either from imperfect reasoning faculties or a neglected education. He may be compared to a foolish gambler who goes on playing when the value of the chances of the table is calculated against him.

That a principle, mathematical in its nature, underlies the system of punishments, so as to be capable of forming a rough basis to a scientific code, will probably have become tolerably evident from the above considerations. For there is clearly for every crime a certain amount of punishment which is merely the exact equivalent of the material advantage gained by the commission of that crime. The probability of escape must, of course, be allowed for, so that, for instance, when the chance of detection (derivable from

statistics) is in the ratio of one to a hundred, the punishment equivalent to the stealing of as much as a thief could earn by honest work in a day, would be a hundred days' labour. This would be the *minimum* mathematical value of the penalty under the above conditions, and if society did not counteract the advantage gained in the theft by at least this amount of punishment, it would be absolutely offering a reward for stealing. But it is necessary that a flourishing society should do more (or it must fix the penalty somewhat in excess of its true *minimum* value) in order to make the unfair method of attaining definite ends positively disadvantageous, so that it may not be adopted except by members of inferior reasoning power. No doubt special considerations may influence the administration of the code in special cases, but the recognition of a broad or general principle underlying the penalties is not on this account of less value or importance.

It may, perhaps, assist in appreciating that the above principle is a just one (in regard to the *minimum* value of the penalty) to observe that if detection were *certain* (in the case of a sum stolen, for instance), then the mere deprivation of the sum afterwards would be sufficient as a penalty to check thieving (as it would destroy all profit). It must follow logically from this, therefore (on the same principle), that when detection is *not* certain, a fine equal to the chance of escape multiplied by the value of the sum abstracted, would also be a sufficient penalty, because all means of gain would thus be entirely extinguished (and a margin of loss remain in the trouble of abstracting the sum). This is evidently merely an instance of varying the punishment by inflicting fines instead of the equivalent labour.

The above analysis may perhaps serve to make it sufficiently clear that the feelings of responsibility, praise, and blame (originally formed probably as "instincts" through natural selection), have a distinct rational foundation, and are in harmony with the doctrine of strict causal sequence in nature. The penal code may be regarded as merely a more emphatic method of awarding blame, or of teaching people that selfishness is the opposite of self-interest. It may be added that those who are interested in the related question of strict causation in physical events, may be referred to a recent letter by one of the authors in "Nature," May 13th, p. 29, "On a Point Relating to Brain Dynamics." It should be remarked, however, that we have since learnt through Mr. George Romanes ("Nature," May 27th, p. 75), that the mode of reconciliation of the rival views on Free Will *v.*

Necessity suggested in that letter, was very analogous to a means proposed by the late Prof. Clifford in an oral lecture. This independent deduction of the same result by different minds may perhaps be regarded rather as a confirmation of its truth than not. Mr. Romanes, who apparently accepts the reasoning given in the letter (on "Brain Dynamics") "as far as it goes," nevertheless remarks that both there and in Prof. Clifford's lecture, "The Prince of Denmark," responsibility had been omitted; and he seems to hold the view that the feelings of responsibility, praise, and blame, cannot be reconciled with the doctrine of strict physical causation, and suggests at the end of his letter that these feelings may be destitute of any rational basis. The following is the passage by Mr. Romanes:—

"What then, it cannot but be asked, is the psychological explanation of these deeply-rooted feelings of responsibility, praise, and blame, which can never be eradicated by any evidence of their irrationality? To me it appears the only answer is that these feelings have been gradually formed as instincts, which, while undoubtedly of much benefit to the race, are destitute of any rational justification."—"Nature," p. 76).

This is the only point where we would venture to differ with Mr. Romanes (while otherwise fully endorsing his letter). Possibly the above carefully considered conclusions may serve as some help out of this difficulty, which has always been regarded as a formidable one. It would at all events seem to us *à priori* more probable that the function of science should rather be to *explain* the "instincts" developed in man, than to show them to be devoid of rational foundation. Precisely on account of the beneficial light that science may be expected to shed on matters of this kind, does it become all the more difficult to understand the half-expressed repugnance of some to scientific inquiry on subjects of this class—almost as if it were imagined that the discovery of truth was a thing more to be dreaded than the persistence of error.

Conclusion.—Since life is valuable only in proportion to its happiness, or happiness is the object of existence, the struggle for life therefore becomes synonymous with the struggle for happiness, and the practice of conduct favourable to happiness constitutes morality. Just as the life of the individual receives important aid from the community (to whom the individual owes some of the essential conditions for his continued existence); so in the same way the

happiness of the individual is promoted by the community in many important respects.

There cannot be the slightest fear of any principle here by which the pursuit by each individual of his own happiness could take place at the expense of that of the community; for since one of the most important elements in the happiness of the individual is the good will or friendship of his fellow men, he could not be said to be "pursuing his happiness" in forfeiting this; and since any ill-considered attempt to further one's happiness at the expense of others, is instantly felt by them and retaliated upon by the withdrawal of friendship (or the more active reproof of the penal code); this, therefore, by infallibly teaching the individual that the attempted pursuit of happiness *at the expense* of the community is in reality a violation of self-interest (or opposed to his happiness), would infallibly bring his proceedings to a check. Thus a self-righting principle in the moral world (much in analogy to the self-correction of the equilibrium of the moving parts of a system under the great kinetic theory) exists, by which the individual happiness is made alone consistent with the greatest happiness of the greatest number.* In fact, morality is seen to contain that essential element

* How, indeed, could the greatest happiness of the greatest number be secured, if each of the units of that number (the individual) neglected the pursuit of his own happiness? In fact, since the more an individual is happy, the greater is the happiness he inevitably sheds around him; so in this sense it may be considered almost a "duty" for the individual to be happy. It is certain that the highest ideal of morality can never be reached without. It may be observed, that the energy of the automatic correction in the moral world, is always proportional to the disturbance (as in the physical world under the kinetic theory). Thus the more an individual attempts to further his own happiness *at the expense* of others, the more violent is the correction or recoil which acts to diminish his happiness—so keeping him in check. In an analogous way, the more the equilibrium of a gaseous body is disturbed by some molecules acquiring excessive velocities, the greater is the tendency of the surrounding molecules to check the disturbance (or to restore equilibrium). At the same time it is well to keep distinctly in view, that the existence of the community does not, on the whole, tend to diminish individual happiness, but (on the contrary) distinctly to increase it: since the pleasures of sociability are among the greatest. There is, therefore, no restriction of liberty here; for an individual, even if he had his choice, would not wish to exist entirely alone (indeed, solitary confinement is considered one of the worst of punishments). The community increase the happiness of the individual, and (inversely) the happiness of the individual diffuses itself around him. Thus the conditions for a perfect harmony are seen to exist. It is only the blundering against self-interest, owing to ignorance and false sectarian doctrine, that causes the occasional discord. The knowledge of self-interest—or of the conditions for individual happiness—being the highest achievement of knowledge (as the final end of morality); it is scarcely to be expected that this should be reached yet, though signs of a rapid advance are not wanting. For the progress of science, by enlightening ignorance, will thereby remove the main cause of unhappiness. This may be still further facilitated as the public gradually come to have a juster appreciation of their true friends.

of stability within itself which is the very condition for the existence of self-evolved systems. It will be, of course, understood here that one of the most important elements in the pursuit of individual happiness, is the cultivation of the esteem of one's fellow men by the performance of kind offices, since friendship and sociability are among the mainsprings of individual happiness.
