

ARTICLE IX.

A DISSERTATION ON INTEMPERANCE,
TO WHICH WAS AWARDED THE PREMIUM OFFERED BY THE
Massachusetts Medical Society,
IN MAY, 1829.

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[At the annual meeting in June 1827, the Society voted to offer a premium of Fifty Dollars for the best Dissertation which should be offered during the year, on the subject of Intemperance; and the Counsellors appointed a Committee to receive the Dissertation, and award the Premium. At the annual meeting in June, 1828, the Committee reported that no Dissertation had been received in season to be entitled to the Premium; and the offer was renewed for another year. Several Dissertations were then offered, and the Premium was adjudged to the following; which was read at the annual meeting in June, 1829, and is now printed by the Society, agreeably to the original vote on the subject.]

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“ Pass where we may, through city or through town,
Village or hamlet of this merry land,
Conducs th’ unguarded nose to such a whiff
Of stale debauch, forth-issuing from the sties
That Law has licens’d, as makes Temp’rance reel.”
“ Smith, cobbler, joiner, he that plies the shears,
And he that kneads the dough; all loud alike,
All learned and all drunk !”

A very slight acquaintance with the laws of the animal constitution, will serve to convince us that its wise Author never fitted or intended it for violent excitements. No matter whether we view it in a moral or physical light, it holds equally true that unduly excited action tends to the waste of those powers on which health and life depend. Death we know is sometimes the sudden result of violently aroused pas-

sion ; at any rate, some one, or more, important function of life commonly becomes deranged, if the mind be long agitated by strong and turbulent feelings. The constitution cannot long react against the influence of intemperate excitements. If the springs of life are overstrained, if the functions are impelled into an unnatural state, the laws of the living economy are violated, and evil consequences inevitably ensue, bearing a relation to the nature, violence and duration of action of the exciting agents.

It would almost seem as though life was consumed by the very motions which are necessary to its existence ; as if the stimuli required to sustain the actions of life, were the means tending ultimately to its extinction. We know that some cold blooded animals, accidentally excluded from the excitation of all stimuli, and having consequently only the most obscure vital actions, have lived to periods far beyond what we have any reason to believe possible under an active state of being. No limits in truth can be placed to the existence of some creatures, could they be continued in this dormant condition. Frogs and toads, as is familiar to every reader, have been taken from the interior of solid rocks, from the trunks of trees, and from depths of the earth, in which situations they must probably have remained for ages in a torpid state, and on exposure to air and light have immediately resumed their active state of being. Could these animals have maintained their existence for such a period if their living functions had been continued in an active and energetic

condition? No facts show us that they could. To be sure the life of these cold blooded creatures does not approximate to the elevated existence of the loftiest of the warm blooded animals; still we are forced to acknowledge a certain general analogy among all beings indued with life. At any rate, other things being equal, it does seem rational to suppose that the more the functions are urged above their natural standard of action, the sooner will their power become wasted, and consequently the earlier will be their extinction. It has even become a vulgar saying in relation to individuals who live freely and under the influence of strong excitements, that they *live fast*. And the saying is founded on sound inductive philosophy, for the signs of age are marked much earlier upon them, than on individuals subjected to less sensual excitement. View the voluptuary, even in the morning of his years; at the period when others are just beginning their career of usefulness, and it will be found that strong and unnatural excitements have borne him rapidly on in his course of existence. The pale and withered brow—the dim sunken eye—the feeble and nerveless arm—the infirm step, and the wreck of all his nobler powers, show us too plainly how prodigally life has been consumed. We behold youth manifesting all the marks of an infirm and decrepit old age.

Do not the inhabitants of tropical climes—in whom heat excites an early maturity, communicates its quickening influence to all the feelings, and accelerates all the functions of life—do not they, I ask, sooner ex-

hibit marks of age and decay than the more phlegmatic inhabitants of colder latitudes? It is at least most strikingly true of tropical females, who begin to decline, and lose the attractions of youth at an age when more northern dames are glowing in all the beauty and loveliness, and consequent power of their sex. Hence it is, that the inhabitants of tropical regions do not bear so well the effects of artificial stimuli, as the dwellers in high latitudes, whose vital actions are less rapid, and who have less natural stimuli to excite them. These statements may no doubt be met by many exceptions, but not enough to destroy their general truth.

Life has been aptly likened to the heavenly fire with which Prometheus animated his statues of earth. While this celestial flame continues to burn, all the manifestations of life are maintained, but with its extinction all the vital actions which it excited must cease. Now though this flame must at last go out, still its extinction may be hastened or protracted according as we artificially and irregularly excite it, or allow it to burn on steadily and equally.

Every judicious physician will rank the abstinence from all violent excitements—temperance, steady habits, calm and well regulated affections, among the most important conditions to the preservation of health, and consequently to the prolongation of life. It may be said that men of very different habits of life, of opposite characters have lived to extreme ages. A few instances may be adduced of men of the most intemperate

habits who have lived on even in health to a ripe old age ; and such cases are sometimes very foolishly, not to say wickedly, cited to show that ardent spirits are not so destructive of health and life as is commonly represented. But the very importance attached to such instances, most satisfactorily proves them to be only exceptions, and very rare ones too, to a general rule. They are lucky escapes from the baneful effects of destructive habits, referrible perhaps to original energy of constitution, active and healthful pursuits, or other favouring causes not understood.

It is a truth which ought to be familiar to every one, but particularly to our own profession, that true and enduring tone or strength cannot be communicated to the animal body by unnaturally urging its vital movements. Actions to be lasting, ought to be steady and equable, and to maintain a relation correspondent to the capability of the organs destined to their performance. Destroy this necessary balance between action and power, and a pathological state must ensue. Over excitement wastes our energies, without supplying the expenditure.

Suppose it desirable to obtain the greatest possible amount of labor from an animal in any considerable length of time. Would any one of ordinary sense and judgment begin by impelling him to undue exertions—to efforts disproportioned to his ability? Would the practiced driver commence by worrying and stimulating him with the whip or the goad? To be sure he might thus be excited to quicker motions, and for a

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little period to an increased exhibition of strength. But fatigue would soon begin to palsy his efforts, and he would much earlier become unfitted for service than under more gentle management. Now an individual, a laborer for example, who begins at the commencement of his task to excite artificially his functions, to whip and goad them on, if you will, to undue and overstrained exertions, acts on the same ill advised principle, as would the injudicious driver who expected to get labor from his horse in proportion to the frequency and power with which he applied the whip. Like this poor abused animal his functions would soon get wearied out by such inconsiderate management. The actions of inanimate creation, if strongly excited, are but of brief duration. The tempest and the earthquake soon spend their power, the winds go down, and the earth rests from its feverish agitation—but the stillness and desolation which follow, painfully exemplify the exhaustion and evil attendant on such unnatural excitations.

Every physiologist and pathologist, I trust, must be well aware that a course of unnatural stimulation cannot long continue operative on the living economy without inducing some morbid alteration in some of the vital tissues, and a consequent derangement in the function of the organ or organs, whose structure becomes thus affected. There can exist no perfect health unless the important tissues of life are in a natural condition. In the complex mechanism of the human body the anatomist detects certain elementary structures which are

denominated tissues, or membranes ; several of these, each with its own peculiar nature, are combined together to constitute an organ. Several organs next unite their functions to accomplish a particular object in the economy, and get the name of an apparatus. Thus then the human body may be regarded as one great apparatus, all of whose parts work together for the maintenance of health and life. Within it are minor apparatus, subservient to more particular effects. These are resolvable into organs, and lastly the organs into tissues, and it is through the medium of these ultimate structures that the functions of life must be excited. Now as all impressions are communicated first to some of the tissues, if they are unnatural, and especially if frequently repeated, a change of structure will follow ; then the function of the organ into whose composition the tissue enters will necessarily become deranged, and if it belongs to what we denominate an apparatus, the effect must be manifested in the grand result of the apparatus. Farther if it possesses high importance in the economy, the whole living machinery, from the necessary connexion and consent of its component parts, must partake in the derangement. Now in the habitually intemperate, morbid impressions are continually conveyed, either directly or indirectly, to the different ultimate structures, to the mucous, the nervous, the glandular, &c. ; hence they soon become diseased, and more or less general derangement of function must ensue. Health dwells not with intemperance. How many do we not see daily, yield-

ing up all their best powers, for a little transitory sensual gratification ?

Though intemperance is a term admitting of almost any latitude, we intend to restrict its use, so far as possible, to the abuse of distilled spirits. It is this species of intemperance, which is now exciting such intense and anxious interest among a large class of our enlightened population.

Though, other things being equal, particular textures and organs become associated with the morbid impressions resulting from the employment of spirituous drinks ; in other words, though intemperance has its peculiar diseases, yet in the state in which we live, we can by no means always calculate upon the exact order or kind of its effects. We are born with, inherit from our parents, or acquire from accidental circumstances after birth, different conditions of physical structure, some peculiarities in the life of the tissues, which cause them to take on with great facility particular modes of diseased action, and which constitute what we commonly denominate predispositions. They are very readily called into activity by any causes which morbidly impress our organs. Intemperance then, operating on an individual strongly predisposed to a particular disease, would on a general principle more easily excite such disease than any other to which such predisposition did not exist.

Suppose an individual to labor under an hereditary disposition to phthisis pulmonalis, would not intemperance at some particular period of life be likely to

bring it into action? Or imagine him predisposed to insanity, to erysipelas, to scrofula, to gout, to dyspepsia, would not this habit be especially liable to develop such predispositions? And thus it is that we find all sorts of diseases following in the path of intemperance, and often meet with not a little perplexity in deciding to what extent it generates disease *de novo*, or merely tends to call into action some pre-existing diathesis. It will be readily conceived that different individuals would not be likely to suffer with equal facility from this habit. Naturally energetic vital powers, an exemption from morbid predispositions, active habits, &c. fortify the constitution to a certain extent against the deleterious influence of alcohol. But the firmest strength must finally yield to its destructive sway.

It is our province to point out only such diseases as are admitted to arise especially out of the habit under consideration. Not that all the affections and modifications of disease thus produced, can by any means be fully treated—circumstances greatly vary them, and it is not an easy matter to set limits to the diseases of intemperance; for though its influence is unquestionably exercised on some tissues with more facility than on others, yet it is specially confined to none. Excepting a few in which vitality is but feebly developed, there is hardly any vital structure, but intemperance may either directly or indirectly injure. The mucous, the serous, the glandular, the dermoid, the muscular and nervous systems of animal and organic life, all, all, may sooner or later, primarily or secondarily

rily suffer from it. But then all we purpose to do, all in truth we are able to do, is to bring in review a few of the most prominent and commonly observed deviations from healthy structure, and natural function, which to say the least, have a close relation with the habitual and free use of distilled spirits. Not that all these affections will be developed in every case, and they may arise, too, from other causes beside intemperance; yet in the intemperate they exhibit such modifications as will very generally direct us to their cause. But how are such various morbid alterations effected? What is the specific mode of action of ardent spirits, on the different tissues and organs of the human body? Why is their influence commonly exerted so much earlier and more seriously in some structures than in others? Such questions we can hardly be expected, with only our present limited physiological and pathological information, satisfactorily to solve. We may rationally believe that the altered condition of the circulation consequent on unnatural stimulation is capable of exerting considerable influence in the generation of morbid changes. Witness the violent and often irregular action of the heart; feel the pulse of a man under the exciting influence of strong drink; look at his eyes, his face; see how forcibly the capillaries are injected with blood, and with what unnatural energy this fluid is impelled to the head. Now can we expect that the delicate vital tissues, can always escape injury under such frequent condition of the circulatory function? Can we imagine that the nice structure of the

brain will remain unharmed, when day after day it is subjected to unnatural excitation, or is engaged and oppressed by the excess of blood which is determined to it? If from any cause, the naturally equable course of the circulation is habitually disturbed, and the blood unduly determined to particular organs, congestions, inflammations, and important lesions may be expected to ensue. The vital organs often suffer in violent inflammatory fevers, and why not in the frequently repeated inflammatory fever of intemperance?

The derangement of the organs of digestion, which is almost universal in the intemperate, communicates a morbid impression not only to the brain, but also to various other important organs. And no doubt very many of the disorders of intemperance arise out of the sympathetic influence of the apparatus of digestion. But physicians of the present day are too frequently reminded of the vast importance of its health, to the welfare of the economy at large, to neglect a due regard to it on all occasions.

But beside particular pathological conditions, we commonly find in the man who has been long addicted to intemperance, a peculiar modification of constitutional susceptibility and action; and this altered state of the system often modifies in a remarkable degree the character of his diseases, and establishes, not unfrequently, a new set of morbid predispositions. There seems no doubt but that some general change is effected in the physical structure of the body under the in-

fluence of the continued action of alcohol.* And it can hardly be questioned that alterations of organization, however minute, must necessarily modify the offices dependent on organization. Where we can detect a morbid condition of a tissue, its function, or the function of the organ into whose constitution it enters, is almost always more or less deranged. When therefore we meet with marked deviation of ordinary function in structures, whose minute anatomy perhaps has not been thoroughly investigated, or at any rate where no sensible material change is discoverable, would not analogy lead us to distrust our own powers of anatomical investigation, and still to refer such deviation to pathological physical condition? But without involving ourselves more intricately in such obscure questions, facts show us plainly enough that physiological—if any functions of the intemperate may be regarded in a physiological state—and pathological phenomena both undergo obvious modifications. If the drunkard has fever, it is not just like the fever of the temperate man. If he is attacked with inflammation spontaneous, or arising from injury, its healthy progress is liable to be interfered with, and it may take on different characters from what it would exhibit in a healthy constitution; various morbid states of the tissues are liable to occur, as thickening, indurations, &c. Sometimes there exists a general inflammatory disposition in the constitution.

* Even the blood of the drunkard is said to be altered, to become dark, and like venous blood.

The natural condition of the nervous system is evidently altered. What a metamorphosis in the intellectual operations. What a nervous irritability; what a depression of animal power, unless preternaturally excited, is seen in the man who has sacrificed himself to intemperance! Suppose the brain to become affected, suppose delirium to come on, does it not manifest a different character from what it would in a temperate and healthy individual? But I trust I need say no more to prove that almost every thing is wrong in the drunkard's constitution; almost every thing, both in relation to his mind and body, undergoes a spirituous change. He is an altered being, and exists in a state of physical organization, never intended or provided for by his creator. And as his organs have different susceptibilities, and consequently give often a different response to impressions, from what they would in their natural state, the rules of practice which ordinarily guide the physician, not unfrequently deceive him when applied to the modified constitution of the habitual and excessive spirit drinker.

Let us now examine a little more minutely a few of the most obvious morbid effects produced on the human system by the abuse of ardent spirits.

Almost every body knows, that the long continued and immoderate use of distilled spirits, exerts a deleterious influence on the structure and functions of the liver. This fact has been known and alluded to even from remote periods of antiquity. Whether this influ-

ence is exerted through the medium of the mucous membrane of the stomach and duodenum, or more directly on the liver, cannot be very satisfactorily determined.

The physiology of the circulation of the liver, the large quantity of blood necessarily passing through it, and the importance of its function to digestion, plainly indicate to us its high utility in the economy, and the close relation it bears to the other functions of life, and consequently that any considerable derangement of it must communicate serious effects throughout the economy. Its circulation, too, has such an immediate connexion with that of the other abdominal viscera, that if disease obstructs it, the effect will be immediately communicated through the whole. Thus the spleen and pancreas, though both may be primarily affected, no doubt often become affected in consequence of obstructed circulation in the portal system. Thus we sometimes find each of these organs affected in the intemperate, the spleen enlarged, and the pancreas indurated, though their affections, from our imperfect knowledge of their physiology, are not manifested to us during life like those of the hepatic system.

The habit of intemperance having been persisted in for a period which may be longer or shorter according to varying circumstances, some obvious derangement begins to show itself in the function of the liver, and we denominate it a functional disease; still there is unquestionably an incipient alteration taking place in its material organization, though perhaps too minute in this

early stage to be appreciated or detected by the anatomist could it now be subjected to his examination. At this period, too, it may for the most part be restored to its healthy condition by an abstinence from the cause which disordered it. But if the cause is now persisted in, its structure and function become more and more seriously affected, till at length its natural organization is so changed, that no means within our knowledge are capable of restoring it to a healthy condition. Of the intimate nature of the morbid action affecting the structure, we are, as in other analogous cases, ignorant. It must of course vary in different structural affections. At any rate the action is altered and unnatural. Changes may commence in it in consequence of congestion and sub-inflammation often ending in the effusion of some new matter into its parenchymatous substance.

Sometimes the liver, under the influence of the habit of which we are speaking, enlarges, and may even increase so as to fill both hypochondriac regions, thus mechanically embarrassing highly important functions to life, as the respiration and circulation. Experiments have shown that the livers of animals may be swelled up to a great size, and indurations induced in other viscera, by mixing spirit with their food. But the livers of drunkards are by no means always enlarged, or at any rate enlarged in any remarkable degree, even when their structure is in a morbid condition. In some few instances the organ has been found even contracted in size. It usually becomes more solid and firm, probably from

effusions into its interstices, and degenerates into the condition which we denominate scirrhus. In this state it exhibits a yellow, brownish-yellow, or an ash colour, often containing tubercles of various sizes, some very minute, diffused generally throughout its substance, frequently giving to its surface an irregular appearance. The vessels are here commonly diminished in their diameter, opposing of course the free passage of blood through the organ, and consequently through the other viscera subservient to the function of digestion, and the gall bladder is contracted and often empty. This condition of things is very often witnessed in the livers of the intemperate; but it is by no means the only one; various other morbid states are common, but we have not space for their consideration. Hepatic affections arising out of the abuse of distilled spirits are no doubt influenced in degree and kind by incidental circumstances, as climate, constitution, &c.

The effects of intemperance, however, are not confined to the liver. All the digestive viscera suffer under its baneful influence, and disorder is extended through the whole economy.

The whole alimentary canal is liable to become affected. The stomach rarely escapes injury in the intemperate. An acrid and unnatural stimulus is applied, day after day, to its delicate and highly irritable mucous membrane, and as we might rationally anticipate, its healthy structure and function ultimately become deranged; this is especially manifested by a vitiated state of its secretions. This morbid condition

of the mucous membrane communicates an unnatural irritation to the muscular coat, causing irregularities in its action, and at times even painful spasmodic contractions.

The kind and degree of diseased action in the gastric mucous membrane of the intemperate vary in different cases according to incidental circumstances, not always appreciable by us. At times the direct stimulation of it, so augments its irritability that sub-inflammation, and even unnatural thickening of its tissue ensue. Even acute inflammation is sometimes induced. Dr. Horner, in some observations made on the stomachs of intemperate persons, 'found the mucous coat thickened and dense, without any remarkable contraction of the stomach, yet thrown into numerous, thick, elevated rugæ, and the summits of those rugæ, so reddened by numerous capillary vessels injected with blood, that at the distance of a few feet they appeared, when the distinction of the individual capillaries was lost in the distance, like red streaks.*' The mucous membrane of the small and large intestines is also liable to become affected, and its functions of course embarrassed and deranged. Here the liver has no doubt often considerable concern. If there is a deficiency of bile, or if its quality is morbid, the feces will be altered in their condition, and act as an unnatural irritant to the mucous surface, along which they pass, and may so act as to give rise to sub-inflammation or unnatural con-

* Horner on Mucous Membrane—American Journal of the Medical Sciences. No. 1. p. 27.

gestion here. Obstruction in the portal system, too, will of course impede the passage of blood through the intestines as well as the other digestive organs, and may occasion congestions, &c. The mucous membrane of the lower portion of the rectum, we know often becomes highly irritable, congested or even inflamed from the causes alluded to, giving rise to that troublesome affection denominated piles. The muscular coat of the intestinal tube, either from consent with the mucous membrane, or from some other influence, acting perhaps through the medium of the nervous system, often takes an irregular and unnatural action, even at times amounting to spasms, causing also diarrhœas. Sometimes it is affected with unnatural torpor, no doubt associated with diminished irritability of the mucous membrane.

Sometimes the coats of the stomach degenerate very insidiously into a scirrhus state, becoming thickened, unnaturally hard and altered in their structure. This condition of the stomach is in some instances quite extensive, but is more commonly limited to particular portions of it, especially to the pyloric region which is abundantly supplied with nerves and blood-vessels. The symptoms attending this affection are very distressing, and little relief can be afforded to them by our art. Dr. Baillie seems to think that intemperance occasions this morbid condition of the stomach only in those who labor under a predisposition to it. But certainly this predisposition cannot be proved to have existed in every case occurring in connexion with intemperance.

The mucous membranes in other situations frequently become affected, especially such as are continuous with the gastro-intestinal. Thus the tracheo-bronchial, and that lining the cavities of the head are frequently implicated in the affections of the intemperate ; hence arise catarrhal and pulmonary affections. But let us, before going farther into the consideration of the effects of alcohol on the living structure, briefly note a few of the most prominent consequences arising out of the altered condition of the tissues of the digestive apparatus of which we have just spoken.

Intemperance soon induces symptoms of indigestion, especially if there is an original or acquired weakness of the organs subservient to the function of digestion, which are more or less permanent in different cases. It is no doubt one of the most prolific sources of dyspepsia among the lower orders of the community.

Many of the symptoms are, though somewhat vaguely, denominated *bilious*, and it is true that the liver has an intimate relation with them ; but they are also referrible to the condition of the other digestive organs as well as that of the hepatic system. Acid and acrid fermentations, and eructations are frequent, and the appetite becomes impaired, or almost entirely destroyed. Hunger and thirst may be generally regarded as incompatible sensations, and as intemperance creates a continued morbid thirst, it diminishes the appetite for food. Let a miserable drunkard go all day long with scarcely a mouthful of food, and give him a sixpence at night, and will he buy bread with

it, or spend it for rum? It is almost proverbial that great rum drinkers are little eaters. Thus the intemperate are very apt to be careless about their periodical meals. It is a bad sign when the family meals are daily delayed for a man not driven by business. But let us proceed with the symptoms—digestion becomes very imperfect, there is often a sense of fulness and oppression, or a feeling of languor and even pain about the epigastrium, sometimes attended with cramps. Such feelings almost all libertines are doomed to suffer. The excessive indulgence in venereal pleasures produces somewhat analogous sensations about the epigastrium. They are at first relieved by stimuli, but the relief is only temporary, and even this cannot long be afforded by them, and finally they may even exasperate the distress. The secretions of the mouth usually become altered, disagreeable to the taste, and a thick yellowish fur often coats the tongue, especially near its root; the breath gets offensive, and becomes strongly impregnated with spirituous vapour. There may be obstinate constipation, or excessive, debilitating diarrhœa, with an unnatural condition of the alvine evacuations, often dark coloured and offensive. Sometimes very obstinate chronic diarrhœa comes on; and may often prove fatal; but this is most common in old broken down drunkards, and is for the most part associated with important lesions in one or more of the digestive viscera. In some instances, even of excessive intemperance, the bowels remain for a long time in a very regular condition.

The respiration is apt to become oppressed and laborious, especially after eating, or severe exercise, and undue determinations of blood take place to particular organs, altering and embarrassing their natural functions. There is apt to be oppression, and often pains about the head, depression of spirits and indisposition to mental or muscular exertion. Such symptoms are all highly aggravated in the morning; it is then that the intemperate man feels most sensibly the effects of his pernicious habit. There is dizziness and pain in the head, foulness of the mouth, nausea and loathing of food, and the morning meal is turned from almost with disgust; in fact he seems awakened only to a world of wretchedness. There is such a *gnawing*, such a sickly faintness at his stomach, and such a general depression of all the energies of life as to be hardly supportable, and so he often rises early to flee to his dram for relief.

The tracheo-bronchial mucous membrane, perhaps from continuous sympathy with the gastro-intestinal, or from sympathy with a disordered liver, or from inhalation of the spirituous vapour, or from some other cause which we know nothing about, often gets into a morbidly irritable condition, and so, in the morning especially, a troublesome cough is apt to attend the other distressing symptoms, usually terminating in a vomiting of a greenish bitter matter, or a glairy mucous; vomiting, however, of such matters often occurs without cough, and affords considerable relief. If the cough is very severe and constant, it is ordinarily the

precursor of organic lesion in the lungs ; in truth, the act of coughing itself, if continued and severe, may occasion, and keep up an unnatural irritation in these organs, and an increased determination of blood to their substances ; at any rate, when acting in combination with the other morbidly irritating causes, pulmonary consumption is not an unfrequent consequence. Thus drunkards are often the subjects of what has been denominated, how properly I shall not undertake to decide, *dyspeptic phthisis*.

I have thus very generally noticed a few of the phenomena, arising, particularly, though perhaps not wholly, out of the condition of the digestive organs caused by intemperance. But all the varied symptoms of dyspepsia are presented to us by different cases, to many of which we shall have occasion to allude under other connexions

The bilious symptoms, if we please so to call them, of intemperance, are associated with a more permanent difficulty in the liver and digestive organs generally, than in ordinary cases. And though in an early stage they may be susceptible of relief, still they demand more permanent and active means. They are likewise more gradually developed, and are less dependent on the influence of season than common bilious complaints. The nervous system, too, is much more severely affected, and the constitution generally, which exhibits much less energy of reaction than usual.

The symptoms described, if the habit which generated them is continued, go on pretty surely increasing,

though more or less rapidly, according to varying circumstances, till fatal organic changes have become established in the digestive or some other important viscera. Then the symptoms take on an alarming character; distressing vomiting often comes on, and a dark colored matter somewhat resembling coffee grounds is ejected from the stomach, connected with inflammation of the mucous tissue of this organ, or with a morbid condition of the liver, or with both. Chronic diarrhæa, and various other distressing symptoms at length come on, indicating to us how fast life is drawing to its close.

Most of the symptoms which have been brought into view, are commonly regarded as originating in a pathological condition of the liver, and it most truly is an organ on which distilled spirits exert a very marked influence. Still we cannot positively demonstrate that it is always primarily affected by such influence, or even whether all the troubles usually referred to it, are actually and immediately owing to its pathological state alone. This organ, more especially within a few years, has been looked upon as a very mutinous member in the human economy. Scarcely a vicious action occurs in it, but is ascribed either directly or indirectly to the liver. It is worth while to recollect that the apparatus of digestion is a compound of several highly important organs, and that the efforts of all are directed by a synergetic action to the accomplishment of one distinct object, which is digestion. Now as each organ of this apparatus is subservient to this end, if the func-

tion of one is obstructed or disordered in any way, the grand result of the whole apparatus must of necessity become affected, and so being compelled to regard especially the collective result of the digestive machinery, it is often not a little difficult to detect the failures in its individual instruments. And thus it is that some of the gastric organs may receive censure when not deserved by them. However, there is such a reciprocal and necessary connexion among them, that they very soon become implicated in each other's affections.

An alteration, as we might naturally imagine, is soon manifested in the tastes and appetites of the intemperate man. The daily application of strong stimulants to the mucous membrane of the mouth and stomach soon begins to blunt its natural irritability. Hence ordinary stimuli lose their accustomed effect; common food and drinks grow insipid. All his aliments to be relished must be highly charged with condiments, the more cayenne pepper, mustard, &c. the better; he seldom makes a wry face, seldom sheds tears, even when swallowing the most heating condiments. This mucous membrane would often seem to partake more of the character of leather than of a delicate and irritable vital tissue. There is often a painful dryness, and parched state of the mucous membrane of the mouth and throat, exciting a constant desire for drink.

Tea and coffee, and such mild drinks soon become insipid to the taste of the intemperate man. His stomach is accustomed to more powerful stimuli, and

he cares little for those meals which are principally made up of these beverages. It has been said to be a bad sign for a woman to begin to lose her relish for tea and coffee.

The inordinate spirit drinker commonly soon shows signs of emaciation; but constitution and other circumstances may delay it to a certain extent. Sometimes, too, though he emaciates so far as regards healthy substance, still he becomes unnaturally swollen and bloated, especially about the face, and at last in his lower extremities, by the accumulation of unhealthy fluids in the cellular tissue. The wasting of the spirit drunkard may be accounted for in several ways: 1st. His appetite usually becomes diminished, hence he takes less than his ordinary quantity of food. 2d. The chylopoietic viscera get more or less deranged, and so the chyle may not only be deficient in quantity, but its natural qualities may be altered, and it consequently be less fitted for nutrition than that prepared by its organs in a healthy condition. 3d. From the morbid condition of the liver, or undue irritation or sub-inflammation which may frequently occur in the gastro-intestinal mucous membrane, or some other cause, the mesenteric glands, as they are denominated, are apt to become affected, tumefied and indurated, and consequently disabled from accomplishing their destined offices, which we imagine in some way subservient to nutrition. Marasmus at any rate is associated with disease in these bodies, when existing to any marked extent, as it must certainly obstruct the free passage of

chyle into the circulatory system. 4th. The extreme vessels become generally deranged in their functions, and the minute instruments of nutrition, or formative vessels, constituting a part of this system, probably partake in this derangement and so do not perform their offices with their usual perfection. Other causes, too, not appreciated by us, may also be operative, all of which combined ultimately cause a general falling away of the cellular substance, and other soft parts of the body. Thus the eyes become sunken and hollow, unless morbid effusions take place about them. The absorption of the adipose matter destroys the plumpness, and general symmetry and beauty of the body. The skin hangs loose and wrinkled, even in early years, and the legs fall away and lose their proportion to the rest of the body, and all the signs of old age soon manifest themselves. Life speeds on apace with the intemperate. There is a wear and tear of the system, fast consuming all its healthful energies, and rapidly advancing youth to the condition of time-worn old age.

The serous membranes by no means escape the morbid condition generated in almost every vital tissue. Their vessels take on an altered action, manifested by a variation in the character and quantity of their exhalations. Thus dropsical effusions, as hydrothorax, and ascites are very common in the last stages of intemperance, and greatly aid the other causes of dissolution. These modifications of action of the serous tissue, however, giving rise to dropsies, are probably

very much more frequently symptomatic of lesions of some of the important viscera, than idiopathic affections. Obstructions of the hepatic system from the intimate connexion of its circulation with that of the other digestive viscera, are a very frequent source of dropsical effusions into the peritoneal cavity. An unhealthy state, too, of the other tissues of the organs of digestion no doubt communicates morbid impressions to the serous structure attached or contiguous to them. But then distilled spirits may exert a more direct action on the serous membranes, modifying in some way their vital actions. Does not intemperance predispose to a certain degree, to inflammatory affections of the serous as well as of many other vital tissues? Are not spirit drinkers a little more liable to pleuritis, peritonitis, &c. than the temperate? My own experience would lead me to answer without hesitation, in the affirmative.

In the intemperate we sometimes meet with a tenderness, indicated by pressure, and a pretty general, though slight soreness over the abdomen, accompanied sometimes by pricking pains, and usually with symptoms of indigestion. Such phenomena may continue, subject to more or less intermission, for years, and are commonly regarded as indicative of dyspepsia; but they are more probably immediately associated with an unnatural irritability, or sub-inflammation of the peritoneal membrane. Sometimes this membrane is found after death, inflamed, thickened, and in some instances tuberculated. Though symptoms of the

character described are by no means confined to the intemperate, still my own observation teaches me that they are most frequently met with among such individuals.

Serous fluids, especially, in an advanced stage of intemperance, are often unnaturally accumulated in the cellular tissue, constituting anasarca or dropsy. This is often connected with great prostration of the living powers, and is associated also with various morbid conditions of the system, especially with organic lesions of important viscera, which so commonly terminate the career of the drunkard. Anasarca or tumefactions are especially witnessed in the lower extremities, as the effused fluids would naturally gravitate in undue proportion towards them. Their living powers are also more feeble in consequence of their remoteness from the centre of the circulatory system. Who has not noticed the livid red, and shining ankles of the drunkard, distended almost to bursting?

The skin almost always manifests more or less disorder in some of its parts, under the influence of intemperance. The condition of the digestive organs has, no doubt, much concern in inducing and keeping up a morbid state of the cutaneous organ; but the use of ardent spirits may likewise influence it more directly through the medium of its capillary circulation. Its diseases, however, must always be aggravated by a bad condition of the digestive organs. There is in truth a close consent between the surface and the viscera, and they exert a reciprocal influence upon each

other. Alterations from a healthy state are most remarkable, and soonest manifested in the face. The skin here is very abundantly furnished with capillary vessels, has a higher degree of vitality, and a more ready sympathy with the viscera of digestion than that which envelopes other parts. Its appearance almost always becomes affected in indigestion; it either becomes unnaturally pale and sallow, or flushed, or spotted with eruptions. In affections of the liver, different portions of the skin are liable to sub-inflammation, and to herpetic eruptions. The face of the intemperate seldom exhibits its natural aspect. Sometimes it manifests a general fiery erysipelatous redness, perhaps inclining to a purplish hue.* The redness, however, is more commonly, in the spirit drinker, more confined to particular portions of it. The nose rarely escapes, it is an unfaithful member to the intemperate man, it will blaze forth his vile habits, let him practice them ever so secretly. It commonly becomes generally or partially red, sometimes enormously enlarged, the nostrils spread wide, and its bridge and tip, and skin in its immediate vicinity, are often very fancifully embossed with carbuncles of various hues and sizes and degrees of brilliancy. At times such eruptions are very general over the whole face. In many spirit drinkers,

* "*Bard.* Why, Sir John, my face does you no harm.

Fal. No, I'll be sworn, I make as good use of it as many a man doth of a death's head, or a *memento mori*. I never see thy face, but I think upon hell-fire, and *Dives*, that lived in purple; for there he is in his robes, burning, burning."—*Shaks.*

however, especially if they are feeble, of a nervous temperament, and have weak digestive powers, the face is unnaturally pale, emaciated, with perhaps only a few of the characteristic eruptions about the nose, or a little redness at its tip, or even these marks may be absent, and the whole countenance be pale, sallow and emaciated. Some spirit drunkards are noticed always to exhibit a pale face. But this is more common after the habit has been long continued, the constitutional energies broken down, and the structure of some of the important viscera injured.

The vital powers of the skin in general, almost always become weakened, and their phenomena altered. A slight injury will often occasion troublesome and unhealthy ulcerations. Ulcers, too, will at times break out upon it spontaneously, baffling the best skill of the surgeon. They are most frequent and difficult of cure on the lower extremities. But every medical man unfortunately witnesses too many of these to need being reminded of their character. Mortification sometimes occurs in the lower extremities of feeble, broken down and aged drunkards. It often begins in the skin, extends to the deep seated structures, making dreadful havoc with the soft parts, and not unfrequently terminating in death; various circumstances may hasten or retard its progress. The secretions of the skin evidently become changed from their natural and healthy condition, though we know not the exact character of such alteration. It has been said that the perspiration will at times exhale a strong spirituous odour. There

is to be sure always a foul spirituous stench arising from the drunkard, and though it principally comes out of his mouth, still some of it may be exhaled from his skin.

The nervous tissue, as we should naturally expect, does not escape the morbid alterations so generally diffusing themselves throughout our material organization. We cannot, to be sure, detect changes in the nervous, with the same facility as in most other vital structures; yet judging from the pathological influence exerted by ardent spirit upon its functions, we might rationally conclude that its material structure becomes more or less affected by it. In truth all our best skill in anatomy merely enables us to trace out the more prominent alterations in the living structures, while those which are more minute, yet still sufficient to derange or modify vital actions even to a very considerable extent, altogether escape us, hence the terms organic and functional diseases; the former expressing sensible pathological changes, the latter those which the anatomist cannot detect. The term functional disease then must be regarded as serving only to express the imperfection of our senses, or our limited investigation into the minute anatomy of tissues.

In the brain we not unfrequently detect an obvious pathological condition associated with intemperance, but not in its extended nervous chords, though their functions may be apparently very much disordered. The close connexion, however, existing between the brain, and the nerves which appertain to it, render it often difficult to separate their affections from each other.

Sometimes a severe fit of intoxication will occasion phrenitis, and continued intemperance may cause chronic inflammation of the brain and its meninges. Other pathological conditions are also detected in it after death. In some instances it has been found too firm in its consistence, in others preternaturally soft, or oppressed by a superabundance of fluid in its cavities, &c. Such affections may take their origin in the unnatural violence with which the blood is often circulated through the delicate cerebral tissue from over excitement of the circulation, from a sympathetic influence communicated from the digestive viscera to the brain, or from some more direct action of the spirit itself on its structure,* or all these causes may combine their influence in the production of disease in it. But whether the cerebral structure be sensibly altered or not, a change soon becomes evident in those functions which are associated with it. Feeling and intellect become affected, in consequence of material pathological changes induced by intemperance on the brain and viscera. No pathologist of the present day will deny the influence reciprocally exercised by the brain and digestive viscera upon each other, and the injury to the mental powers arising out of their morbid affections. What a variety of colouring do not external objects take from the changing conditions of the viscera? Let

* It is not fully decided whether alcohol is absorbed into the circulation, and thus applied, in a very diluted state, however, directly to the vital tissues. Many facts would seem to show that this may be the case to a certain extent. See Cooke on Nervous Diseases. p. 104. Boston edition.

the poor dyspeptic answer this question. The mind strongly sympathises both with the healthy and morbid states of the digestive organs ; and also, though not to the same extent, with those of the other important viscera. Health of the viscera communicates a healthful impression to the brain, giving strength to the intellect, and alacrity and contentment of feeling ; but their opposite state shadows the mind with gloom and despondency, and oppresses all its noble powers. Now the digestive organs of the intemperate man are almost always more or less diseased, and the structure of the brain is probably almost always in a greater or less degree changed from its natural state. Thus the victim of intemperance soon begins to manifest a depreciation in those elevated faculties and feelings which exalt man so high above the rest of animate nature. His memory begins to fail, and his ideas to be less clear and distinct. His moral energy diminishes, his mind is incompetent to its usual efforts, he grows timid, irresolute, loses his wonted enterprise and decision of character, and either neglects his affairs, or manages them injudiciously ; every thing seems to go wrong about him, he is continually erring in judgement. His temper, too, becomes capricious, he is peevish, fretful and discontented, and trifling causes often excite him to violent fits of passion. Was he ambitious, his high views soon yield to the degrading influence of his habits ; he shuns his respectable companions, and seeks society among those equally, or more abandoned than himself. However elevated a

man's station may have been in society, intemperance will soon reconcile him to low company. He sinks in intellect, in feeling, in principle, in conversation, and he must feel his degradation, must feel rebuked in virtuous society, and so will seek his proper level.

And then the condition of the viscera conveys a morbid influence to the brain ; gloom fills the mind, and reflects its dismal colouring to every thing without it. This state of mental feeling in its turn reacts on the viscera, aggravating their morbid condition, and thus the evil, as has been elsewhere remarked, is increased in a geometrical ratio, rather than by simple addition, and is also aided by general debility. Thus the intemperate man is very apt to magnify all his complaints, and is ever wearying us with predictions of his own death ; under such a state of feeling, he not unfrequently reflects with most bitter remorse on his wicked and ruinous course, but, like one oppressed with a night-mare, has not power to escape the destruction that he sees threatening him. His feelings, mental and bodily, at length become truly distressing, and with an almost irresistible power drive him to his *bane and antidote*, which affords him a short-lived feverish excitement, and a little temporary alleviation of his suffering. But the alleviating power of his antidote is daily diminishing, and its baneful effects augmenting. It is well known that spirituous potations when long persisted in, frequently lose in a great degree their exhilarating effects. The stomach of the drunkard will often get at last into such an extremely irri-

table and morbid state, and the nervous system become so weakened or disordered, that but little spirit can be borne by him, and even its immediate effects are unpleasant. He is now truly wretched, the false friend so long depended on, has deserted him in his hour of greatest need. He now begins to call for other aids to bring him relief; bitters and a variety of medicinal agents are employed; but it is too late for them to benefit him; the unnatural work has been going on too long in his system. His body oppressed with pain, his mind agonized with gloom, or hypochondria, he is sometimes driven to terminate his wretched and wicked career by suicide, unless dropsy, apoplexy, or something else fortunately save him from this dreadful catastrophe.

Intemperance often exerts a sad influence over the moral character of its victims, chilling all those mild and benevolent affections which shed so much happiness over friends and the domestic circle, and which like mercy bless both him that gives and him that takes; or still worse, converting them into the most cruel feelings which disgrace the human heart. Wife, children, friends, are not only neglected, but often maltreated by the drunkard. He abandons his own fireside, where, if at all, contentment should be found, leaves every domestic enjoyment to carouse and riot with the wretched outcasts of society.

Intemperance frequently occasions insanity, more especially if there exists any hereditary or acquired predisposition to it. No doubt a large proportion of

the cases of mental alienation occurring in the United States, are in reality referrible to this cause, though circumstances often render it difficult to trace the connexion. The undue determination of blood so frequently taking place to the head, and the pathological condition of the digestive organs, may both aid in its production. Idiocy often follows the insanity of drunkards. The structure of the drunkard's brain almost always becomes at last so changed that it cannot serve as a healthy medium for the manifestation of mind. In the latter stages of intemperance we commonly witness an almost entire wreck of the intellectual functions.

In some individuals, temporary maniacal symptoms are almost always induced by intoxication. Such persons are in great danger of an ultimate permanent alienation of mind, if they continue their intemperance. The mental diseases thus generated are no doubt often entailed on the posterity of the drunkard. If he has children, but fortunately intemperance weakens the generative function, their bodies are apt to be feeble and their minds base.

There is a species, or modification of insanity almost peculiar to those addicted to the intemperate use of distilled spirits, usually denominated *delirium tremens*.* It will sometimes, however, though not very commonly, follow the too free use of fermented liquors, or even of opium. It is for the most part witnessed in those

* It has been very judiciously suggested by Dr. George Hayward, that *Delirium Vigilano* would be a more appropriate name for this disease.

of a nervous temperament ; but long continued intemperance will give rise to it in almost any constitution. It most usually occurs in the veteran drunkard, but the recently initiated in intemperance, if of feeble and nervous constitutions, and sedentary habits, are also liable to it. It seems to be more readily induced in the confined atmosphere of cities than in the open country. In truth I have seldom met with this disease in the country, though Heaven knows intemperance is not wanting. The poor and badly nourished are more liable to it than the rich.

We recognize the disease by a distressing watchfulness commonly attended by uncontrollable tremors of the limbs and body, and general agitation ; by chills also, and unnatural heat after, and profuse and debilitating sweats. The eyes look wild, glaring, unmeaning, and the countenance is pale, unnatural and agitated. Oppression and other signs of disorder commonly exist about the digestive organs. The mind is variously affected in different instances. For the most part it is haunted by frightful and gloomy fancies. The individual also imagines himself from home, about his ordinary avocations, at which he seems to be working most industriously, while the sweat is running from every pore. He is all the while extremely suspicious, and impatient of contradiction.

In delirium tremens, there is not the furious insanity, the wild, red and fiery eye, the burning face, and violence of the circulation, witnessed in phrenitis. It surely differs from phrenitis, and from ordinary mania.

Its aspects, too, are varied and modified by peculiarities of constitution, and by the condition of the vital energies. It is often attended with a good deal of danger, especially in broken down constitutions, and its occurrence always affords the strongest evidence of the habits of its subject. I believe it to be quite as common in such as are continually pouring down spirits, and yet, as their friends say, are never the worse for liquor, as in the downright and disgusting drunkard. The former keep up a continued and pretty regular excitement; the latter have their crises of intemperance, after which the constitution may stand a chance to rest for a little time, and partially recover itself from its unnatural excitation. It is driven, too, to violent reaction against the offending cause.

The proximate cause of this disease has been referred especially to the brain and digestive organs. Dr. Armstrong refers its phenomena to a venous congestion of the brain, and it must be admitted that drunkards are liable to what are denominated, a little vaguely to be sure, venous congestions. But then the Doctor came to this conclusion from the examination of the pathology of the brain in two cases only, and the venous congestion detected might after all have been only the effects of the disease. The truth is, we have at present no certain knowledge of the material change originating the phenomena of this disease. The intemperate man's system exists in an altered state, which we have shown more or less modifies the diseases that affect him. Now it does not seem

very improbable that such a change may be effected in the nervous system in consequence of intemperance, as may predispose to this modification of insanity, and it seems farther not unlikely that its developement may be aided, at least, by a pathological state of the gastric viscera acting on the nervous centre in its altered condition. Sometimes, though rarely, this disease establishes a permanent mental alienation.

Intemperate spirit drinkers suffer much from what we are in the habit of denominating, though not very philosophically, weakness of nerves, or nervous irritability. The hand gets unsteady, and unfit for nice operations. The head, body and limbs are often affected with tremors or shakings, and the disease denominated shaking palsy, is sometimes induced. Such tremors are apt to be particularly troublesome in the morning; certainly till the usual remedy is employed to still them, which is not unfrequently conveyed to the lips with difficulty, and not without spilling some of the *precious* draught. Troublesome palpitations, and other distressing nervous affections are also liable to ensue, especially in individuals of a nervous temperament.

Females possessing more nervous irritability and sensibility than males, are more liable to neuro-pathic diseases, under the influence of intemperance. Hysterics often come on. Fits of laughing, crying and all sorts of violent passions, are here often exhibited, independent of any moral cause to

excite them. Their true cause often not being suspected, stimulants are advised, and thus they are not only continued, but even aggravated. The morbid condition of the viscera operating on an irritable nervous system, may often excite such affections.

Epilepsy is more frequently produced in men by intemperance, especially if there exists any predisposition to it. Some individuals, even in the early commencement of intemperance, become very liable, during or soon after intoxication, to epileptic fits. Our information of the essential changes in the nervous system leading to epilepsy is extremely imperfect; it cannot be questioned, however, that it is frequently excited by gastric irritation, and preternatural determination of blood to the brain, both of which causes are commonly operating in the intemperate.

Apoplexy is also occasioned by the long continued abuse of spirituous liquors, particularly in individuals physically disposed to it. Apoplectic symptoms of a temporary character not unfrequently occur during a severe fit of intoxication, owing probably to the quantity of blood sent to the head, and the consequent unnatural distention of the cerebral vessels. Congestions and effusions also may occur in the brain, in part perhaps from a weak and altered condition of its vessels, and fatal apoplexy be the result. It is pretty well established, however, that those addicted to the too free use of fer-

mented liquors are the most common subjects of apoplexy. The intemperate are also liable to palsy, which, however, has generally, perhaps in most instances, an intimate connexion with the condition of the brain constituting apoplexy. The exact relation, however, these two affections bear to each other in every instance, is by no means well understood. But beside the affections alluded to, the intemperate are liable to almost all those obscure and varying complaints which ignorance has caused us to generalise under the unmeaning name of *nervous diseases*.

The baneful influence of intemperance manifests itself in the muscles of animal life, through the medium of the nervous system often, and perhaps in some instances the muscular fibre itself may become altered. These muscles, however, must always be more or less implicated in nervous affections, as their functions are so immediately dependent on the nerves. At any rate muscular motion under the control of the will is not so energetic, nor is it performed with the same facility as in temperate and healthy individuals. The step is less firm and graceful, the arm less vigorous. A want of uniformity and correspondence is often witnessed in the action of the muscles of the face, materially changing the expression of the countenance. There is frequently a peculiarly irregular action in the muscles about the mouth. The lips are often half closed, a little tremulous, and perhaps the lower

one partially drawn down on one side, and thus the mouth of the drunkard is apt to have a peculiarly unmeaning expression, not easily described, but very striking when witnessed. I have often noticed the orbicular muscles of the eyes to contract very frequently, strongly and irregularly causing frequent and irregular winking, and a close shutting of the eyelids. I say that I have observed these things, not, however, that they are present in every instance. Accompanying them, when present, the yellow, inflamed and watery eye, the bloated, fiery and blotched face, all combined, give to the countenance a peculiarly unnatural, and any thing rather than an intellectual expression. What a sad change is effected even in the finest and most expressive countenances, by intemperance! Mark the eye of the drunkard, and where is its intelligence? Where the benignity and beauty and variety of expression which once beamed from it? Its natural fire is now quenched, there is no longer *speculation in its gaze*. In short, all the dignity of the human countenance is departed, and its look is almost brutal, a brand of infamy is set upon it. Such marks, with the usual hesitating, stammering speech, will betray the most secret drunkard.

The sleep of the intemperate man is far unlike the soft, still slumbers of health and innocence. Seldom does it come as a comforter; uneasy sensations, and frightful or gloomy images are continually troubling it. Thus he frequently starts, groans,

snore, and cries out frightfully. As his mouth and throat are apt to become dry and parched, and his thirst great, he often dreams of his adored liquors, but alas! he cannot taste them, and so Tantalus like, is he tormented. Nightmare too, often worries and somnambulism endangers the votary of intemperance, and on awaking his misery is but little alleviated. If he goes to bed intoxicated, he lies all night perhaps in a sort of apoplectic state, and dearly, very dearly does he pay for his debauch in the morning. The dry parched tongue, the sickly, distressing feeling at the precordia, the violent throbbing headach, render him sensible for the time being, how very dear he purchases sensual gratification when its price is health.

The urinary organs are also frequently implicated in the effects of intemperance. The kidneys and bladder must be unnaturally excited by the continued secretion of irritating urine. A heat and irritation, and consequent desire to pass urine are often felt almost immediately on taking a draught of spirits; and the mucous membrane of the bladder is sometimes thus brought into a morbidly irritable condition, and the irritating cause being continued may ultimately occasion permanent diseased action in the urinary apparatus. The intemperate, especially as they advance in life, are certainly more frequently affected in these organs than those of temperate habits. And may not the too free use of distilled spirits sometimes give a

disposition to the formation of urinary gravel and calculi? Gout often, and dyspepsia almost always, follows intemperance, and there frequently appears to exist an intimate relation between dyspepsia, gravel and gout. They not unfrequently occur, and sometimes alternate with each other, in the same constitution.

A peculiar disease arising from the use of ardent spirits has been described by Dr. Jackson, in the *New England Journal of Medicine and Surgery*,* under the name of *arthrodynia a potu*. It has been most frequently met with among females. It is characterized by severe pain in the limbs, especially the feet and hands, sometimes shooting up them suddenly, and in one case the pain 'frequently passed up the back and then forward to the pit of the stomach, taking the course of the diaphragm.' There is also numbness, and after a while some contraction of the fingers and toes, and an inability to use these parts readily, so that at length they become nearly useless. The whole body, except the abdomen, diminishes in size, and the feet and hands are particularly emaciated, and the skin of these parts, and sometimes of other parts, though in a slighter degree, assumes a peculiar appearance. 'This appearance consists in a great smoothness and shining, with a sort of fineness of the skin. The integuments look as if tight and stretched without rugæ or wrinkles;

* No. IV. Vol. XI. p. 351.

somewhat as when the subjacent parts are swollen ; but the skin is not discoloured. Yet in this disease there is not any effusion under the skin, and the character, which this assumes, arises from some change in the organ itself.' Digestion is always much disordered, the mind weakened, and sleep prevented by the pain and procured only by opiates.

'In the progress of the disease spasmodic affections often ensue, and both mind and body are liable to be disturbed and agitated by slight causes. The powers of life at length are exhausted and delirium perhaps occurs at last, as a precursor to dissolution.'

This disease is thought to be always fatal, unless the use of spirituous liquors is abandoned before the energies of the digestive organs are greatly impaired.

Several instances of spontaneous combustion taking place in drunkards, have been recorded, but too much mystery and uncertainty envelope them to warrant us in ranking such a termination, in the present world, among the wages of intemperance.

I have thus brought together in as brief a manner as justice to the subject would admit, a few of the diseases of the different organs and tissues, and consequently of their functions, which are liable to arise out of the intemperate use of distilled spirits. But what a host of other maladies, not even alluded to, are occasioned by it ! There is

in truth scarcely a human infirmity but may be indirectly excited, or in some manner influenced by this habit. It breaks down, enervates all the natural energy and firmness of the constitution, and consequently renders it susceptible to the influence of almost any disease to which chance may expose it. It has been, and in fact still continues to a certain extent, a vulgar belief, that the free use of wine or distilled spirits tends to render the body insensible, to a certain degree, to the cause of prevailing fevers, and other diseases. But it is contrary, on a general principle, to truth, for whatever tends to weaken or derange the powers of life renders them less capable of successfully opposing the attack of morbid agents, as miasms, &c. Possibly the beastly drunkard, he who is almost always intoxicated, may, as has been stated, be in a degree insensible to prevailing fevers. In truth disease is constantly going on in his system of another kind, caused by a peculiar poison, and forestalling an influence in it incompatible to a certain extent with that of other morbid agents. He seems in truth to be insensible to almost every thing but rum. When fevers, &c. do attack the intemperate, they are usually more severe and fatal.

It might be proper in this place to remark, though our limits will require great brevity, on the influence exercised by wine* on the tissues and

* Though the term wine is applied often to the fermented juice of many of the sub-acid fruits, we shall here limit it to that of the grape only.

organs of the living body. Very many of the diseases which arise from the abuse of distilled spirits are also generated, though often in a somewhat modified form, by excessive indulgence in the use of wine. The stimulating effect of wine in fact, depends on the alcohol contained in it, but this constituent is so modified by combination with other ingredients that its intoxicating effect is less, and less injury results to the constitution from the use of the same quantity, than when taken in its uncombined state. Experiment has shown that a bottle of the dry and strong wines, as Madeira, Sherry and Port, contains nearly a pint of proof brandy. But the intoxicating effect on the system of a bottle of wine would be found generally very much less than that of a pint or even half a pint of brandy, when considerably diluted with water. This difference is explained by Dr. Paris, on the supposition that in wine the alcohol 'is not only more intimately mixed with water, but that it exists in combination with its extractive matter; in consequence of which, it is incapable of exerting its full effects before it becomes altered in its properties, or, in other words, partially *digested*; and this view of the subject,' he says, 'may be fairly urged in explanation of the fact that the intoxicating effects of the same wine are liable to vary, in degree, in the same individual, from the peculiar state of his digestive organs at the time of its potation !'* Many

* Paris on Diet

of the stronger wines, however, which are sent abroad, have more or less brandy added to them, much of which is *fretted in* by the production of a renewed fermentation, yet some will remain in an uncombined state. When such wine is taken to excess, it will necessarily be much more injurious, and productive of the diseases belonging to intemperance than pure wine. In truth, it will soon produce the same effects on the system as ardent spirits. It is in fact, in part, ardent spirits. Now much of the wine drunk in our country is not only adulterated with brandy, but sometimes with other noxious articles, consequently its effects here are no sure criterion by which we can judge of the influence on the constitution of pure wine as drunk in the vine growing countries. It is a well known fact that intemperance is by no means a common vice in wine countries, in France, Spain, Portugal, Italy, &c. where the light wines in their pure state are substituted for ardent spirits. Nor are their inhabitants subject to the numerous class of diseases attendant on the employment of distilled liquors. Hence it has been very rationally suggested that the planting of vineyards in our country might exert a very happy influence in the suppression of intemperance. The light wines of course, from containing less alcohol, are least injurious in their effects.

If man lived in his original condition, simple in all his habits, water would be all that he would re-

quire—all that would be suited to such a condition. It is unquestionably the natural beverage, the only natural diluent for man as well as all other animals. But our condition is altered, we have swerved very far from nature's simple rules, and we are speaking of man in this artificial state. Now is there not a necessary adaptation of our habits one to another? And may not man in his altered condition sometimes even require for his health, what in his natural state would not only not be needed, but even be positively injurious. The stomach, even from infancy, being subjected to the influence of various stimulating condiments, and to other influences tending to lessen its natural irritability may sometimes in adult life get to require something a little more stimulating than pure water: a little pure wine taken at proper periods, may then do it no material harm. But then wine is greatly abused; its use is carried often to such excess as ultimately to sap the energies of the constitution, and bring on a train of distressing infirmities. The stronger the wine, the sooner of course will its deleterious influence be manifested in the system. The effects of wine, however, on the vital structures, obviously differ in many respects from those of distilled spirits. The powers of digestion and assimilation are by no means so rapidly injured as in the spirit drinker, and the appetite often remains good for a long time. Thus we frequently find gluttony associated with the free use of wine; and as highly

nutritive food is commonly employed, the body is very apt to suffer from excess of nourishment. High living of this character, may for a little time even elevate the physical energies, and thus encourage the continuance of it; but the powers both of body and mind must ultimately be wasted by such unnatural excitation, and the term of existence abridged. The injurious effects of such habits will be felt sooner or later according as the individual is laborious and active, or sedentary and inactive in his habits. *Bon vivants*, however, are very apt to be indolent.

The general appearance of the body of the excessive wine drinker is commonly indicative of a plethoric condition, certainly unless a great deal of exercise is taken. The face is ruddy and rotund, the belly increases in size, and an increased quantity of fat is deposited in the cellular tissue. This condition is often connected with weakness of body, and a torpor of the intellectual powers. The breathing is apt to be short and embarrassed under exercise, the head is often oppressed, and various affections, commonly referred to a plethoric state of the system are apt to ensue. Sanguineous apoplexy is more common than in spirit drinkers. The lungs and heart are liable to be oppressed with blood, and shortness of breath, palpitations, and sometimes *angina pectoris*, in advanced life, will take place. Gout, too, is commonly believed to be more readily brought on by the intemperate

use of wine than of distilled spirits. The plethoric state of the system induced by wine and its associate habits is certainly very favourable to the production of gout, and especially to its development when any predisposition to it exists. Gravel, and affections of the urinary organs are often met with, in apparent connexion with the intemperate use of wine, but probably not more frequently than with that of spirit. Wine does not so readily break down and shatter the nervous energy as distilled spirits. The various and obscure neuro-pathetic affections are not so often witnessed in the wine drinker as in the spirit drunkard, but diseases of the circulatory system are very frequent in the former. There commonly exists in connexion with the free use of wine a strong disposition to acute inflammatory complaints, to pneumonia, acute rheumatism, &c. These are commonly of a more active character, and demand larger depletions than when occurring in the spirit drinker; and there being also more energy of life, they are sooner recovered from, and the system more perfectly restored. The passions are apt to be violent and strong in the wine drinker, and affections of the brain from undue excitement not unfrequently occur.

Finally, however, all the important functions begin to suffer under the continued and unnatural stimulation of wine. The digestive organs become ultimately deranged, and lose the energy which they

had all along exhibited. Inflammation perhaps, in a low degree, or increased insensibility comes on in the gastro-intestinal mucous membrane, extending in some instances to the tracheo-bronchial; hence dyspeptic symptoms, hemorrhages from the mucous membranes, cough, spasms of the stomach and large intestines, diarrhoeas, perhaps alternating with obstinate constipation. The symptoms are all aggravated and many produced by a diseased condition of the liver; the skin and tunica conjunctiva become yellow, and hypochondriac and other symptoms of hepatic obstruction are now introduced, and the nervous system at last becomes shattered as in the spirit drunkard. Obstructions occur in the respiration and circulation, from congestion in the lungs, or from some altered condition of the heart or its large vessels, arising out of inflammation or some other cause not understood. Dropsy, especially hydrothorax, apoplexy, or consumption frequently bring up the rear, and then the scene closes.

Though the excessive wine drinker, is apt to be fat and ruddy for a little time, yet the fat will at last be absorbed. The skin then hangs loose about the belly, the legs diminish greatly in size, and the whole body fast emaciates. The condition of the skin becomes altered, often liable to inflammations and eruptions, and analogous symptoms to those produced by ardent spirits finally come on, though a little modified by the different character of the agent.

It now only remains for us to remark on the means which may be deemed best suited to the prevention and cure of the habit of intemperance. In our farther remarks, we shall, as heretofore, refer especially to intemperance in the use of distilled spirits.

In treating of the prevention of intemperance, it will obviously be necessary to connect our observations with a consideration of its causes. These should be laid plainly open to view, else how can they be evaded or repelled? They must be known, the mind must be fixed intensely upon them, or they will not be successfully guarded against. There is no other way to strike at the root of this growing and destructive evil than through the medium of its causes.

Let us inquire if this habit may not sometimes be begun, or a disposition to it acquired, much earlier than the world imagines, even in infancy. I feel convinced that habits are of much earlier growth than is commonly believed. Infancy and childhood are tender and pliable, peculiarly susceptible to the action of external impressions, and thus to the influences of habit. Habits may become fixed, and difficult to eradicate, before the partial parents even suspect their growth; habits, too, which their own imprudence has been daily cherishing. No matter how soon the moral and physical education of a child is commenced. Many a parent may be heard wailing over the evil habits of

his offspring, talking of chance, fate, and destiny, when he himself had been mainly instrumental, either by omission or commission, in their production.

Suffer me to ask in the first place, if the habits of nursing females are always such as tend to the well-being of those they nourish? Are not many in the habit of daily using stimulating liquors, as cordials, &c. while giving suck, perhaps advised to it, especially if feeble, to enable them to bear up under the new drain now established in the system? And do not mothers often in this way insidiously fall into the habit of intemperance? But we are to speak of the effect on the child. The fact is now well known that the milk of a woman is susceptible of an important influence from the diet and medicines which she may take. A child may be purged, acted on by mercury and other medicines, through the medium of its nurse. The change, too, which diet effects in the character of this secretion is strongly shown in some of our domestic animals. It seems hardly to be questioned, then, that the daily employment of alcoholic drinks by nurses may impart to their milk unnaturally stimulating, and otherwise injurious properties, which must necessarily exercise a deleterious influence on, and alter, perhaps, the natural tastes and dispositions of the helpless being who must draw from it his subsistence. If intemperance is carried to great excess, under the circumstances referred to, then very marked and serious conse-

quences to the child will often ensue. The soft, delicate cerebral organ may be so injured by unnatural excitation, that the mind can never become perfectly developed, and a foundation may also be laid for a train of physical infirmities, which would, though very erroneously, be regarded as natural or hereditary predispositions and might terminate early in death, or if not, life, oppressed by bodily and mental ills, would be rendered not only useless, but actually burdensome.

We should esteem it then, our highest, our bounden duty to impress urgently on the minds of mothers the necessity of temperance, if not for their own welfare, at least for the well being of their helpless offspring. A nourishing and easily digestible diet, with mild drinks, will ordinarily fully and perfectly sustain the secretion of milk in a healthy female, and she may be positively assured that it will be much more bland and nutritious, and better suited to preserve and support the health of her child, than if unnaturally increased and altered by the influence of artificial stimuli. A feeble, delicate female may sometimes require some mild fermented liquor, a little pure wine, perhaps, but distilled spirits should never be allowed, except in extraordinary cases, and then only under the direction of a *judicious* physician. Nursing women, too, ought not only to be cautioned against spirits in their vulgar, undisguised form, but likewise under the more *genteel*, and to most females,

more dangerous modifications of cordials, tinctures, &c.

Let us next see if the more direct management of children in early infancy is not, in many instances, I by no means say generally, such as would be likely to cultivate in them a taste for stimulating drinks. It is not uncommon for injudicious nurses to begin, almost immediately after its birth, to drench the child with hot and stimulating infusions. If it cries from overfeeding, from a little pressure of wind, or from almost any accidental cause, the poor little thing must have something *warming* for its stomach, some tincture, or other heating medicine. The amount of the matter is, if the child cries a little more than the nurse imagines indicative of health, or does not nurse so much as she thinks proper, the stomach, highly sensible, delicate and tender, must be unnaturally acted upon by stimulants, and he stands no small chance of being intoxicated. How frequently too are not such unnatural means employed to arouse the pallid appetite? And are not cathartics, whose menstruum is rum, in very common use, even in early infancy? And then there is a mixture of rum and opium, with a few additional stimulating articles, commonly called *paragoric*, which finds a place in almost every family, and on which some children are very liberally fed, and thus not only many infirmities are generated, but the very ailments for whose relief it is administered are more confirmed;

the necessity for it grows out of its use. Its abuse in some instances, from respect to human nature I will not say they are frequent, is truly abominable. If the child has fed too freely, and signs of uneasiness and pain of the stomach or bowels follow, this mixture is hastily produced. If he does not pass nearly all his existence in sleep, if he shows a propensity to muscular motion, or to make a little noise, as is quite natural for animate things, especially if at an unseasonable hour, he must be stupified. If the mother is desirous of going abroad, paragogic will still her infant till her return. Or if there is a nurse, and she gets wearied out in attendance, this mixture will remove the obstacles to her own rest. That this medicine has virtues, like other poisons, when judiciously employed, every physician well knows, I am merely speaking of its abuse. Parents ought to know that it is a compound principally of rum and opium, and that its excessive use will sap both the moral and physical powers of their offspring. All the injurious consequences of the spirit and opium must result from its abuse, and by weakening the digestive powers it may even establish a sort of factitious necessity for such stimulants in after life.

The food too of children is apt to be too stimulating, too highly seasoned with condiments. What then let me ask would be the probable consequence of such management at a period when impressions are apt to be strong and lasting, the system pliable and peculiarly susceptible to the influence of habit? The answer is

obvious. The natural irritability of the system, especially of the mucous membrane of the mouth and stomach, would become blunted or otherwise injured by excess of excitation. Ordinary, and simple food and drink would become insipid and tasteless, nor would the stomach be sufficiently aroused by it to accomplish with ease its natural functions. It would be weakened by over stimulation, and the whole system would partake in the effect. Disorders of digestion, weakness, nervous complaints, &c. would necessarily ensue, and would seem to require more stimulants, bitters, &c. and so the child would grow up under the continued influence of artificial excitements, a seeming necessity for which would grow with their use. There does often appear to exist something like a reciprocal connexion among the various stimuli, one frequently leading on to a desire for others. Thus food if not well heated by condiments, becomes insipid to the drunkard. And I conceive that an individual accustomed to highly seasoned food, would be in more danger of acquiring a relish for stimulating drinks, than one used to more plain and simple diet. Stimuli like the vices are apt to be gregarious. But many children, independent of their food, take quite spirit enough under the disguise of medicines to cultivate in them a taste for it.

Some parents get into the gross and obviously baneful practice of actually treating their children with stimulating draughts. The drainings of the wine glass, or still worse, of the spirit glass, are given to the child,

or the sugar imbued with spirit, till he learns to love, and cries for such articles. This practice of feeding children with rum, is sometimes, among the lower classes of society, carried to a most shocking and ruinous extent. Now how often do we not hear parents who have been thus insidiously enticing their children on to vice, exclaim bitterly against destiny, evil stars, wicked dispositions, &c. Fate must after all take the blame for our neglect or misdeeds. If we can but shake the cause of evil from our own shoulders, no matter where it falls. An injudicious, foolish parent, suffers his child to lie stupid in bed half the forenoon, and laments and wonders, nay even complains that he has grown up a worthless sluggard. Another, in place of the mild and simple diet and drinks which are alone required to develop all our powers in their fullest perfection, is daily feeding a child from his own glass, or suffering a stupid nurse to drench him with all manner of heating and stimulating things, and then forsooth cannot divine how he acquired the taste which he displays for them ;—what caused him to become intemperate !

Now mothers, and nurses particularly, ought to be instructed by our profession in such management of children in early life as shall be best suited to promote their present and future health and welfare. We should teach them that simple food and drink best conduce to the development of their physical and moral energies, that stimulants, except in disease, are not only of no use, but positively injurious, if not imme-

diately, at least in their ultimate tendency ; and that the apparent necessity for their employment, for the most part, grows only out of their unnecessary use.

The habit, too, not uncommonly originates from misfortune in business, poverty, domestic unhappiness, disappointed ambition, and the various other miseries and afflictions so frequently associated with humanity. These operating on minds naturally sensitive and despondent, or deficient in moral firmness, weigh too heavily for their power of reaction, causing such a painful depression, such a desolation of feeling as to drive them to almost any means which can afford even partial or temporary alleviation to their mental anguish. They begin to take spirits with the same intentions that a person laboring under a painful and incurable disease would take opium, to blunt their nervous sensibilities, and produce a partial suspension of the power to feel. But when the habit is once begun, it is maintained by different motives from those which originated it. Under such circumstances what shall be done to save from the destruction of intemperance ? The most effectual way, as every one will admit, to enable us to rise above the ills of life, and effectually to resist those motives which impel to evil habits, is to strengthen, especially by early education, the moral and physical constitution, which are often closely related to each other, and to cultivate a strong feeling of religious and moral obligation. But this must be the work of time, and misfortunes come suddenly and upon all characters. Other means must be employed, other motives made

use of to preserve from the danger which is threatening. The mind should be diverted from its own sufferings by varying old associations, by new scenes, amusements, &c. It should be well considered too that this remedy is but temporary in the effects for which it is at first employed. That it cannot long shroud the intensity of mental suffering, in a little time the health will inevitably begin to depreciate, and a state of the digestive viscera and brain will be induced adding ten fold to the original suffering. The pleasing maze thrown over the troubled feelings, and the bright fancies which may temporarily glow forth under the morbidly exhilarating influence of intemperance, finally cease to be produced, and the unnatural stimulation serves but to aggravate the misery. Nothing then is gained by such a course ; but health, reputation, usefulness, nay every thing which gives value to existence are lost. The sensualist must be miserable ; his doom is fixed ; sooner or later his tribulation will come.

It is of the highest importance, too, that the numerous causes continually operating either by direct or indirect influences to give occasion to the habit of drinking should be known and shunned. Habit models our characters. It is but the repetition of single acts, the facility of whose performance increases in the ratio of their frequency. Hence evil habits are progressive, and the consequences of a single error on our moral habits

cannot be foreseen. If we yield once to a sensual indulgence, a precedent, a sanction as it were, is formed to yield again when circumstances bring temptation in our way, and thus it is that the venial beginning of evil habits, the yielding to a single seduction however slight, may prepare the heart for the most disgusting vices. Once within the threshold of sin, our descent is easy, and hardly aware of our progression, we soon find ourselves in its most frightful and gloomy depths. In regard to our sensual impressions the influence of habit is truly astonishing, especially in relation to our food and drink. Use may render many disagreeable and indigestible articles of diet both pleasant and digestible. It even causes us to crave the most nauseous poisons. Who would believe, independent of experience, that articles so unpleasant and disgusting to the uncorrupted taste as opium and tobacco, should be so sought after and become so necessary to the immediate comfort of many individuals as they now are! Who would think that the taste and system could be so depraved by habit as to crave the most virulent poisons! Yet corrosive sublimate has been habitually taken in doses exceeding a drachm. It is habit that renders alcohol so grateful, and seemingly so necessary to us. It is a poison, but a slow one.

From what has been remarked it is evident how necessary it is to avoid the early incitements to intemperance, to shun its first beginnings, to lay

down positive rules of abstemiousness, and if we detect a growing inclination to it, at once to arm ourselves with all our resolution to oppose it. Men seldom become thieves, or murderers, or drunkards at once; they would at first shudder even at the contemplation of such vices; they arrive at them only by degrees under the progressive influence of habit. To drink a glass of rum, or to tell a lie may be no very dreadful crimes, viewed abstractedly; thus regarded, evil may sometimes be productive of good. A lie may benefit ourselves or screen a friend; a glass of rum may afford a temporary cheerfulness of feeling, or we may please a friend by drinking with him. But then such partial benefits should weigh nothing in comparison with the hazard attendant on the breach of important moral rules. Surely to be most easily and safely virtuous, we ought to be so wholly.

In observing human society we cannot but remark an obvious difference in individuals in regard to facility of acquiring habits. Some appear to be constitutionally firm and unbending, rarely yielding to temptations held out to them by their associates. Others are more easy and accommodating in their dispositions, are readily led astray and induced to become participators in the habits of those among whom they mix. They are the creatures of accident, good or bad, according as circumstances influence them. They are sanguine, often of lively quick parts, highly sensible to the pleasures of ex-

istence, and consequently apt to become devotedly attached to them. They are beings of the day, enjoying life as it goes without regard to consequences, living only for those things which bring pleasures in their train. As they possess lightness of heart, often sprightly wit, perhaps sing a good song, or tell a good story, or have some buffoon pleasantry about them, their company is much sought for, and they soon get the name of boon companions, or *clever fellows* in the Yankee acceptation of the term.

Such characters are always in great hazard of falling into the habit of intemperance. Stimulants often elevate still higher their spirits, and for the time being exert a grateful action on the system; and if their digestive powers are strong and their constitutions vigorous, they bear up for a time against their pernicious habits, and hence their danger becomes increased. It is ever hard persuading people, especially of this volatile temperament, to look far ahead for evil. But the evil day will come, let the constitution be firm as it may. Acute rheumatisms or other active inflammations will begin to occur, though not at first perhaps referred to their true cause; and not till it is too late for reformation, are their evil habits seriously reflected on; not perhaps till their moral and physical energies have become enervated and diseased. Convivial feelings laid the first foundation of the habit, but different motives came at length to aid

in its continuance. Such individuals ought to be particularly watchful over their habits, and especially careful in their choice of associates.

A disposition to intemperance has been supposed to be hereditary, and this may in some instances be true. We know children often resemble their parents in their physical structure, diseases, tastes and indiosyncracies. Some individuals certainly appear to have almost a natural inclination for stimulating liquors, and run with astonishing facility into habits of intemperance. Such individuals for the most part readily acquire other kindred habits, as *chewing* and *snuffing*. Much may here no doubt be referred to the difference of effects of such stimulants, and to difference of temperament, as well as to incidental circumstances not appreciable by us, which may have operated even in early infancy. No doubt tastes and dispositions are frequently acquired in infancy and childhood, which are afterwards regarded as innate. I should on a general principle be more inclined to believe that the child of intemperate parents would be tainted by example than hereditary predisposition. But making all due allowances, there may be instances where such a disposition is inherited.

A fruitful source of intemperance, and one frequently alluded to, is the great number of clubs, or whatever else we may please to call them, always existent in civilized communities, and into a great proportion of which spirituous liquors are common-

ly introduced. And it is in the whist club, the singing club, or even in some one whose purpose is more laudable, that the first foundation of intemperance is frequently laid. The strong propensity to imitation engrafted for a wise purpose in our nature, impels us soon to partake in the habits of those among whom we frequently mingle in social intercourse. A man is never safe who has connexion with a society where the bottle has free circulation.

But beside those mentioned there are numerous other occasions for enticing the thoughtless multitude to get drunk. In many of our villages it is customary for the successful competitor for military or political office to distribute rum among his constituents. What a scene of drunkenness, blasphemy and disorder, not unfrequently ensues on the choice of a representative, or a petty militia officer! And what purpose do our militia trainings more effectually serve than the promotion of intemperance? Ride through a country village at the breaking up of one of these musters, and no farther answer will be needed to the question. A source too of much intemperance is the frequent practice of drinking healths, especially to favourite political candidates. But such facts are too familiar to every one to require that I should dwell longer upon them.

Idle men, especially if of social feelings, are in great danger of falling into the habit of intemperance. Observation teaches us that the human mind

left unoccupied tends strongly to evil. Man was made for occupation. He will find something to do, good or bad. His moral and physical health both demand regular and interesting pursuits, but any, however trifling, are better than the dangerous exposure consequent on the want of stated employment. With him who has no appointed task, time must lag heavily and wearily on. It becomes his worst enemy, and he will often resort to the most foolish and wicked means to get rid of it. Any thing to kill time. Hence he is likely to find out drinking companions, and all other sorts of companions, whose practices, for want of better, soon fix upon him. It is a trite saying, that 'the devil tempts every body but the idle man, and he tempts the devil.'

Females, especially, are sometimes insidiously seduced into the habit of intemperance by the use of tinctures, stomachic elixirs, &c. Their nerves are weak, their stomachs feel faint, and unpleasantly, perhaps from improper diet and want of exercise, from keeping late hours, or from other causes; or they may be subject to hysterical affections, for all which complaints spirituous tinctures are very likely to be advised. And as they are disguised under the unmeaning and often ill applied name of medicines, conscience is quite at ease. That they are drinking rum, and often in considerable quantity, is a thing far, very far from their thoughts. They are taking *medicines* for their *nervous weaknesses*,

curse to her family, and having at length forfeited every thing that gives value to life, her usefulness and respectability in society, the esteem of friends and kindred, she remains a mournful beacon to warn others of the danger of her course. And how small and apparently harmless are the beginnings of such mournful consequences! How little are the sparks which often kindle up the desolating fire of intemperance! And with what caution ought we not to guard against them?

I have thus, rather ungallantly to be sure, alluded to females, not believing, however, that the habit is even so common among them as in our own sex, but because when it does occur it forms a more shocking picture, and because they are more liable to be beguiled into it in the manner I am considering. Many females would regard it as grossly vulgar to drink a glass of rum and water, but disguise it under the alluring shape of a cordial or stomachic elixir, and conscience is at once quieted. The delicacy of many would be shocked by the offer of pure spirits and water, who would not hesitate an instant to swallow a glass of anise-seed cordial, cinnamon cordial, or *cherry rum*, and what is the mighty difference? Why, the cordial would probably be the stronger. They are deceived by them, dreadfully deceived by them; they are drinking rum, almost undiluted rum. The devil is said, when he wishes to allure men to destruction to disguise himself under some pleasing shape,

always taking special care that the cloven foot be kept out of view. And it is only when he has beguiled us on so far, so ensnared us in his toils that we cannot escape him, so gradually familiarised himself to us that we can contemplate his frightful aspect without alarm, that he ventures to unmask all his ugliness to our view. But is he not the devil still, much more dangerous in his disguise than in his true shape? Now sugar and spice rum as you will, present it under ever so pleasing a form, it is still rum, only ten fold more dangerous on account of its disguise. But it will not be long before its mask, like that of the devil's, is thrown off, and it can be seen, smelt and tasted even by the most fastidious, by those of the most delicate nerves, without fear or trembling.

A bad and dangerous practice is to drink spirit at stated periods, as at noon, just before dinner, to arouse an appetite perhaps, just before going to bed, &c. The influence of habit will cause it to be craved at such times, its quantity will soon get to be increased, and very likely the intervals between its periods shortened. We are very apt to regard a man with a suspicious eye, when we see him daily, at particular hours, slipping into a drinking house, or going to his own domestic bottle. Especially if he is frequently telling how little he drinks, that he is in no danger and all that, or goes slyly to his bottle, looks over his shoulder before he drinks, or covers his glass with his hand.

Dealers in liquors, as distillers, &c. ought to be especially on their guard, lest by too frequently tasting their liquors, they get to love them too well.

We meet with many individuals who pass in the world for temperate men, or at least only for moderate drinkers, and respectable members of society, and yet are daily sapping the energies of their constitution by *tippling*.* They tell you that they are never *the worse for liquor*, they are often athirst, and consequently drink frequently, but they take so little, that surely no harm can result, just *dash* their water, that it may not be too cold for the stomach. Now suppose them to drink only an average of half a glass of spirits an hour, which these moderate drinkers would certainly think but very little, a pint would be taken into the system in sixteen hours, about the ordinary average of one's waking hours. A pint of rum a day, and yet a moderate drinker! Oh how we are deceived in our estimation of littles! Can we not recollect that every thing great grows out of the multiplication of littles? That time, in its longest duration, is made up of inappreciable moments, and that our loftiest hills are but the accumulation of little masses?

* Almost all drunkards commence their career by moderate drinking; and the example of moderate drinkers is by far the most dangerous. The example of the beastly drunkard every body will avoid; but good fellowship, lightness of heart, &c. are often associated with moderate drinking, and the dread effects of the habit are less strikingly developed to view.

There are numerous classes of men, whose pursuits daily afford occasion to temptations to intemperance. But I will only allude to that class in whose interest and respectability my feelings are most warmly engaged. I refer to our own profession. Public opinion in our country has long affixed the stigma of intemperance to the character of the medical profession ; and we are not unfrequently asked why this vice is so prevalent among physicians. That it is a common, by far too common an evil among them, observation has fully satisfied me. Physicians practising in thinly populated districts or villages, whose rides are necessarily extensive, are most exposed, and most frequently fall victims to the habit. Hospitality is ever tempting them with stimulating drinks, and wearied as they must often be with bodily exertion, with professional cares and solicitude, their nature exhausted by long and anxious and painful watchings, it is not to be wondered at that in the frailty of humanity they often yield to the allurements, and swallow the exciting draught. Now day after day, and night after night they may be placed under like circumstances, and subjected to similar temptations, and having once yielded, a sort of license is established for yielding again ; and so they go on, necessarily augmenting the quantity of their stimulus, till at length they come to love, and regard as even necessary to their existence, that which they took at first merely as a temporary support under their fatigues, or, which is

even less pardonable, for fear of infringing the rules of hospitality. But oh, how little is the transient gain to our feelings in comparison with the certain loss of health and strength and all the noble powers of our nature which must soon ensue.

But what strength of motive, when properly presented to our minds, have we not to deter us from this disgraceful practice? Surely if temperance is imperatively called for among any class of the community, it is so especially among the professors of the healing art. Is not a sound intellect, which none but the temperate can long maintain, that which should alone warrant the trust of health and life reposed in us by our fellow men? And moreover will not the habit which has rendered stimulants seemingly necessary to our own health be apt to warp our better judgment, and cause us to deal them more liberally among our patients? Ask the face of the physician who is in the practice of stimulating highly his patients, and see if it will not commonly tell you that he also stimulates himself unnaturally? But suppose we use spirits for ourselves without advising their employment to others, still will not our example be likely to exert quite as much influence as our precepts? And then how inconsistent, how opposite to reason to hold ourselves up as the guardians of life and health when we are daily destroying our own; daily consuming, to gratify a factitious appetite, all the moral and physical capabilities which God has so kindly be-

stowed upon us? I can imagine no greater curse among a people than an intemperate physician in principle and practice, especially if fortuitous circumstances have brought him into popular favour and confidence. A pestilence will destroy but the body; but soul and body both, are consumed before his destructive influence.

Now the surest way to preserve ourselves from intemperance, is to start with the fixed principle never to use ardent spirits except as a medicine, and then only when circumstances urgently demand it. If we never swerve from this principle, temptation will soon cease to be held out to us.* Our most arduous duty, and that which requires the most self command consists in opposing the first venial beginnings of bad habits, and which are regarded as vices only so far as they endanger future moral character. We ought to be steadfast, unbending in our virtuous resolves, carefully avoiding the first steps to evil practices. We should never say within ourselves, if I may be allowed to borrow the eloquent language of another—'how inconsiderable and how venial would be this error; but to what crimes may this single error lead! We shall thus be saved from the common temptations, by which

* 'Indefinite resolutions of abstemiousness are apt to yield to *extraordinary* occasions; and *extraordinary* occasions to occur perpetually. Whereas the stricter the rule is, the more tenacious we grow of it, and many a man will abstain rather than break his rule, who would not easily be brought to exercise the same mortification from higher motives. Not to mention, that when our rule is once known, we are provided with an answer to every importunity. *Paley*.

minds less accustomed to a sage foresight, are at first gently led where they consent to go, and afterwards hurried along where it is misery to follow, by a force which they cannot resist, by a force which seemed to them at first the light touch of the gentle hand of a Grace or a Pleasure ; but which has expanded progressively at every step, till it has become the grasp of a tyrant's arm.*

Another very common source of the habit of intemperance among the lower orders of community is the prevalent custom among our farmers, mechanics, masters of vessels, &c. of daily allowing *grog* to those in their employ. Rum is about as cheap as any drink except water ; labourers commonly prefer it, think they require and are consequently indulged in its use. Young boys even, when first apprenticed to mechanics, must have their regular hours for drinking rum.

Now nothing is gained to any concerned by such practice, but a great deal is lost. The artificial stimulus only transiently arouses the physical powers, and so soon as the unnatural excitation has subsided, they become feeble and enervated, and the same course must be again and again resorted to, to maintain them at or even near their healthy standard, till finally nearly all power becomes dependent on artificial stimulation. Thus, day after day, the rum drinking labourer is lavishly wasting

* Brown on the Human Mind.

that strength, which he might surely elevate by temperance and activity.

There is no truth in the vulgar opinion that the healthy laborer requires the stimulation of ardent spirits. Those who have fairly made the experiment, and whose judgment consequently is most to be depended upon, almost unanimously tell us that ardent spirits are not only unnecessary to an individual undergoing bodily labor, but generally tend to enfeeble him, and render him less competent to effect his task. We allude of course to such as have not already acquired the habit. It is a well known fact that those skilled in the art of training for athletic feats, running, boxing, &c. do not employ alcohol when they wish to raise the muscular energies to their highest point. They know better, common sense and experience both teach them better. An easily digestible and nourishing diet, with water or some fermented liquor for a drink, are what they chiefly rely upon. The pedestrian, at least our experience has so instructed us, will hold out better, continue his exertion with more ease and alacrity, and feel better at its close, if he abstains from the use of distilled spirits.

What then, it may be asked, shall not the poor laborer have a single glass to cheer his heart under his daily and often painful task? I say no, not one drop. But I by no means assert that a glass or even a gill of ardent spirits a day taken in a diluted state would be likely to occasion any serious harm to a healthy laboring man. But it surely is of no manner of use, and

we are thus often laying the foundation of a habit whose force no power may be able to control. All experience instructs us that it is nearly impossible to confine a laborer to a glass or a gill of spirits a day. To gain the exhilarating and pleasing effects first produced, the quantity must necessarily be augmented ; for it is a general law established by thousands of facts, a law which every physician must be familiar with, that our vital functions respond less readily and powerfully to the action of a foreign stimulus in a certain ratio—not capable of being exactly estimated, as it must vary somewhat according to circumstances—of the frequency of its application.*

Those who employ laborers may be assured that it will conduce to their own interest, to that of the laborer himself, and to the benefit of society at large, to abolish the practice we are referring to. Should they even be obliged to give an increase of wages as an inducement to submit to the deprivation, they would still I conceive enhance their own interest. A hundred substitutes might be found for distilled spirits, whose effects would certainly be attended, if with any, with very much less injury. A large proportion of the mild fermented liquors, if not drunk to such extent as to disorder the digestive function, for even water may be taken too freely, would be quite harmless.

All those individuals who hold an elevated rank in

* This law, it may be remarked, does not hold true without exceptions. In the latter stages of drunkenness, the system will sometimes become morbidly susceptible to the action of the habitual stimulus.

society, who lead its fashions and give tone to its manners, possessing consequently high influence over their fellow men, ought to exert their best efforts to render the practice of drinking stimulating liquors unfashionable. Let them banish it from their own circles as a vulgar custom, and very many others, at least for the sake of seeming genteel, will soon likewise dispense with it. There are always a class of society who are very ready to assimilate themselves to their superiors, by aping either their virtues or their vices. At any rate, the habit of using distilled spirits should be expelled from good society, and if it must abide any where, let it be only among the lees of humanity. The example of the great will effect very much more than their precepts. Let them cry out against intemperance as loudly as they will, *on the house-tops, in the market-places*, and what good purpose will it serve, while they keep their own cellars stored with the choicest of liquors, and seize every occasion to boast of their age and quality; or while they are treating every menial that does a job for them, every coachman or stage-driver that carries them safely and rapidly on, or that they may increase their speed. This latter is a practice which must have struck every traveller.

Our churches, too, ought to look well to the practice. Do none of the members of God's church keep strong drinks on their side-boards? and do they never taste them themselves or tempt their friends on to destruction with them? Do none take out licenses to poison their fellow-creatures with alcohol? Christians

surely ought to set their faces against a practice so mischievous in its consequences.

A diminution of the facility of obtaining ardent spirits, every one must consider of the highest moment in relation to the suppression of intemperance. Extreme poverty is commonly associated with mental and bodily suffering, and if the poor can lessen the sense of their wretched condition, or even produce a pleasing exhilaration, for a few cents, is it likely that they can be prevented? The consequences are ahead, the relief and gratification immediate. Poverty then generates drunkenness, as well as drunkenness poverty. To enhance the price of spirituous liquors, government must be looked to. It is very certain that drunkards will always more or less abound when a few cents will get a man drunk. What temptations, too, are held out in all our cities, towns, and villages, to allure people on to intemperance. A man can hardly turn a corner in any populous place, but a sign indicating the sale of spirituous liquors, with perhaps an invitation to enter and drink, will meet his view. But such nuisances to the health and morals of society have of late been so frequently decried, that I shall content myself with this bare allusion to them.*

* The females in a town of Ohio have formed themselves into a temperance society, and two of the articles in their constitution must unquestionably exercise a good deal of influence in a new country where females are scarce, and males plenty, especially on unmarried gentlemen. They are, 'We will discountenance all addresses in any of the male sex, with a view to matrimony, if they shall be known to drink ardent spirits, either periodically, or on any public occasion.'

'We, as mothers, daughters and sisters, will use our influence to prevent

It now only remains for me briefly to consider the means best suited to cure the habit of intemperance after it has once begun, or become established. Few habits enthrall by so potent a spell the voluntary and reasoning powers of man and so enslave his moral faculties as that of intemperance, and few are there from whose shackles we less frequently become delivered. Such is its force, so violent is the craving, that the intemperate experience for their loved liquor, so heart broken, disconsolate and wretched are they when deprived of it, that few motives are sufficiently strong to come into successful competition with it. Friends, the enjoyment of social intercourse, home, wife, children, nay, even the hopes of God's mercy are often all yielded up for a little rum. Is it not very strange that man, endowed so highly above all other animals, should sacrifice every true blessing of life, all the superiority of his nature, to the gratification of this single taste?—that he should give up so much for so little? How strong an instance does it not afford of the power of habit in the constitution? And how forcibly does it not admonish us to avoid the early temptations to any habit whose ultimate tendency is evil. But the habit of intemperance operates with a double power; for it is not only daily growing in strength by repetition, but by depreciating our moral

the connexion of our friends with a man who shall habitually drink any kind of ardent spirits.' What a sacrifice these ladies are willing to make for the cause of temperance! Another excellent agreement among them is, that they will not take spirit on any occasion, except prescribed by a *temperate* physician.

feelings and energies, it is lessening the motives and power which should oppose it. To afford any probable chance of cure, the habit of intemperance should be attacked early, while the mind is in a condition to feel and reason on its consequences, while it is susceptible to shame, and retains its moral principles. In short, before all its elevated views have become debased under its degrading influence. When the habit has been long established, to break from its bonds requires of its victims a firmness of resolve which few are then capable of exercising. They now say they must drink ; their health suffers, their feelings are dreadful if deprived of their habitual stimulus, it is too late to amend, life depressed in all its powers must yield to its discontinuance. The poison must now be used as an antidote to the poison.

A question naturally occurs when speaking of the cure of intemperance, whether it is better gradually to break in upon the habit, lessening daily the quantity of spirits taken, or to do it at once, not allowing one drop to satisfy the morbid cravings of intemperance ? Now I would answer unhesitatingly, at least if health is not almost entirely destroyed, if age has not too much diminished the energies of life, if, in short, there is a prospect of restoring health and saving life by breaking the habit, let it be done at once. Some substitute may be, probably will be, demanded to enable an individual to endure the total deprivation, and to soothe the consequent agonizing craving, but save him from the bane that is so surely promoting his destruction. The

distress to the individual will probably be more concentrated, but then it will not be so lasting. The temptation, too, is at once removed, and the associations which enslave the mind, sooner, and more effectually destroyed. But where the taste and feelings are gratified daily by a little and a little, the associations which bind to the habit are maintained, the little employed serves but to arouse the morbid longings. Suppose a man was anxious to estrange himself effectually from a beloved mistress, would common sense teach him to do it by degrees, to see her perhaps once a day, then once every other day, and so on that at length he might care nothing about her? or would it not rather direct him to break from her at once, avoid her altogether?

If the tobacco chewer, and snuff taker essay to loosen by degrees the bonds which fix them to their habits, they will rarely effect their purposes. The intricate knot tying us to all bad habits should be forcibly cut asunder. But the case may be said to be different in regard to the use of ardent spirits. The system has been so long accustomed to a particular stimulus, that a partial change has been effected in its healthy laws. Spirits have become, as it were, a requisite exciter of the motions of life, and to abandon them entirely and at once, might occasion dangerous exhaustion. But facts and experience serve to banish from the mind all such unfounded apprehensions. Abundant evidence evinces that distilled spirits may be suddenly and wholly withdrawn, in ordinary cases from the intemperate, not only without endangering

health or life, but with evident improvement to the former, and consequent security to the latter. It is a known fact that in many of our public charitable institutions, habitual and miserable drunkards are often entirely debarred from the use of distilled spirits. The immediate consequence is what we should anticipate ; they feel acute and agonizing longings for their wonted stimulus, and distressing exhaustion not unfrequently ensues. But such feelings are rarely long continued, and if there exist no serious lesions of important viscera, the different tissues, under the healing influence of temperance and bodily exertion, recover their natural vital powers, and are enabled again to respond with a healthful energy to the impression of ordinary stimuli. In a few months in truth, after the commencement of such a course, they often arrive at a state of bodily vigour which could by no means have been predicated on their original diseased aspect. I know the sacrifice of feeling must be great, that the depression of mental feeling and bodily powers, and the ardent and painful longing for the accustomed draught may render the individual for a period completely wretched, and consequently that a good deal of moral firmness is demanded to enable one voluntarily to submit to such sacrifice. But then such sufferings are rarely attended with danger, they are daily growing less intense, and will at length cease altogether and health be restored, unless fatal disease has fastened on the system.

I have no doubt but that the habit has been, and may again be gradually destroyed. It has been said

to have been done, by daily dropping a quantity of sealing wax or some other substance into a drunkard's glass till it became filled. Still I feel well assured that the most efficient and easiest way is the one I have already advised.

There are many collateral means to be employed to aid in reclaiming the drunkard and to give him succour, under his painful trials. If he is an idler, some regular employment must be afforded him, such as will keep both mind and body in a continued state of healthy excitement. Change of situation, too, is often very advantageous by presenting new scenes of interest to the mind, and thus withdrawing it from old associations; and consequently lessening the ardent longings for the customary stimulus. The more the mind can be engrossed in interesting pursuits, the better will be the chance of breaking the habit.

All those means should likewise be pursued whose tendency is to arouse the bodily vigor, that the system may be enabled to withstand the effects arising from the sudden deprivation of its accustomed stimulus. Among them are an easily digestible and nourishing diet, free bodily exercise in the open air; for instance farming and gardening, both of which are very healthful and interesting pursuits. Journeying, by land or sea, aids very much in strengthening the health, and is also beneficial by affording change of air and scene, and awakening new interests and associations in the mind. Cold bathing, especially showering, may also be employed in aid of other means, unless the system is very greatly

debilitated. It serves to give energy to the organs of digestion, and tone and vigor to the constitution at large, also to allay the parching thirst, and abate the distressing sensation at the precordia. Mild aperient medicines should likewise be employed if the condition of the bowels requires them, but not in the form of tinctures. These means with the physical, tend also to elevate and restore the intellectual and moral powers, rendering them more adequate to the contest they are maintaining.

It is usually necessary to substitute in the place of distilled spirits some mild drink which shall pleasantly excite the stomach. Enough of this character may be found, though not all equally grateful. Dr. Heberden mentions Bath water not only as being very efficacious in curing the complaints arising from intemperance, if employed 'before the liver and stomach are deeply hurt,' but likewise as very useful in preventing a relapse, 'by enabling the patient to correct the habit of drinking: for,' says he, 'the nature of this water is so friendly in warming and comforting the stomach, as to relieve all that coldness and anxiety which almost irresistibly force a hard drinker to fly to strong liquors for ease under these insufferable sensations.'* Now some of our own mineral waters, exert an analogous effect. Among the best may be ranked the Congress water; this when judiciously employed tends to produce a gentle and pleasant excitement of the stomach, and probably acts through its medium on the hepatic

* Commentaries.

system. It thus commonly alleviates the distressing, sinking faintness about the epigastrium, also abates the dryness of the mouth, and unnatural thirst, and acts as a mild and cooling aperient. A visit to the Congress spring should always be advised to the reforming drunkard, if he has the means to do it, and his lungs are unharmed.

Some gentle bitter infusion may also be required in aid of other means to incite the appetite and sluggish powers of digestion, and to prevent that distressing collapse of the system which is apt to ensue on the sudden loss of an habitual stimulus. If used, however, to excess, injury instead of benefit may result. The too free use of bitters has even been said to give a disposition to apoplexy and palsy. Bitters ought never to be employed in cases of intemperance in any other liquid form than that of watery infusion. When combined with a spirituous menstruum they only serve to aggravate the evil we are endeavoring to relieve. Among other tonics I have sometimes found a happy influence exerted by some of the mineral acids in the debilitated stomachs of the intemperate. If any of the important viscera have become seriously diseased, our regard should of course be particularly directed to their condition, and other management in many points, than that advised, would be called for; but this forms a subject not within my province to consider.

There may, however, be cases as already hinted—there probably are cases, for few general rules exist without some exceptions—in which it might not be

prudent to enjoin a sudden and entire abstinence from the use of spirituous drinks. Delirium tremens is said to have been excited in some instances by a sudden deprivation of the accustomed stimulus. Take an old man, for instance, who for a course of years had been addicted to the intemperate use of distilled spirits, in whom the unnatural actions generated by ardent spirits, had virtually become the accustomed phenomena of life, in whom there remained but little vital energy, and consequently but little power to alter habitual morbid associations, and of accommodation to new circumstances, and modes of living action, whose functions in truth seemed almost dependent on ardent spirits; in such a case I am not prepared to assert that we could without risk, advise a total abstinence from distilled liquors. The irritability of the tissues may have become so blunted as to be unable to respond to milder stimuli. In such old and hardened sinners, however, there is little hope of amendment, do what we will. In truth it is no easy task to persuade an intemperate old man that his health does not require ardent spirits, and I will not dispute but that it may in some rare instances. But observation has certainly instructed me that old men commonly bear the loss of such liquors without the dangerous consequences which are generally apprehended. Health, in fact, is often a good deal improved, if the individual is not very aged, or the constitution too much shattered. Wine, however, and some mild bitter infusion, should commonly be employed as substitutes.

In advanced and obstinate cases of intemperance, opium has been advised as a substitute for spirits, and has sometimes succeeded in enabling the drunkard to abandon wholly or in part his accustomed potations. But as the habit of taking opium will be liable to become confirmed, we can only regard it as a choice between two evils. The habit of using opium does not ordinarily so debase the intellectual and moral powers as that of ardent spirits.* I have known individuals to yield up spirit for opium and become in consequence more respectable and useful members of society. In all cases of intemperance which baffle every other means, I would not hesitate to advise opium as a last resort.

In others beside those in advanced life, the vital tissues may in some instances get into such an altered condition from intemperance, that they cannot be readily excited by ordinary stimuli. They may have become unusually torpid or their natural irritability altered in some other way. Thus sometimes diarrhoea, spasms of the stomach, and dangerous depression of the whole system ensues on the sudden deprivation of alcohol. In such cases a gradual diminution of it may be found necessary, and wine and other fermented liquors should be tried as a substitute. But instances of this character are not very frequent, and in truth when they are so far gone as this, they are not very likely to be restored to health, or their usefulness

* Opium may be, and sometimes is used, to such an extent as to ruin both bodily and mental powers; but not so commonly as ardent spirits.

in the community. There may be cases I grant, where from some idiosyncrasy, natural or acquired, fermented liquors will not suit the stomach, but yet its feeble condition may seem to require some stimulus. Distilled spirits may under such circumstances be necessary, but their use should be very sparing, and continued only while necessity seems to demand them. In such cases a great deal of discrimination and prudence are required on the part of the physician whose advice may be called for. There are no doubt a number of diseased states of the body, though by no means so many as commonly believed, requiring alcohol in some of its modifications, but these I am not called on to discuss.

It will be perceived that I have all along been supposing a desire on the part of the individual to get rid of this debasing habit, and a voluntary submission to means which may be advised to effect it; but this is not commonly the case. Now if a person is determined to persist in the habit, in opposition to every motive that may be set before him, restraint will not probably have much effect, unless it could be permanent, or at least continued for a long period. He will be likely to feel offended under such restraint, regard it as a punishment imposed upon him, and break from it whenever opportunity is afforded. In regard to such persons, I have only to say, if they are determined to kill themselves, why let them do it; the sooner their families and society are rid of them the better. In some instances, though it must not be understood that

I would advise such a practice, rum has actually been put in their way that they might effect their work as speedily as possible. It would seem, however, from the following citation, that this method may sometimes produce a result quite contrary from what is expected or intended. 'A man of Philadelphia, who was afflicted with a drunken wife, put a cask of rum in her way, in the charitable hope that she would drink herself to death. She suspected the scheme, and from a mere principle of contradiction abstained in all time coming, from any sort of indulgence in the bottle.' The habit was here overcome by exciting a new feeling in the mind, stronger than the original one, and incompatible with its indulgence.

Various remedies have been advised to be taken internally with a view to destroy the anxious longings, and to change the morbid physical condition of the drunkard's system. Sulphuric acid taken with bitters, or with the individual's favorite liquors has been stated to eradicate the strong desire felt by the intemperate for ardent spirits.* If this is true, it is very difficult to determine the mode in which it operates to produce such an important result. There is nothing peculiarly nauseous about it, nor are its effects on the system of an unpleasant character. Experience alone must test its utility.

* M. Bruhl Cramer, a German physician, administered it successfully with bitters. Dr. W. D. Brinkle has related several cases in the North American Medical and Surgical Journal, tending to establish its utility. He added from one to two drachms to a pint of the patient's favourite liquor, of which a wine glass full was to be taken at intervals till intoxication was produced.

But nauseous and disagreeable articles have had most repute as medicines for intemperance. Not only tartar emetic, tobacco, and other sickening medicines have been conveyed into the drunkard's liquor to excite in him an aversion for it ; but things most foul, and offensive to sense, as venomous reptiles, serpents, toads, and even putrid animal substances. I have heard of a man that was cured of intemperance in consequence of a putrid eel being put into his bitter bottle. The active ingredient in Dr. Chambers' medicine, which for a little time had such vulgar repute, was tartarized antimony, and its immediate effects were severe vomiting and distressing nausea. Analysis proved it to consist of antimony, capsicum, sulphur, carbon, cochineal, and gum. Very likely the articles were varied, and more disagreeable ones at times combined with the antimony. Now this medicine did certainly in many intemperate individuals occasion a temporary dislike for the liquor in which it was taken, but that permanent cures were generally effected by it has not been proved. But even to check temporarily the morbid craving for an intoxicating liquor, is no small advantage, it gives a man a chance to reflect on his bad practices, and to confirm himself in good resolutions. Dr. Rush, and other physicians have used antimony in cases of intemperance, combined with the favorite liquor. Some have advised it in nauseating doses merely, others in such quantity as to produce severe vomit-

ing. And good effects have been produced by both methods in some instances. But then large doses have proved dangerous and even fatal in cases of much prostration, and where there existed an inflamed or highly irritable condition of the gastrointestinal mucous membrane, or serious lesions in some of the viscera, and disposition to chronic diarrhœa. The indiscriminate use of Dr. Chambers' medicine was attended with a good deal of danger, and in some instances with speedily fatal consequences. Such remedies ought only to be employed under the direction of a prudent physician, and adapted by him to individual cases.

We need be at no loss to determine the principle on which the substances alluded to, for the most part act. It is by destroying existent associate feelings, and creating others of an opposite character. To him that has yielded to habits of intemperance, many pleasing associations are awakened by the sight, or the thoughts of his loved liquor: Day after day perhaps it has cheered his depressed feelings, dispelled from his mind the real or imaginary evils which were weighing with a painful pressure upon it, or relieved the distressing bodily sufferings to which he is subjected. Such have repeatedly been its immediate effects, and the cause which produces them will be loved and sought after; even its taste will become delightful. Now could we in place of such tempting associations, connect with the liquor those of a forbidding and

painful character, as sickness, distress, or a disgusting taste, analogy would certainly lead us to hope for some advantage. The principle of association or suggestion extends its actuating influence over the whole animal constitution, and our sensual as well as intellectual tastes and habits are in continued obedience to its control. Under its influence the most lovely objects may excite our disgust, and the most hateful become agreeable. Administer antimony frequently to a child in his favorite food or drink, and see how soon he would get to loath them, even without the medicine. This is a matter of so familiar observation that judicious mothers and nurses ever wish to avoid administering medicines in substances which they are desirous a child should take for nourishment. Many a child has long loathed a favorite sweetmeat because it had been made the vehicle of a nauseous drug. The taste however is so firmly established in the drunkard by previous associations, that new ones can by no means always permanently eradicate it.

Some have thought that intemperance is strictly a physical malady, and that the urgent desire for strong drinks, like fever, bulimia, &c. originates in morbid material changes, which like other diseases are to be restored by internal remedies. Little ignominy consequently should attach to the drunkard, and moral treatment would be but of minor consideration. Now that it becomes a disease no

one doubts, but then it is a disease produced and maintained by voluntary acts, which is a very different thing in my view from a disease with which providence inflicts us. Our laws rightfully recognise a difference between a crime committed under voluntary and involuntary insanity. On the like principle stealing may be regarded as a physical malady, meriting pity rather than blame. The thief longs most ardently for gold ; his feelings and condition are truly distressing without it, and thus by a sort of physical necessity arising out of a morbid condition generating this desire, he is impelled to take it, in the same way that the drunkard is driven to swallow rum to satisfy his morbid desire. Now strong motives are and should be held up in the community to prevent those vices which affect its safety and well being. Ignominy and disgrace should ever be associated with intemperance, no matter how much, there is not yet enough to prevent the spreading evil. It is a crime striking deeply into the very root of all peace and good order in society. Its effects are not confined, as some foolishly assert, to the individual ; the common expression that a drunkard is an enemy but to himself conveys a falsehood ; his evil influence extends to his family, his friends, and indirectly to society at large. It is a crime equally, or perhaps even more injurious in its effects on the community, than many which receive the severest of the law's penalties. There is scarcely a vice but that follows in

the train of intemperance. There may be philosophy in the belief, that evil habits are dependent on material disease, and are frequently to be encountered by medicinal agents, but let it prevail, and peace and good morals must fall before it. Calomel and phlebotomy will never eradicate from the mind of the thief his unlawful desires. And I feel convinced that should the opinion ever prevail that intemperance is a disease like fever, mania, &c., and no more moral turpitude be affixed to it, drunkenness, if possible, will spread itself even to a more alarming extent than at present.