

the narrowness of the former academic curriculum, and business men often measure values only in terms of dollars and cents. There is coming a realization that there are extremists on both sides of the question of education: that the vocational courses without some study of the classics do not properly educate the youthful citizens.

Pharmaceutical educators also have different viewpoints; studies of mathematics, history, Latin, etc., some contend, might be extended with additional years of pharmacy courses. By no means should the time in college be a measure of what the actual or direct needs or application of the pharmacist are in the pursuit of his vocation—education should mean much more than this.

Some medical colleges, with advanced requirements for medical education, provided only for the subjects of the first two years; but this, if we are rightly informed, has not proved successful. In colleges of pharmacy a similar plan might result otherwise if the first two years qualify the druggist and the subjects of study are so arranged that further application by the students leads to other degrees.

E. G. E.

LAW MAKING, RATIONAL, AND IRRATIONAL.*

BY JAMES HARTLEY BEAL.

The faith of the average American citizen in the all-sufficiency of legislation to cure social, economic and moral evils is childlike and bland—a faith that is never chilled by the fact that rarely in his experience has he known a law to accomplish more than a fraction of the good that was predicted of it, and that many laws have either failed altogether or have introduced greater or more numerous evils than those they were intended to cure.

The framers of the American system of government proceeded upon the theory that the people who were least governed—who had the fewest laws to obey—were the best governed. To-day this ancient and once honorable doctrine is very much in the discard. No matter what evil is under consideration the first remedy thought of or proposed is legislation. The number of measures introduced during the life of a single Congress may run to ten or fifteen thousand, and even a state general assembly may be called upon to consider several thousand proposed new laws during a single session.

Granting that our highly organized civilization, with predominating industrial and economical interests, may require a more complex system of jurisprudence than would serve the necessities of a less specialized social organization, it is entirely absurd to assume that society needs the amount of regulation that these frantic attempts at law-making would indicate. Comparatively few of the proposed new laws possess any real merit. A large proportion simply reflect the spirit of meddlesomeness that governs the minds of those who gratuitously assume both their right and their ability to prescribe the standards according to which the remainder of their fellow citizens shall order their morals, their occupations and their daily lives.

*Delivered before the Urbana Association of Commerce.

Assuming that we shall continue to grind out national and state legislation at the present rate, what will be the volume of written law in another twenty-five years?

No Law Can Be One Hundred Percent Efficient.—Another lesson of political history is that even the best law will fall far short of complete efficiency in removing the evils at which it is aimed. Whether we have one law or a thousand upon a given subject, there will always be a residuum of evil that mere law-making will not cure. When this irreducible minimum has been reached the multiplying of prohibitions only multiplies the number of violations.

It is an accepted principle in mechanics that no machine can be expected to reach 100 percent in practical efficiency, and the mechanic therefore directs his efforts to obtaining the most profitable ratio of power expended to work delivered. Strangely enough, people who do not expect to obtain one hundred percent efficiency from any construction of wood or metal, are forever trying to compose laws that shall be one hundred percent efficient, that is to say, laws that cannot be or that will not be violated.

Some thousands of years ago there was promulgated a code of Ten Commandments, governing the fundamentals of social and moral conduct, and in all the centuries since then the Divine Author of that code has neither repealed nor amended a single one of the ten original articles. A divine intelligence could be expected to understand that if men are disposed to disobey the commandments of a primary code they will be equally disposed to disobey the provisions of all subsidiary codes of amendments and regulations; but human law-makers, when they discover that one set of statutes is being violated, seem to imagine that by the adoption of a new code of regulations, or by rearranging the phraseology of the old code, the law violator will become a law observer.

The law-making bodies of this year are busy amending and reforming the laws adopted at previous sessions. Last year they were doing the same thing. Next year they will be repeating the process.

Each successive measure in its day was proposed as an important and necessary reform, and those who dared to oppose it were denounced as reactionaries and obstructionists, or worse. When in time its defects became evident, it was then attacked as an abuse by a new set of law-makers, the successive crops of reformers jumping over each other's heads like a group of boys at leap-frog.

What we all must learn is that the best possible law will fall considerably short of perfection, and that when any comprehensive and well-considered law has once been placed upon the statute books our attention should be given to its enforcement, and not wasted in impossible attempts to devise measures that cannot be violated.

Excessive and Radical Legislation Productive of Lawlessness.—Another lesson of political history that many reformers have failed to learn is that excessive and extreme legislation is of itself a most potent breeder of lawlessness.

Every student of history knows that, without exception, periods of excessive and radical regulation have always been followed by periods of equally extreme and radical reaction.

Seemingly there is a certain ratio or balance of regulation that must be maintained to obtain the best results for law and order. Human nature will stand for coercion without reaction up to a certain limit, but if this limit be exceeded there will be a moral break-down that makes the individual less amenable to the reasonable restraints of the law than before.

The very extremity of a law may constitute the most potent reason for its violation. In other words, the profits of violating the law may be so great, and the risk of punishment so small in comparison, that the hazard is really not much greater than the hazard of lawful occupations that are much less profitable. Such laws in effect place a premium upon law-breaking, and penalize the law-abiding citizens who are naturally inclined to obey the law themselves at a disadvantage as compared to those who ignore it, and there is a letting down of moral tone all along the line.

Most men believe that the chief function of government is to protect them from oppression. When the citizen comes to feel that the government itself has become an oppressor, he is already at heart a potential law-breaker, ready to evade the mandates of the law whenever he thinks it safe to do so.

The Failure of Emotional Legislation.—That some laws succeed fairly well in correcting the evils at which they are aimed, all can testify from personal observation; that some laws do not work at all, or have a back action that is worse than inaction, is a matter of common knowledge.

If we examine into a law that is known to work fairly well in practice we shall usually find it to be one that is not extreme in its provisions, and one that was formulated by cool and deliberate judgment in the light of well-established precedents. If we examine into the laws that are admitted failures we shall find almost universally that they are extremely drastic in their provisions, that they were composed under the influence of strong emotions and passed under the whip of intensive propaganda.

When our emotions are aroused in public affairs we want direct action and lots of it, and we mistrust the motives of those who urge less drastic measures as a more certain, though slower and less spectacular, method of reaching the desired end.

We regulated the railroads with our emotions instead of with reason and judgment until we regulated them nearly into bankruptcy. Now at tremendous cost we are painfully trying to work back to the line of reason and moderation.

When we undertook to regulate the trusts we again rejected the teachings of experience and the reasonable judgment of experts and followed emotional leadership with the result that we hopped and haltered legitimate business enterprises without materially curbing the operations of those the law was intended to reach. This emotionally formulated law has not only operated to prevent small business men from combining to protect themselves from the aggressions of large capital interests, but every time Congress has passed an appropriation bill it has been reduced to the pitiful expedient of expressly providing that the money appropriated shall not be used to prosecute violations of the law by certain strongly organized interests.

Why is it that we have so frequently followed emotional leaders and rejected the counsel of conservative statesmanship? Simply because of our impatience for immediate results. It is the same disposition that prompts the teacher or doctor or merchant to withdraw his small hoard from the safety of the savings bank and invest it in oil stock that promises a thousand percent return.

Common horse sense, or even average mule intelligence, should teach us that in political affairs as in business enterprises the more profuse the promises the less likely the performance. The promoter of "get-rich-quick" concerns can always promise greater returns on the investment than can be offered by the promoters of legitimate business undertakings.

Laws Fail When They Ignore Human Nature.—Another lesson from the history of political experiments is that laws fail when they ignore the ordinary qualities of human nature instead of operating in harmony therewith.

The engineer who digs a tunnel, or drains a swamp, or irrigates a desert does not begin operations without a careful and scientific study of all the surrounding conditions. Sometimes he finds a direct method of approach the most suitable, sometimes an indirect approach, and his success is measured by his ability to adjust his methods to the peculiar circumstances in each case. Sentiment finds no place in his plans. He does not ignore or attempt to violently suspend the operation of natural laws, but seeks to utilize them in the attainment of his purpose. He does not attempt to destroy the natural tendency of water to flow down-hill, but makes use of a fall of water at one place to carry water up-hill at some other place.

The reformer of political and social institutions, in his anxiety for direct and immediate results, rarely takes time to patiently study the particular conditions involved, refuses to be bound by the laws of human nature, and will not consider any other method of approach than the age-old formula "it is forbidden," which in the history of civilization has failed as often, if not oftener than it has succeeded.

Some evils of the body politic are of such a nature that the only proper course of procedure is to totally prohibit them, but others are like the tares in the wheat that cannot be directly uprooted without uprooting the wheat also.

Human nature in the mass can be led by education and persuasion; it cannot be successfully driven. Laws that are passed by tricky political methods or adopted with the grudging assent of a bare majority, and which attempt to violently uproot world-old prejudices or beliefs in a day, retard rather than advance genuine reform.

Consider also the bulk of secondary legislation in the form of rules and regulations adopted by the administrative officers of the law. Congress adopts a measure covering four or five pages, whereupon the department of administration issues a code of regulations covering fifty or sixty pages, introducing obligations and producing results which the original law-making body could not have contemplated.

This country began its existence with the freest government on the face of the earth, and under this freest of governments our people have prospered as no people ever prospered before. Unless the present craze for law-making can be checked, the next generation will find itself subject to more regulation than was old *verboten*-ridden Germany, and under the rule of more bureaus and bureaucrats than Russia under the Czars.

The Inability of Reformers to Learn from Experience.—Somehow men do not

seem to learn, or at least do not heed the lessons of experience in politics as they do in the lessons of the physical sciences.

In the physical sciences facts once ascertained by careful experimentation are recorded in literature and become a part of the general inheritance of the race, so that men do not waste their lives in forever trying out the things that have been fully tested previously.

In political science, however, we do not seem to be able to record well-established political and economic facts in such a way as to impress them upon the popular mind and save the world from endlessly trying over and over the same old experiments that have been tried and have failed numberless times before. These facts have been recorded, however, and are available to those who will take the trouble to look for them.

Successful Laws Mark Reforms But Do Not Make Them.—One of the facts we may learn from the history of political experiments is that successful laws do not make reforms, but only mark them, that is, they mark the periods when the reforms have so far gained the consent of the minds and hearts of the people that the written statutes are merely concrete expressions of the will of a liberal majority of those who are to live under them.

If a proposed reform will really make the world a better place to live in, it is necessary only to convince a majority of the people of its wisdom and desirability, when appropriate legislation will follow logically and naturally. Generally, however, the radical reformer resents the slow and cumbrous methods of education and prefers to make an organized assault upon the law-making body and compel an immediate acceptance of his so-called reform by act of legislature.

When his premature law is openly derided and violated with comparative impunity, the reformer will not admit, and probably does not realize, that the legislation was in advance of genuine public sentiment. His remedy is to adopt still more legislation of the same kind, piling prohibition upon prohibition and penalty upon penalty, with the result of producing an ever-increasing number of violations, and correspondingly diminished respect for the authority of the law.

If mere law-making could make men or society perfect the world would have been free from evil several millenniums ago. Every known political and social tort has been legislated against thousands of times and yet these wrongs persist and not a few when traced to their sources will be found to be the direct outgrowth of the very laws intended to prevent them.

Reform Legislation Imposes Burdens upon Innocent People.—Another fact to be learned from the history of experiments in law-making is that reform measures invariably impose burdens upon perfectly innocent people who do not stand in need of reformation, and invariably place restrictions upon acts that may be wholly without evil or even meritorious.

This has been true of every piece of reform legislation that has ever been placed upon the statute books. The best of reform measures are mixtures of good and evil, and not a few of such measures have been responsible for the growth of greater evils than those they were intended to cure.

Common sense, therefore, demands that we take into consideration the burdens a proposed law will certainly impose upon innocent people and upon innocent

industries, as well as the good results which it is hoped the law will produce. Like other things, reforms can be had only for a price, and sometimes cost more than they are worth.

The exact point at which the evils of a reformatory law begin to outweigh the good cannot be determined with certainty in advance of actual trial, but experience teaches that it usually falls far short of the extreme limit which the radical reformer is inclined to demand.

Excessive Regulation Precedes the Destruction of Liberty.—Another fact frequently brought to the attention of the student of political history is that peoples who have obtained their liberties by the most heroic of sacrifices have so frequently thrown them away again in the frivolous pursuit of things they thought would make their liberties still more secure and their freedom still more free.

The story of the democracies that have failed shows that their vigor and prosperity regularly declined with the growth of internal legislation, or with the forcing of obnoxious regulations upon their citizens by the factions which successively obtained control, until they had so weakened themselves by internal strife that they fell to pieces of their own weight or were an easy prey to enemies from without.

Of course no people ever intentionally destroyed their own liberties. They always intended their law-making to make their countries better and stronger. Their uniform mistake was in consenting to the violation of fundamental principles for the sake of some fancied immediate good which their radical legislation was expected to accomplish.

The one great lesson of all these unsuccessful attempts at self-government is that a nation which willingly submits to the suspension of the principles of free government for the sake of expediency, or for the accomplishment of some quick and immediate reform, will in the end always come to grief. Principles that can be suspended for beneficent purposes can also be suspended for evil purposes, and laws intended for purely good ends can also be enforced oppressively.

The Fundamental Principles of Free Government Are Permanent.—Another lesson from the history of political experiments is that the fundamental principles of free government do not vary with the changing values of the factors of civilization. A principle of government essential to the preservation of liberty in one age is essential to the preservation of liberty in every age.

By certain doctrinaire reformers of the present day the United States Constitution is considered to be obsolete and out of date because it was composed before the age of telephones, wireless telegraphy and flying machines. It would be as reasonable to consider the principles of arithmetic obsolete because they were discovered before the invention of modern business methods.

Civil government is not a problem of mechanics, but of human nature, and no group of men who ever lived had a keener or closer information of the essential qualities of human nature than the group of statesmen who formulated the Federal Constitution and the Bill of Rights that was made a part of that document. They were not only men of rare natural ability, but they met their task with a face-to-face directness and with a freshness of experience with governmental tyranny that their successors have not had.

These men said: No government has ever had unlimited power over the lives and destinies of its people that it did not eventually exercise its powers oppressively. We will prevent such a disaster by making it a fundamental principle of the Federal Constitution that the powers of the government shall be limited strictly to matters of general concern, and will prohibit its interference in the lives and liberties of the individual citizen, except insofar as they are intimately and directly connected with the powers expressly given. Similar consideration induced the placing of corresponding restrictions upon the powers of the governments created by the earlier state constitutions.

It is not too much to say that under the dual form of government thus founded our people have enjoyed a greater degree of national prosperity and a greater degree of personal liberty coupled with order than ever before existed.

Unfortunately the members of the present generation have generally failed to grasp the fact that the prime reason why our state and national governments have not hitherto ruled oppressively is because they have not had the power to oppress.

The doctrinaires are now ready to tear these old and well-tried charters of liberty to pieces and to confer upon the legislative and executive departments the very powers which the elder group of statesmen were certain should be withheld from them. Perhaps the doctrinaires are right; but if our government can possess unlimited powers without using them oppressively, it will be the first instance of its kind in all the history of civilization.

We Talk Eugenics and Practice Anti-Eugenics.—One who should study the accomplished and attempted legislation of the last quarter of a century might reasonably arrive at the conclusion that the chief object of civil government is to protect the mentally incompetent, the morally weak or vicious and the physically unfit. He would observe, for example, that the law makes it difficult to secure useful and necessary drugs for the treatment of the mentally and morally competent in order to keep them out of the hands of degenerates who might use them to their own hurt. He would discover legislation to handicap the enterprising and progressive business man in order to enable the less enterprising and less progressive to succeed. He would note the legalization of trade union rules designed to penalize the skilled and industrious artisan and prohibit him from producing more or better work than the unskilled and the lazy. He would discover numberless schemes, either accomplished or in process of accomplishment, designed to pension the lazy, incompetent and wasteful members of society and to collect the pensions from the industrious, competent and economical members. He would observe parlor philosophers talking about the importance of developing a mentally fit and physically strong and virile race and advocating governmental and social policies designed to produce the opposite.

Since we have such an abundance of societies and devices intended to favor and protect weaklings and degenerates, would it not be timely for humane people to establish a society to protect the rights of those who are neither weak nor vicious, who exercise proper restraint upon their appetites and passions, who are industrious and thrifty, and in every way prove their right to respectful consideration?

Is it not time to return to the viewpoint of the fathers of the republic as to the proper functions of government, and to realize that the sane and decent members of society possess certain inalienable rights of which they should not be deprived in order to confer special benefits or special protection upon those who do not deserve, or who have abused the privileges of citizenship?

DOMESTIC AND IMPORTED *VERATRUM* (HELLEBORE),
VERATRUM VIRIDE AIT., *VERATRUM CALIFORNICUM* DURAND,
AND *VERATRUM ALBUM* L.

I. BOTANICAL STUDIES.

BY ARNO VIEHÖEVER, GEORGE L. KEENAN, AND JOSEPH F. CLEVINGER.*

With the resumption of importation of European drugs difficulties are being experienced regarding their identification. A notable example is *Veratrum* (Hellebore).

The name Hellebore, while mainly applied in this country to drugs derived from *Veratrum* species, is also used for *Helleborus* species, especially in Europe and in connection with Black Hellebore. The *Helleborus* species, however, belong to an entirely different family (Ranunculaceae), while the *Veratrum*s belong to the Melanthaceae. Since, fortunately, the roots of these families are so different, instances of substitution of *Helleborus* for *Veratrum* species are probably not numerous. Some confusion has arisen, however, from the use of the name of White Hellebore for roots obtained from both *Veratrum album* and *Veratrum viride*. The former is not native and is usually obtained from Europe, and therefore sometimes referred to as "Imported White Hellebore;" the latter, being native, is at times referred to in the trade as "American" or "Domestic White Hellebore." While the United States Pharmacopoeia VIII recognized both *Veratrum album* L. and *Veratrum viride* Ait. as official, the last issue (IX rev.) only recognizes *Veratrum viride* Ait.

It is pointed out in the literature that the plants are very much alike and the roots and rhizomes obtained from either plant cannot be distinguished. The subject has received considerable attention in the past, not only from taxonomists, but also from histologists, chemists, and pharmacologists. The studies with regard to histological data have not led to definite results, either in proving the identity or distinct differences of *Veratrum album* and *Veratrum viride*. The question has therefore been taken up anew. Authentic samples, collected in the Appalachian mountains, as well as commercial samples, collected in import and interstate trade, were examined.¹ Since we were primarily called upon to establish, if possible, differentiations between these commercial products as they appear upon the market, we have given the histological characteristics, and some of the factors which may influence them, our special attention. We have also studied other characteristics considered of value for differentiation.

*Joint contribution from the Pharmacognosy Laboratory and from the Insecticide and Fungicide Laboratory, Miscellaneous Division, Bureau of Chemistry.

¹ Some of the material used in this investigation was collected by R. C. Roark, formerly a member of the Insecticide and Fungicide Laboratory, Bureau of Chemistry.