

somewhat below the normal water level. When the water has been pushed down sufficiently air enters this pipe, and its escape relieves the excess of pressure. When the blowoff is in operation the appearance at its mouth greatly resembles the eruption of a powerful geyser. The stream of spray, due to the entrance of water with the air from the chamber, is thrown sometimes to a height of 400 feet.

The capacity when all intake shafts are operating is about 5,000 horse power. So far but one intake is used. This under test at near its maximum capacity showed an efficiency of better than 82 per cent. while delivering 11,930 cubic feet of air per minute at 128 pounds absolute pressure.

All machinery at the stamp mill and at the mine, whether on the surface or underground, is operated by compressed air. Beside utilizing cheap power the compressor has obvious advantages over the usual machine in the absence of parts to get out of order and in low cost of attendance.<sup>3</sup>

The foregoing examples are presented to Section D as illustrating the type of problems which are arising in connection with the extensive operations at great depths on the low-grade lodes of the Lake Superior copper district.

F. W. McNAIR

MICHIGAN COLLEGE OF MINES,  
December, 1906

#### WHY HAS THE DOCTRINE OF LAISSEZ FAIRE BEEN ABANDONED?<sup>1</sup>

PERHAPS the most remarkable change which economic opinion has undergone

<sup>3</sup> See description by A. L. Carnahan in the *Mining World* of August 25, 1906, and by C. H. Taylor in *Mining and Scientific Press*, August 18, 1906.

<sup>1</sup> Address of the vice-president before Section I.—Social and Economic Science—at the New York meeting of the American Association for the Advancement of Science.

during the last fifty years has been the change from the extreme *laissez faire* doctrines of the classical economists to the modern doctrines of governmental regulation and social control. And yet there has been very little attempt to explain why *laissez faire* has been so generally abandoned. Its abandonment has been gradual and almost unconscious, not so much the result of any rival abstract doctrine, as the cumulative effect of experience, which in hundreds of individual cases has brought men face to face with the practical limitations of the let-alone policy. The movement is fast bringing us back to the old view by virtue of which economics was first named *political* economy.

The revival of governmental activity in economic affairs is due to causes which are partly political and partly economic. This paper has to do chiefly with the economic causes and we shall, therefore, merely note in passing the chief political aspects of the problem. One reason for the extension of governmental control of industry is the growing strength of governmental control in general and of popular confidence in it. *Laissez faire* was a natural doctrine in a time when governments were weak and inefficient. Change of power has brought change of the theory of power. Compulsory workmen's insurance we find in the strongly developed German Empire; railway rate regulation follows increased power and centralization of government. It may even be said that much of the modern government regulation of industry resulted from the attempt of governments to extend its powers in self-defense. It has been felt, for instance, that if the government did not control the railroads, the railroads would control the government. Government regulation here has taken on the aspect of a struggle for supremacy. Just as England feels the

necessity of having a navy equal to the combined navies of several other European powers, so governments feel that they must overtop the corporate aggregations of wealth with which they may have to cope.

Were there space we might discuss the question how far the movement toward governmental interference can profitably be pushed. The doctrine of socialism lies at the extreme opposite pole from the doctrine of *laissez faire*, and we are moving toward socialism dangerously fast. Yet there are insuperable obstacles to the success of socialistic projects. Governmental power and efficiency are limited and, when one class of society attempts actually to rule another, there is always a tendency to corruption, inefficiency, lack of adaptability to new conditions and abuse of power. Socialism can not be put in practise without opposition, and to maintain itself socialism must hold the opposing class in subjection. Nominally this subjection would be a benevolent paternalism, but in political history it is the universal experience that the party in power, to entrench itself against attacks, soon usurps more power, employs indefensible and oppressive methods and tries to establish itself in the enjoyment of special selfish privileges.

Our present purpose, however, is to study, not the political, but the economic, side of the problem. The doctrine of *laissez faire* is that governmental interference, in economic matters at least, is unnecessary and harmful. Sometimes it is added as a corollary that not only should government let individuals alone, but also that individuals should let each other alone. 'Live and let live' and 'Each for himself' are the mottoes of this type of individualism. The advocates of extreme *laissez faire* maintain that one class is not justified in imposing its tastes upon another. They say, we must not meddle with our neighbors' affairs, even if they are wasting their lives

in what appears to us trivial, useless or positively harmful gratifications. Those who love art, science or literature have no right, we are told, to criticize those who are bored by these things, but love prize-fighting, fast horses, fast society or high living.

The reasoning by which these individualistic doctrines were supported may be briefly stated in two propositions: first, each individual is the best judge of what subserves his own interest, and the motive of self-interest leads him to secure the maximum of well-being for himself; and, secondly, since society is merely the sum of individuals, the effort of each to secure the maximum of well-being for himself has as its necessary effect to secure thereby also the maximum of well-being for society as a whole.

In the light of the experience of the last fifty years, it is not difficult to see wherein each of these two propositions is in error. First, it is not true that each man can be trusted to pursue his own best interests. Some men need enlightenment, owing to ignorance of what constitutes their best interests, and others need restraint, owing to lack of self-control in following them. The necessity for both enlightenment and restraint has always been recognized in the case of children, and an examination of actual conditions will show that they apply—often with equal force—to adults.

Liberty is certainly indispensable in a healthy society, but liberty insensibly verges upon license. While most of us would still agree that sumptuary laws are ill-advised, there is certainly good ground for maintaining that the liquor traffic should be put under some restraint, even if only by high license. It is not true that the drunkard is the best judge of what is for his own well-being and that of his family, and it is still less true that even when he thoroughly recognizes his failings he

will have the self-control to act upon that knowledge. Hence the liquor problem becomes a social as well as an individual question. Again it is not true that ignorant parents are justified in imposing their ideas of education upon their children; hence the problem of child-labor, instead of concerning only the individual, as was at one time thought, has important and far-reaching relations to society as a whole. The same principles apply to the restraint of gambling, vice, the suppression of indecent literature, the compulsion upon landlords to make tenements sanitary, and many other forms of governmental regulation.

Even where governmental intervention is impracticable or inadvisable, there will still be good reason for attempting betterment of conditions through the influence of one class upon another; hence come social agitations and the efforts of one class to educate or instruct another. On this principle are based the great modern movements for human betterment as exemplified by the Society for the Study and Prevention of Tuberculosis, the Society for Sanitary and Moral Prophylaxis, the National Civic Federation, the American Institute of Social Service, the National Child Labor Committee, temperance societies, college settlements, district nurse associations and other organizations.

Strange as it may seem to those of us interested in these movements to-day, the fact is that a generation ago many of them would have been regarded by the dominant Manchester School not only as impracticable, but as unnecessary and possibly harmful. The adherents of this school seemed to treat the difference between knowledge and ignorance as a mere difference in opinion, with which the government has no more concern than with difference of religious creeds. It is certainly true that the attempts of govern-

ments to impose what is regarded by the ruling class as the 'true religion' upon the entire people have always proved ill-advised; the recognition of this has produced the modern sentiment of religious toleration. But we are carrying toleration too far when we refuse to correct errors which science demonstrates to be false. There are doubtless millions of persons to-day who jeer at the idea that indiscriminate spitting is dangerous to public health, but it would be silly to allow their ignorant prejudice to prevail. The bacteriologist knows what the ignorant do not know, and every effort should be made to pass down this knowledge to the masses as soon as possible after it is discovered. We can not let any dogma of *laissez faire* prevent us from checking suicidal ignorance.

The world consists of two classes—the educated and the ignorant—and it is essential for progress that the former should be allowed to dominate the latter. But once we admit that it is proper for the instructed classes to give tuition to the uninstructed, we begin to see an almost boundless vista for possible human betterment. Instead of regarding the present state of society as a normal and desirable one because each man naturally 'seeks his own best interests,' we permit ourselves to judge each actual case by our own ideal standard. This standard may differ widely from the average of actual usage. We must always distinguish between the ideal or *normal*, and the real or *average*.

The average represents merely conditions as they are; the normal represents conditions as they ought to be. Yet nothing is more common than confusing the two. In fact, in most anthropometric or physiologic tables, the word 'normal' is used almost synonymously with 'average.' The normal height of man, his normal weight, his normal length of life, his normal diet.

strength, etc., are all identified with the average.

In this way all question of possible improvement is begged. We are stopped at the outset from asking, for instance, whether men in general are too stout, for the average weight of mankind is *assumed* as 'normal.' The absurdity of such procedure becomes apparent as soon as we consider cases in which, by common consent, the average and the normal are held to be distinct. For instance, the average adult man certainly does not have normal teeth, for they are usually half decayed; nor normal hair, for he is usually half bald; nor normal posture, for he is usually round-shouldered. Average health is below normal health, average morality below normal morality. In the absence of evidence we have no right to assume that the average and the normal are identical, even when we lack the data on which to base an opinion. It is only recently, and in consequence of the movement against tuberculosis, that experts have come to realize how widely different is the average air we breathe from air which is normal for human respiration, and that investigation has shown the average diet, in America at least, to be abnormally nitrogenous. In view of such revelations we should be open-minded enough to accept evidence—should it be offered—that the average span of life is less than half the normal span, and the average efficiency less than half the normal efficiency.

Those who habitually confuse the normal and the average are prevented from seeing the possibility of progress. They take the position, as unscientific as it is obstructive of progress, that 'whatever is is right,' presumptively at least, and brand every one who deviates from the average as an eccentric or a crank. The confusion between the normal and the average thus leads to the confusion between the eccentric

and the pioneer. An eccentric or a crank is properly a person who deviates from the *normal*, and is almost the opposite of the pioneer, who deviates from the *average*, but toward the normal.

Discrepancies between the average and the normal may apply—in fact, do apply—to the economic side as well as to other sides of life. But this the *laissez faire* doctrine denied. The world as it is was thought to be nearly, if not absolutely, the best world possible. One example of this complaisant assumption was in the use of the term 'utility' to signify the intensity of desire that men have for things. So far as I know, the only writer who has attempted systematically to distinguish between the desires of men as they are and as they should be, is Pareto, who for this purpose suggested a new term—*ophelimity*—to replace 'utility' as applied to man's actual desires, reserving for the term 'utility' its original sense of what is intrinsically desirable. Thus, to an opium fiend opium has a high degree of *ophelimity*, but no utility. Economists have not yet laid sufficient emphasis on the distinction between true utility and what Pareto calls *ophelimity*. A whole range of problems of social betterment is opened up through the distinction. Economists have received with derision the suggestions of reform of Ruskin. But, however impracticable his specific proposals, his point of view is certainly saner than that of most economists; for, as Ruskin has pointed out, it is absurd to regard as equivalent a million dollars of capital invested in opium culture, and a million dollars invested in schools.

But there remains to be considered a second fallacy in *laissez faire*. Not only is it false that men, when let alone, will always follow their best interests, but it is false that when they do, they will always thereby best serve society. To Adam

Smith it seemed self-evident that a man served society best who served himself best—though he would certainly have admitted that the rule had exceptions in the case of thieves, assassins and others who are obviously enemies of society. But the extent to which the classical ‘economic harmonies’ were pushed by some writers, while not including such persons as thieves among beneficent workers, was, nevertheless, astonishing. Herbert Spencer’s advocacy of freedom of private coinage is well known, though any one familiar with ‘Gresham’s law’ knows how chimerical such an institution would be. A still more astonishing suggestion is that which Molinari is reputed to have made at one time, namely, that even the police function of government should be left to private hands, that police corps should be simply voluntary vigilance committees, somewhat like the old-fashioned fire companies, and that rivalry between these companies would secure better service than that now obtained through government police!

If we stop to classify the social effects of individual actions, we shall find that they fall into three groups: (1) those actions which benefit the individual himself and have no effect upon others; (2) those actions which benefit the individual and at the same time benefit society; (3) those actions which benefit the individual while at the same time they injure society. It is the third group which the *laissez faire* doctrinaires have overlooked, and especially that part of the third group in which the injury to society outweighs the benefit to the individual. As Huxley said:<sup>2</sup>

Suppose, however, for the sake of argument, that we accept the proposition that the functions of the state may be properly summed up in the one great negative commandment—‘Thou shalt not allow any man to interfere with the liberty

<sup>2</sup> ‘Life and Letters of Thomas H. Huxley,’ by Leonard Huxley, Vol. I., pp. 384–5, Appleton, New York, 1900.

of any other man’—I am unable to see that the logical consequence is any such restriction of the power of government, as its supporters imply. If my next-door neighbor chooses to have his drains in such a state as to create a poisonous atmosphere, which I breathe at the risk of typhoid and diphtheria, he restricts my just freedom to live just as much as if he went about with a pistol threatening my life; if he is to be allowed to let his children go unvaccinated, he might as well be allowed to leave strychnine lozenges about in the way of mine; and if he brings them up untaught and untrained to earn their living, he is doing his best to restrict my freedom, by increasing the burden of taxation for the support of gaols and work-houses, which I have to pay.

The higher the state of civilization, the more completely do the actions of one member of the social body influence all the rest, and the less possible is it for any one man to do a wrong thing without interfering, more or less, with the freedom of all his fellow citizens.

In the examples given by Huxley, the acts complained of are injurious not only to society, but to the individual. But even when the act of an individual is actually for his own benefit, it may not be for the benefit of society. The paradox that the intelligent actions of a million individuals, each attempting to better his condition, may result in making the aggregate condition of the million worse, is illustrated by considering the effect of individual action in the case of a burning building. When a theater is on fire, thousands of frantic individuals are struggling to get out. In the panic, it is doubtless to the best interest of any particular individual to struggle to get ahead of the others; if he does not, he is far more apt to be burned. And yet nothing is more certain than that the very intensity of such efforts in the aggregate defeat their own ends. The reason is that the effect of the effort is chiefly relative; so far as one pushes himself forward he pushes others backward.

Numerous examples exist of actions which benefit the individual but injure so-

ciety, or benefit a part of society but injure society as a whole. Thus, the city of Chicago, in tapping the Great Lakes for its new sewerage system, has tended to influence the level of those lakes and thereby affect economically a large territory, including several states of the Union and also Canada. It has been estimated that the level of the lakes may be affected as much as six inches.

One reason for federal interference in irrigation is that the water supply is often controlled by citizens of one state, while the land belongs to another state or to the United States, and cooperation between the two is difficult to secure. Water, in the arid lands of the west, is a prime requisite, and without it the lands have no value. From one point, Mt. Union, in the Yellowstone Park, three rivers begin—the Missouri, the Columbia and the Colorado—flowing into the Gulf of Mexico, the Pacific and the Gulf of California, and through a large number of states and a vast extent of territory. The mutual interests of the riparian owners and those affected by irrigation could scarcely be adjusted merely through the play of individual interests.

Similarly, the act of one individual in destroying forests influences climate and water supply and thereby affects other individuals in distant parts. Where individuals in the community are allowed to seek their own interests the destruction of forests in some regions inevitably follows.

A like effect was seen a few years ago in the case of the seal dispute between the United States and Great Britain. The play of individual motive in this case tended to the actual extinction of seals, and could only be curbed by the mutual agreement of nations to prevent pelagic sealing.

Individual action can not be trusted to provide fire-proof or slow-burning construction as required in a crowded city; for the individual, although interested in protect-

ing himself from his neighbors' fires, is not interested in protecting his neighbors from his own fires; hence the necessity and justification for city fire ordinances. Similarly, soft coal, in such cities as Denver, St. Louis and Pittsburg, constitutes a veritable nuisance to the entire city; and yet the individual factory owner is undoubtedly following his own best interest in not substituting hard coal or using expensive smoke-consumers. Such protective measures would redound greatly to the benefit of the community, but only slightly to his own benefit; hence the necessity and justification for smoke ordinances. Individual action would never give rise to a system of city parks, or even to any useful system of streets. And where parks exist, as in the case of Battery Park, New York, there is a constant tendency for those seeking their individual interests to encroach upon them. In Hartford and other cities certain parks have in this way gradually disappeared, much to the damage of the public.

In the cases mentioned, of a conflict between social and individual interests, legal restraints become necessary. But there are many examples in which, for one reason or another, legal restraints are impracticable. This is particularly true in cases where a number of nations are concerned. There can be no question, for instance, that the standing armies and great navies are an almost intolerable burden in Europe, and that their existence has tended to increase the cost of our own army and navy, three thousand miles away. Nevertheless, in the absence of any central international authority or mutual agreement to bring about disarmament, it must be confessed that it is to the interest of Germany or France each individually to keep up its military equipment to a level comparable to that of its neighbors. Yet the aggregate effect of international competition for military power is to cancel itself out; the ad-

vantages and disadvantages are purely relative. The nations are in a mad race each to excel the other. Their object being purely one of relative advantage, such advantage can be shifted from one to the other, but can not accrue to all. A general increase in relative advantage is a contradiction in terms, so that in the end the racers as a whole have only their labor for their pains.

An economic example of the same international character, and one which has received very scant attention, is found in the increase of the monetary metals. The production and distribution of gold and silver is the effect of individual action, each person seeking his own best interests. Yet the aggregate effect upon these individuals may be injurious. The injury referred to is not the imaginary injury of an 'unfavorable balance of trade' which was the bugbear of the mercantilists, but the exact opposite. A nation which increases its stock of money is always and necessarily a loser. This increase costs the nation either labor of mining or commodities sent out of the country, and for this cost there is no return whatever. To assume that the increase of money is itself a valuable return is to commit the fallacy of inflationism. Money is a very peculiar commodity. A general increase of other commodities is an advantage to society, but a general increase of money is not. The inflationist reasons that if a government can enrich one person by printing paper money and bestowing it upon him, it has only to do the same for everybody in order to enrich the nation. The paper-money delusion is too well understood to require comment. It is, however, not always perceived that precisely the same reasoning applies to all inflation, even the inflation which nature herself creates when she unlocks her hoards of buried treasure. The United States now has \$33 of money

per capita as against \$22 a few years ago, but we are no better off on that account. The smaller amount of money is as useful in exchange as the larger amount. There are, of course, transition evils in contracting or expanding the currency, but so long as the price level remains constant or certain, the absolute number of dollars of the circulating medium is a matter of indifference. It follows that any effort expended in increasing the stock of money is wasted effort, an effort without a return. This waste is a necessary concomitant of monetary individualism.

A not dissimilar case, and one which is now causing much discussion, is that of railroad rates. Those who have examined the working of competition in railroad transportation recognize the fact that this competition is of the variety called 'cut-throat' competition, and that no stable or normal rates for transportation, under which capitalists will consent to invest in railway-building, can occur through such competition. Those who advocate competition as a cure for the evils of railroad rates do not appreciate the mechanics of the problem. The effect of competition is to bring rates down to the cost of operation; it leaves no provision for interest on capital sunk in the enterprise. If the cost of operation is one cent per ton-mile, whereas two cents are required to include enough revenue to pay interest on original cost, rates under competition will inevitably sink below the two-cent level to the one-cent level. For if we assume that the two-cent rate is for a moment the ruling rate, it is clear that it would pay any individual competitor to cut under that rate in order to divert traffic away from his rivals. But as soon as he cuts below it, all the others must do likewise or lose their traffic. This competition is merely self-defense, and yet its ultimate effect is to injure, not benefit, all of the roads who engage in it. It is

*cut-throat* competition. In order that rates may be maintained at the two-cent instead of the one-cent level, either competition must be absent, or it must be partial or imperfect. In the actual railroad world competition is usually present at some points and absent at others. The consequence of this mixture of competition and monopoly is that rates will be determined differently for some points than for others, and this constitutes what is called local discrimination. In a régime where monopoly is present, discrimination, not only of this local character, but discrimination as to persons and as to commodities carried, is a natural and inevitable result. It is not, of course, a desirable result; but it is no more undesirable than is the cut-throat competition which is the other horn of the dilemma. This cut-throat competition discourages the investment of capital in new railroads, and the shippers and consumers must in the end suffer. This dilemma between the evils of monopoly and of competition leads to governmental regulation, though the efficacy of this remedy is not all that could be desired. It is not our purpose to discuss the best solution of so difficult a question. We are merely concerned in pointing out that this railroad-rate problem is partly due to cut-throat competition and that cut-throat competition is one more example of the suicidal effects of blindly following individual self-interest.

Numerous other examples might be given; we shall, however, content ourselves with one. As John Rae has pointed out, there exists a species of subtle competition in private expenditure, due to social rivalry—the desire for distinction through wealth. It has frequently been remarked among ladies' social clubs which begin with simple entertainments, that each successive hostess attempts, almost unconsciously, to surpass her predecessor in the entertainment offered. Beginning with tea and cake, the

club ends with elaborate and expensive collations, until it produces a heavy drain upon the resources of its members. In precisely the same way, on a larger scale, there is laid a heavy burden upon us all through the social rivalry of individuals. If we study the history of Newport or similar fashionable resorts, we find that social racing has gradually resulted in setting a pace which only the most wealthy can keep up, and that even for them expenditure represents cost rather than satisfaction. This cost often takes the form of producing fictitious values on articles merely because they are 'exclusive.' As John Rae says:<sup>3</sup>

A dish of nightingale's brains could scarcely be a very delicious morsel, yet Adam Smith quotes from Pliny the price paid for a single nightingale as about £66. According to Suetonius, no meal cost Vitellius less than £2,000 \* \* \* Thus Adam Smith reckons the cost of some cushions of a particular sort used to lean on at table, at £30,000.

Nor do we need to draw our examples from ancient Rome. The 'History of Luxury' by Baudrillart will show the tendency to produce luxury out of social rivalry in all ages. It was only recently that an American in London gave a dinner party which was said to have cost \$8,000. The table was placed in a large Venetian gondola set in the midst of an artificial lake, while in a smaller gondola near by a band was stationed.

Much has been said of late about the importance of living the simple life, but so far as I know there has been no analysis to show why it is not lived. This analysis would reveal that the failure to live it is due to a kind of unconscious cut-throat competition in fashionable society. When San Francisco was destroyed by earthquake and fire, much comment was made upon the fact that many did not feel their losses as

<sup>3</sup> 'Sociological Theory of Capital,' by John Rae, ed. by C. W. Mixter, MacMillan, 1905, p. 247.



much as might have been anticipated. One reason for this result is doubtless found in the fact that the losses were not relative. Had a single individual found himself suddenly reduced from a palace to a tent, his sense of loss and discomfiture would have been great. He could no longer return social entertainment among his former associates; he would feel 'out of it' and envy would gnaw at his breast. But after the San Francisco catastrophe there was little place for envy; all were in the same boat. There was no relative loss, there was only the absolute loss of creature comforts, and strange as it may seem to one who has not considered it, the absolute loss is the smaller of the two.

It is hard to overestimate the tax which is laid upon society through social racing. We are not conscious of this weight, because, like the weight of the atmosphere, it is always pressing upon us. The New York business man buys a silk hat as a matter of course. He does not think of its cost as a tax laid on him by society. He is satisfied because the hat fills a want, and he does not consider how that want originated. It is only when the tax varies by change of place, just as when atmospheric pressure varies by ascending a mountain, that he is at all aware of its existence. If he removes to a smaller town where social racing is less intense and the leaders in the race are unable to set so high a pace, he finds the tall hat no longer *de rigueur*. He drops off this and numerous other expenses and feels himself that much better off. A gentleman recently refused a salary of \$7,000 in New York, preferring \$4,000 in a smaller town, feeling that he could buy no more real satisfaction with the former than with the latter. The extra \$3,000 meant simply that it would cost more to keep up with his neighbors.

The burden of social racing is laid not only on the rich but upon all classes.

A milliner in New Haven recently thought to avoid competing with existing fashionable millinery establishments by catering to the trade of shop girls. To his surprise, he found that the tyranny of fashion was quite as strong among them. He attempted to put on sale a large number of \$5 and \$6 hats, but found great difficulty in disposing of them, whereas the few \$15 and \$16 hats met with a very ready sale. The shop girls wanted these hats to 'be in the swim.' Recently in France a whole family committed suicide because they had lost the capital which they considered necessary to keep their social position.

Many ingenious arguments have been made to justify luxury and in some of them there may lie truth. The fact that luxurious expenditure can be so readily cut down in hard times provides a sort of buffer against want and famine. The relations of luxury to the growth of population deserve careful study. But whatever the indirect benefits of luxury, certain it is that it forms a tax upon society, and a heavy one. It seems also true that where luxury is greatest civilization decays.

Were there more space we might discuss remedies for this social racing; but we must content ourselves with merely describing the phenomenon. It exemplifies the manner in which the self-seeking of each may create a burden for all.

From this and the other examples which have been reviewed we see that the mechanics of individualism is not so simple as the individualists have assumed. The old individualism requires two corrections: first, the individual may often be interfered with in his own interest, because either of his ignorance or his lack of self-control; secondly, even when an individual can be trusted to follow his own best interests, it can not be assumed that he will thereby best serve the interests of

society. A recognition of these two facts is essential not only to clear thinking, but as preliminary to any practical solution of the great problems of human betterment. We are doubtless to-day in danger of too much socialistic experimentation; but nothing can be gained and much may be lost by ignoring or condoning the opposite evils of individualism. In fact, the menace of socialism can best be met if we understand and acknowledge the evils which it is intended to remedy. The preliminary to remedy is diagnosis, and an accurate diagnosis will save us from the error of both extremes—the extreme, on the one hand, of an overdose of socialism, and the extreme, on the other hand, of omitting all medication whatever.

IRVING FISHER

YALE UNIVERSITY

#### SCIENTIFIC BOOKS

*Sociology and Social Progress: A Handbook for Students of Sociology.* Compiled by THOMAS NIXON CARVER, Ph.D., LL.D., David A. Wells Professor of Political Economy in Harvard University. Boston, Ginn and Company [1906]. Pp. vi + 810; 8°. List price, \$2.75; mailing price, \$2.95.

This is a timely and valuable book. In these days when social questions are attracting the attention of all, even the scientific specialists, and when an undigested mass of contemporary literature is being poured forth upon the public wholly incapable of appraising it, it is of the greatest importance that the utterances of the masters of thought, science and literature bearing on the subject should be made accessible to all as guides to public judgment. To do this is the purpose of this volume, and even a partial enumeration of the authors and works that have been drawn upon is sufficient to indicate the value of the compilation. The most important are: Comte's 'Positive Philosophy' (Harriet Martineau's English condensation), Buckle's 'History of Civilization,' Darwin's 'Descent of Man,' Adam Smith's 'Theory of Moral Sentiments,'

Bagehot's 'Physics and Politics,' Fiske's 'Outlines of Cosmic Philosophy,' Herbert Spencer's 'Data of Ethics,' Kidd's 'Social Evolution,' Tarde's 'Imitation,' Galton's 'Hereditary Genius,' Machiavelli's 'Prince,' Aristotle's 'Politics.'

When we remember that about two thirds of the space is devoted to these works and a fair share to others ranking second only to these, we can well pardon the introduction of a number of lesser works and even some quite insignificant ones.

The selections from large works, which is no easy task, are judiciously made. For example, the three most important subjects treated by Buckle, viz., the influence of physical laws on society, the rôle of intellectual development, and the influence of religion, literature and government, are introduced here without abridgment. Darwin's chapters on sexual selection in relation to man are given in full with the exception of the scientific details, so that it is quite readable. And so of the rest. Those who read these works in their youth and retain only a vague impression of them, have an opportunity here to refresh their minds with the cream of them, and those who never read them at all can gain from this digest a fairly adequate idea of them.

But Dr. Carver has intended that the book, as its title implies, should be something more than a mere compilation. In the first place, he has supplied an introduction to it of his own, in which he sets forth as clearly as has ever been done the true scope and method of sociology. His treatment is thoroughly sane. He is an economist of the modern school which has arisen from the recent revised definition of value, and which brings the great sciences of economics and sociology into sympathetic touch with each other. If he lays somewhat undue stress on social progress, he only does what others, including the present reviewer, have done before they had devoted themselves to a serious study of the conditions of social order. The doctrine which he specially emphasizes as his own, and which he had earlier set forth, is expressed in these words: