PURE-FOOD LEGISLATION VS. POOR FOOD-LEGISLATION.*

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For the purposes of this paper, it matters but little which of the above titles is taken; the one representing what is admittedly desirable, the other—unfortunately to a large extent—what actually exists. The problem involved is by no means so easy as, at first sight, it might seem. Much of our knowledge of the general subject is, as yet, but tentative and, in attempting to formulate it, so much depends upon our definitions. Certain general principles, however, seem to have been fairly established; and legislative enactments embodying them prove efficient or futile just in proportion as these fundamental principles are kept well to the front, or are lost in a mass of minor detail.

For the present we shall use the term food in its broadest sense, meaning thereby "the substances taken into the body which are utilized in maintaining the functional activity of the organism." This definition, given by Sidney Martin,¹ it will be seen may be made to include drugs, as well as foods and accessory foods, as they are more commonly understood. While it would be beside our purpose to argue that a drug is a food, or vice versa, it is certainly true that drugs are used to maintain "the functional activity of the organism," and as the subject of pure drugs is so frequently considered in connection with that of pure foods, the one general term may be used to include both—at least in public health discussions.

While the fact may be rather a sad commentary upon our times and customs, the necessity for legislation on these subjects is assumed to be granted. In a paper, not yet published, Dr. H. W. Wiley, of the U. S. Department of Agriculture, classifies food legislation in regard to its source, as national, state, and municipal. For obvious reasons, such division of the subject is, in this country, of peculiar import. Continuing, Dr. Wiley defines food legislation according to character, as general, subjective, prohibitive, restrictive, and fiscal. Taking them in inverse order, we can hardly look upon food legislation from the fiscal standpoint, however effective it may have proved, as other than an emergency measure. Of this, more later. Restrictive legislation is held to be objectionable because it can hardly be framed without more or less unjust discrimination. Prohibitive legislation is almost invariably a failure; that it has a distinctly deleterious moral effect has been deduced from our experiences in the effort to prohibit the sale of intoxicants. Subjective legislation is deemed too cumbersome for practical efficiency, inasmuch as it involves legal enactments for each separate product to be controlled.

General legislation then, according to Dr. Wiley, is the only just and practicable method of securing the desired results. The Brosius, Mason and other bills before Congress partake of this character, and are to be executed by the (to-be-elevated) Director of the (to-be-erected) Bureau of Chemistry of the Department of Agriculture.

Here, then, we may hear the old cry: "There is no god but God, and Mahomet is his prophet!" It is rather

confusing, though, to discover that there is more than one claimant to the title of "Defender of the Faith."

Dr. Charles A. Crampton,² Chief Chemist, Internal Revenue Office, in a recent article on "Food Preservation and Food Adulteration," declares that: "In view of the difficulties which have beset the path of the Interstate Commerce Commission in the exercise of their authority, it is a matter of grave doubt whether the Secretary of Agriculture would be able to enforce a law based upon the same authority. The Department of Agriculture, moreover, while it is well equipped in the matter of scientific experts, has no large force of local officers at its disposal, a most essential and expensive part of the machinery necessary to the proper execution of a measure which will involve the inspection of the entire area of the United States from Maine to California." Dr. Crampton seems to have overlooked the fact that the U. S. Department of Agriculture has, perhaps, a larger and more widely distributed "force of local officers" than almost any other of the government departments. It may be questioned, however, whether a veterinarian for instance—at least in the present state of development of our veterinary schools—would be wholly competent to fulfil the manifold functions which these proposed laws create; and if the veterinarian be incompetent, the revenue officer would be apt to be still more so. Dr. Crampton concludes that "a much more feasible plan . . . would be the enactment of a general law modeled upon the revenue laws now in operation, or the gradual extension of these laws to cover other articles of food liable to sophistication; the scientific resources of the Department of Agriculture could be well applied to the establishment of standards of purity, a most troublesome branch of the subject, and one not necessarily connected with the routine of its execution."

For any one familiar with the history of the old National Board of Health, and the steps by which it was practically smothered out of existence, it is easy to imagine that the Supervising Surgeon-General of the U. S. Marine-Hospital Service, writing in the same strain, might be able to demonstrate that that Bureau of the Treasury Department is the only possible government office to which the great work should be assigned. It is a fair inference, from Dr. Crampton's opening paragraph, that the War Department, too, may know something—at least of preserved meats.

Turning now to the bulky volume of testimony before the Senate Committee on Manufactures (Senate Report No. 516, 56th Congress, 1st Session), one is inclined to question "the wisdom of Congress" (invoked by Dr. Crampton), if it is to be adjudged by some of the propositions here set forth. Perhaps, from the standpoint of a chemist or a member of congress, "the great bulk of the condensed milk of the country is a perfect human food" (page 3), and candy may be "a natural and proper element of food" (page 9), but the members of the Section on Diseases of Children, of this ASSOCIATION, will scarcely endorse these dicta.

It would be as tiresome as it would be futile to wade through this conglomeration of repetitious testimony, the value of which, by reason of the way in which it was taken and recorded, is—from a scientific standpoint—infinitesimal; even were all the articles there enumerated mentioned, the whole field would not be covered. Nor do we find the National Pure Food and Drug Congress conducted with that singleness of purpose which might be thought desirable. Those of us who attended its

* Presented to the Section on Hygiene and Sanitary Science, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1. Stevenson and Murphy: *Treatise on Hygiene*, vol. i, p. 393, Phila.: Blakiston, 1892.

2. N. Y. Independent, vol. III, No. 2681, pp. 942-44, 19, iv, 1900.

sessions found much of the time taken up with the bickerings of conflicting interests, the cross-purposed wire-pulling of individuals who have axes to grind.

In spite of all these conflicts and differences of opinion—many of which arise from inability to get a comprehensive view of the whole situation, or from unwillingness to move in this matter with an entirely unselfish desire for the public welfare—there are some points about which all who are in earnest are agreed. For convenience, Dr. Crampton is again quoted: "The keynote of modern propaganda in respect to methods of control of food adulteration may be given in three words—viz. *an honest label!* No one wishes to deprive the poor man of his right to use a cheap and wholesome substitute for a more expensive article of food; it would be an unwarranted interference with the rights of both producer and consumer to prohibit the sale of such an article; moreover, it would be inimical to the advance of scientific invention, which has conferred a distinct benefit upon mankind by its production. But it should be sold under its true name and upon its own merits, not as or for the article of which it is an imitation or substitute."

The idea, then, would seem to be not that adulteration, imitation, sophistication, substitution, are unobjectionable, but that they would be practically impossible if everything were labeled *suo nomine*. From a scientific standpoint, it is desirable to demonstrate, wherever possible, that this or that food product is, or is not, wholesome. But there is a fact, so often overlooked by scientists as well as would-be scientists, which has been especially emphasized by Prof. A. B. Prescott in his testimony before the Senate Committee, namely, that laboratory reactions, test-tube physiology, are very different processes from those which take place in the human economy. Says Professor Prescott (Senate Report 516, page 197): "No two stomachs are in exactly the same condition. The contents of the stomach, the chemical agencies of solution in the stomach, are very, very, complex; in fact too complex to be fully defined by chemistry at the present time." Would that all physiologic chemists were so honest and frank! The inability of even competent chemists to reach final conclusions on these subjects is curiously illustrated in some of the German laws. In one section of the country we find that borax and boracic acid have been adjudged inimical to health, and therefore their use as preservatives prohibited. In another, we find that similar authority has decided that these preservatives are harmless and therefore their use is permitted.

Viewed from the other standpoint, the history of food legislation shows pretty clearly that the consumer may safely be left to his own instinct and experience to determine what is or is not wholesome. What he seeks and demands is simply the truth. So that, both physically and fiscally, the public weal is best conserved by absolute honesty. In proof of this take the testimony offered on the subject of mixed flour (Senate Report 516, page 5). Said Mr. Augustine Gallagher: "People don't want a mongrel, they want real goods; they are satisfied to trust their judgment. If they want any mixing done they wish to do it themselves. They do not wish to be victimized in the mixing. People understand there is no use of any one mixing products unless they are making money by the process. The enforcement of the flour act has accomplished more in three months than was ever claimed for it by the most extravagant. . . . Our export trade in wheat flour has increased between 24 and 25 per cent. during the

first three months of the operation of the mixed-flour law."

This brings us to another point, well made by Dr. Crampton, the absolute futility of the attempt to inculcate moral principle by mere legal enactment. As he puts it: "the first and most important requisite to a more rigid control of the practices of false pretences and counterfeiting in the preparation and sale of food products is, not more legislation, but a more sensitive public conscience; not more illy considered and half executed laws, but more respect for existent laws on the part of the producer and seller, more vigorous assertion of his rights in the premises on the part of the buyer and consumer. So long as it is practically impossible, owing to the state of public sentiment, to send a man to the penitentiary for selling oleomargarine as butter, it will not be possible to execute with any degree of thoroughness further laws which multiply the number of the same character of misdemeanors."

What then, in conclusion, is the proper solution of these problems? The writer by no means feels himself competent to give a final answer to the question. Yet, there are suggestions which may come to the mind of any thoughtful student of the subject, and in proportion as they are honest and disinterested they are, presumably, worth recording.

In the first place, this subject demands a greater interest and a more thoroughly cultivated intelligence on the part of the medical profession. The physiology of digestion, absorption and assimilation and the whole question of dietetics, in health and in disease, together with that of practical therapeutics, must be more carefully worked out. These studies should be so conducted as to be wholly removed from the debasing influence of commercialism. We are yet far too prone to be led by the alluring advertisements of the enterprising manufacturer to try, and even to commend without a fair trial, the multifarious products which he foists upon the market—for revenue only.

Given such a preparation, the second point will have been insured, the adoption—by the profession, not by the laity—of certain definite and more or less reliable standards, embodying the fundamental principles involved.

The third item will have to do with the putting into effect and carrying out of these principles—necessarily a governmental function. And here I would ask, where is the sense in, what is the excuse for the miserable, puerile, petty jealousies of the various government departments in the discharge of these functions? In common with many other members of the ASSOCIATION, the writer has long hoped and worked for the establishment of a national department of health, which, logically, should have charge of this and all allied subjects. Perhaps our efforts along this line have been misdirected. Certainly any measure which would convert into a mere political organ what should be—if I may so phrase it—a purely scientific organism, is to be deprecated. But is this necessary? In the past ten years, as my acquaintance therewith has grown, I have been more and more amazed at the extent and value of the work of the many scientific establishments under the direction and control of our national government. From the standpoint of economy, the apparent waste arising from the duplication and reduplication of effort in this direction, is even more amazing. As a matter of fact, it would be very difficult to so differentiate and isolate these various works as entirely to avoid duplication. The diverse functions of the governmental body are as closely inter-

related and interdependent as are those of the human body. Might it not be possible to establish a bureau of science, for instance, in which the achievements of these various laboratories—no matter in what department located—might be assembled and centralized, a scientific clearing house as it were? What matters it whether a chemical analysis be made in the laboratories of the U. S. Department of Agriculture, of the Treasury, or of War? There is no danger that a soil analysis will be attempted by the Biochemic Division, nor that a specimen of *Trichinella spiralis* will be referred to the bacteriologist of the U. S. Marine-Hospital Service. Nor yet is there any reason why the Entomologist's nose should be dislocated just because the Helminthologist is able to determine a specimen of *Boophilus bovis*!

Finally, when this whole subject has been properly formulated in the shape of a bill to be passed—not passed upon—by Congress, let the bill first be submitted to all specialists, all the trades, all the trades organizations whose interests are involved. Let each perfect his or their own section, showing in what way it will affect them and what points it is most important to secure. It is absurd to expect that a committee of Congress should wisely and justly determine upon the details of such a bill. Equally absurd is it that a chemist should define what is to be the part taken in these investigations by the botanist, the zoologist, the pathologist.

Several of the bills before Congress are supposed to contain all that is necessary, after a careful study of the food laws of other countries; but a comparison of these bills with the national laws of Great Britain and Germany, for instance, will show how utterly inadequate they are. It has been urged that, in prospect of the passage of the bill recently agreed upon by the National Pure Food and Drug Congress, it is best to withhold criticism—this upon the argument: "Better half a loaf than no bread." On the other hand, it may be said: "'tis better to bear the ills we have than fly to those we know not of." The bill referred to, if passed as agreed upon, will not only work a manifest injustice in certain particulars, but it will, almost inevitably defeat itself, in others.

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A NEW LEG-SPLINT FOR TRANSVERSE FRACTURE OF THE TIBIA.*

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This paper considers, briefly: 1, why surgeons splint a broken leg; 2, the plaster-of-paris treatment for it; and 3, a new leg-splint devised by the writer.

WHY SHOULD SURGEONS SPLINT A BROKEN LEG?

The question, though elementary, is quite opportune, as shall be shown further on. Senn¹ says: "In the treatment of fractures as in the treatment of wounds of the soft parts accurate coaptation and effective fixation should be aimed at, so as to place the parts in the most favorable conditions to unite by the smallest possible amount of new material." Thomas Bryant,² in his manual, writes: "After the setting of the fracture, the essential part to be observed in its treatment is the immobility of the broken bone; and next to this, its

exposure during the process of repair to render certain that the bone has maintained its right position."

These quotations are sufficient to answer the query why we should splint a broken leg. A reference to the medical journals of the past year will show, however, that several surgeons—notably Champonnière—advocate the treatment of fractures without the use of immobilizing apparatus. Massage and passive motion are deemed all sufficient. It is difficult to comprehend the *raison d'être* of the newer teaching, unless it be viewed in the light of a reaction from alleged immobilizing apparatus in vogue that has serious disadvantages. The swing of the pendulum of practice, from misfit immobilizing apparatus that often produces deformity, and always prevents the seasonable application of massage and passive motion, to no apparatus at all, is the swing of the pendulum that has many illustrations in the history of the practice of medicine.

One advocate of the new method of treatment gravely informs us that the Hottentots never employ fixation in fractures, but rely solely upon rubbing. Despite this interesting information, it is probable that the English-speaking races, with the restraining influence of their jury system, will continue to employ immobilization in the treatment of fractures. The necessity for the use of massage and passive motion in the treatment of fractures is not questioned. That manipulation alone should suffice in the treatment of fractures, as with the Hottentots, is untenable. The combination of fixation, massage, and, in proper cases, passive motion, is doubtless the most effective treatment.

THE PLASTER-OF-PARIS TREATMENT.

In describing this treatment, I shall quote an advo-

* Read by title in the Section on Surgery and Anatomy, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1. "Principles of Surgery," Phila., 1890, p. 56.

2. "Manual for the Practice of Surgery," Phila., 1855, p. 63.