

Syllabus of lessons on 'temperance' for scholars attending public elementary schools.

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SYLLABUS

OF

LESSONS ON "TEMPERANCE"

FOR SCHOLARS ATTENDING

PUBLIC ELEMENTARY SCHOOLS.



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SYLLABUS OF LESSONS ON "TEMPERANCE" FOR SCHOLARS ATTENDING PUBLIC ELEMENTARY SCHOOLS.

PREFATORY NOTE.

1. It is hoped that in course of time such instruction on the subject of "Temperance," in its restricted sense, as is suitable to Public Elementary Schools will be given by the regular Staff as part of the teaching of the elementary rules of personal health which should be included in the curriculum of every school. Article 2 (9) of the Code for 1908 indicates that such instruction should be given wherever possible, and Hygiene (which, of course, comprehends instruction relating to alcoholic drinks) is now included as one of the regular subjects for Two Year Students in Training Colleges (Article 15 (a) of the Regulations for the Training of Teachers for Elementary Schools).

2. At present, however, some Schools have on their staff no teachers who have the special knowledge required for giving teaching of this kind, and in order that the scholars may receive instruction in "Temperance," the services of special peripatetic teachers have been offered by various Societies and Organisations, and have in many cases been accepted by Local Education Authorities and Managers of Schools. Such instruction has been allowed to count towards the period of secular instruction required by the Code. These extraneous teachers, however competent they may be, have not always the particular qualifications required by the Code, nor the experience of the methods of teaching suitable to scholars in Public Elementary Schools, which are possessed by the regular teachers on the staff of the schools. Further, the syllabuses of "Temperance" lectures to be given by extraneous teachers which have been submitted for the Board's approval have been very various, and in some cases have not been specially designed for the instruction of scholars in Public Elementary Schools, nor have they always been appropriate to that purpose. In these circumstances the Board have come to the conclusion that the time has come for the issue of an official Syllabus to which all instruction in "Temperance" (whether given by extraneous teachers or by teachers on the ordinary staff) should conform in general character, and, to some extent, in detail. The Board believe this course to be essential in order to provide security that the teaching given on this difficult matter shall be both accurate in its statement of facts and suitable in its manner of presentation to scholars in Public Elementary Schools.

3. The following Syllabus has accordingly been framed as a "Model" Syllabus for use by teachers in Public Elementary Schools, whether they are or are not members of the School Staff, and the Board of Education will not in ordinary circum-

stances be prepared to approve under Article 3 of the Code any Syllabus of instruction which departs substantially from this Model. It is suggested that at least three lessons in the subject should be given to the children each year. It is, however, desirable to arrange, so far as may be possible, that if any part of the instruction is given to children who are under 10 years of age, it should be only that which is of the broadest and most general character, and that lessons on the matter of the Third Section should only be given to children who are over 12 years of age. Where three lessons cannot be given, the teacher may be able to cover the ground in rather less detail in two lessons, and where one lesson only is given, it is preferable that the matter in Section III. of the Syllabus should be very lightly touched, the main attention being concentrated on Sections I. and II. Where the lessons are given at distant intervals, as will sometimes be the case, it is clearly desirable to begin the later lessons by a brief recapitulation of those which have preceded. There is an obvious advantage in securing that a series of three lessons is given to the children within a comparatively short period. Lessons on this subject need not necessarily be grouped under a separate head in the curriculum, but can appropriately be included in instruction on Hygiene, of which indeed they form a part.

It will be observed that the principle of the Syllabus is to proceed, as far as possible, by means of question and answer, from what the child already knows to what it does not know. By this means the child is brought to express what it has already experienced, and is led on, by amplification and illustration, to realise what is most conducive to a healthy life. Technical terms and language which a child would not understand have been avoided as far as practicable, and it is of the highest importance that in using the Syllabus the teacher should be careful to employ only the simplest language.

4. Some Notes for the guidance of teachers have been appended which elaborate the necessarily condensed statements of the Syllabus, and indicate under each heading the line which should be taken and the material which can be safely used in enforcing or illustrating the several points. It is not, of course, intended that these Notes should ever be read to the class or used in such a way as to overload the teaching with detail. It may be taken that the statements of fact made both in the Syllabus and in the Notes have been carefully verified, and that the inferences drawn from the facts are supported by scientific opinion of high authority.

5. It has been alleged that some of the "Temperance" teaching given in the past which was represented as "scientific" has, in fact, fallen short of a scientific standard as regards accuracy in stating facts, caution in drawing inferences, or methods of instruction. Indeed in some cases it appears that

attempts have been made to support the incontrovertible general arguments against the abuse of stimulants by suggesting that alcohol inevitably and invariably has deleterious consequences when taken as a beverage in any conditions whatever. The supposed proof of this proposition, sometimes included in lectures on "Temperance" given in Public Elementary Schools, occupied time that might have been better employed for the purpose of inculcating "Temperance" on broad intelligible grounds, and as a scientific argument rested on somewhat precarious foundations.

6. The teacher will know that a temperate life depends mainly on good habits and the appreciation and practice of a few simple and direct rules of health and conduct, and is therefore largely a matter of good training. There are open to the teachers on the Staff of the School frequent opportunities, apart from the regular lessons, of impressing upon the scholars the importance of habits of self-control. It should be the object of any special instruction in "Temperance," as in other departments of Hygiene, to supply in a simple intelligible form the broad truths of the subject and plain reasons for the good habits which it should be the constant aim of the School life, no less than of the Home life, to develop in the scholars.

7. "Temperance" teaching in Public Elementary Schools should therefore aim mainly at impressing upon the scholars the manifest advantages of abstemiousness, and the absence of advantage in, and the positive risks and dangers of, any departure from it. The advice or injunctions given should be based upon the broad facts of common experience, such as children can readily understand, and upon the conclusions of trained observers (*e.g.*, as to the extent to which the power to do mental and physical work is affected by the consumption of alcohol in its ordinary forms), rather than upon the results of laboratory experiments or pathological studies. The latter may be valuable in the teaching of advanced students of Hygiene, but can have little, if any, real meaning for children. The teacher should carefully avoid anything, whether in the details or in the methods of dealing with them, calculated to excite morbid curiosity or fear. Instruction on the subject of "Temperance" should itself be temperate and should make a sober appeal to such reasoning capacity as a child possesses and to the ideas of decent, self-respecting and dutiful living which every good teacher endeavours to present to and cultivate in the children under his charge.

Robert L. Morant

June 1st, 1909.

SYLLABUS.

SECTION I.

EATING AND DRINKING: FOOD AND ITS USE.

1. What things do we eat?
2. The different kinds of food.
Meats, fats, starches, sugars, salts. Water in food.
3. What is the use of our food? Why food is necessary.
 - (a) Food is necessary for the growth of the body.
 - (b) Food prevents the body from becoming thin and wearing away. It repairs waste.
 - (c) It is from food that we get our strength and power to work.
 - (d) It is by our food that the body is kept warm.
 - (e) The working of the mind depends upon the condition of the body. If the body is not properly fed the mind will not work so well.
4. Overfeeding and underfeeding. Too little food is bad for the body; too much food is bad also.
5. The special usefulness of the different kinds of food. Why people eat various kinds of food, and why they are wise to do so.
6. Things which people eat and drink for pleasure. Sweets, cakes, tea, coffee and cocoa. Some of these things are foods or quench thirst. The value of each. Why people drink tea and coffee.
7. Other beverages.

Besides these beverages, which are in part useful, people also take for pleasure other beverages, such as beer, wine, spirits. These are not useful in the ways in which our ordinary food, and such things as cocoa and milk, are useful. People often do themselves great harm by taking too much beer, wine and spirits.

The chief reason for this is that these beverages contain Alcohol and little or no real food-substance.

Children and young people ought never to take alcoholic beverages in any circumstances, unless by a doctor's express order.

SECTION II.

ALCOHOL.—EFFECTS OF ALCOHOLIC BEVERAGES
ON THE BODY.

1. The presence of Alcohol in beer, wine and spirits.

Not only are beer, wine and spirits not useful to us in the same way that our ordinary food is useful; they also contain varying proportions of alcohol, which in pure form is injurious to the human body.

2. Some characteristics and uses of pure Alcohol.

3. The proportion of Alcohol in beer, wine and spirits.

It is impossible to drink alcohol undiluted, because of the direct injury and pain it would produce.

The harmful effects of alcohol are weakened, though not destroyed, when it is mixed with water and other things, as in alcoholic beverages.

4. The drinking of alcoholic beverages may bring about injurious effects and changes in our bodies, which may be considered under the following headings:—

The effect of Alcohol on:—

- (a) Growth.
- (b) The power of the body to resist disease.
- (c) The body's strength and power to work.
- (d) The proper digestion of food.
- (e) The heat of the body.
- (f) The control of the body which is exercised by the brain.
- (g) The intelligence and understanding.

5. The effects of excessive drinking of Alcohol:—

- (a) The man or woman who habitually drinks too much alcohol may become a mental or physical wreck.
 - (b) Persons who drink in excess do not, as a rule, have long or healthy lives. The evidence of this.
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SECTION III.

EVIL CONSEQUENCES OF INTEMPERANCE
TO THE INDIVIDUAL,
TO THE HOME, AND TO THE STATE.

(For children over 12 only.)

1. The drinking of alcoholic beverages not only may have bad effects upon the body and mind of the individual, but also may be followed by still more serious consequences, namely, moral injury to himself and great harm to others.
2. The importance of self-control and temperance in all things.
Freedom is lost if evil habits are acquired.
3. The personal consequences of excessive drinking of Alcohol :—
 - (a) Waste of money which could be wisely spent or saved. The value of thrift.
 - (b) Loss of self-respect.
 - (c) Unfitness for work ; loss of employment. Pauperism.
 - (d) Ill-health ; disease. Insanity.
 - (e) Neglect of duty ; moral degradation. Crime.
 - (f) The ruin of homes ; unhappiness and suffering of men, women, and children.

4. The social evils which result from alcoholic excess.

The habit of alcoholic excess affects not only the individual and his family, but also the State, *i.e.*, the whole of the people. There is wasteful expenditure of money ; and paupers, lunatics, and criminals are a heavy burden on the public. The working powers of the people as a whole are impaired, and so the prosperity of the nation itself is undermined.

NOTES ON TEMPERANCE SYLLABUS.

SECTION I.

1. *What things do we eat?*

By questioning the children the teacher will be able to ascertain a considerable number of foods in common use in their own homes, or which they have had in their most recent meal, such as meat, fish, bread, butter, jam, potatoes, etc.

2. *The different kinds of food.*

The children will thus learn that there are various kinds of food. Broadly, all foods may be grouped under four different headings:—(a) *Meats*, among which may be included butcher's meat, fish, bacon, poultry, eggs, and also cheese and milk; (b) *Fats*—such as butter, dripping, cream, margarine, bacon-fat; (c) *Starches and Sugars*—among foods which contain starch are bread, potatoes, rice, tapioca; sugar is found in beetroot, carrots, sugar-cane, sweet fruits, and milk; (d) *Salts*—among which common salt is one of the most important. It is, however, necessary for us to eat fresh fruit and vegetables, because these also contain "salts" as well as "acids." Most kinds of food belong to more than one of these groups, for instance, milk contains meat substance, fat, sugar and salts, besides water; bacon contains meat and fat; eggs contain meat substance, fat and salts. Generally, however, the food consists chiefly of one food substance, such as meat or fat. All these different food substances are required by the body, and it is therefore necessary to eat many different kinds of food. Milk is almost the only food which contains everything needful for children, and that is why it is so important that babies and little children should have plenty of milk. Some people do not like eating meat or fish, and they must on that account take an extra amount of such foods as milk and cheese instead, for they cannot keep well or strong if they eat only starch-containing foods, fat and vegetables.

Water in food.

Besides solid food to eat we need also something to drink. Water is the best fluid to drink, and man cannot live without it any more than plants or animals can. If a plant is not watered, and is thus allowed to become dry, it will wither and die; the human body will also die if it cannot obtain water. Most food contains a good deal of water; and some foods, such as jelly, though appearing to be quite solid, are almost wholly made of water. All fruits and vegetables contain water, and thus when they are cooked they seem smaller because some of the water in them boils away, or becomes "juice." There is also a large amount of water in meat. The water contained in food, however, is not enough to keep us healthy, and we must therefore always drink water as well. Water is necessary partly because it helps to dissolve and make liquid the food which is eaten. The nourishing part of the food is then in a condition to be absorbed into the blood, and is distributed by the blood to all parts of the body. Food can only be taken up by the blood in liquid form, so that without water the food would be of little or no use to our bodies, however good it might be in itself. Water therefore may in this sense be considered a food.

3. *What is the use of our food? Why food is necessary.*

Everything we eat is not necessarily "food." To be a real food it must be able to help the body in one or more of the following ways:—

(a) *Food is necessary for the growth of the body.*

It must help to make the body taller and bigger. Babies and children have to grow bigger and heavier, they cannot do this unless food is given to the body which it is able to turn into bone and muscle. After serious illness grown-up people become thin, wasted and weak—then they have to eat food to restore them, and to make their muscles big and strong again.

(b) *Food prevents the body from becoming thin and wearing away.*

If we do not have food for several hours we begin to feel hungry. Some part of the body is continually wearing away and being used up, somewhat in the same way as a candle is used up as it burns. When we feel hungry it means that we feel the need of food to replace the part of the body that has wasted away. If we use our muscles and do hard work the body wears away faster than if we do no work, and therefore we need more food after our work to make up for this extra waste. If we cannot get enough food we know that we grow thin, so it is evident that we must take food even if the body is to remain the same size and weight.

(c) *It is from food that we get our strength and power to work.*

When we do work with our bodies or minds we use up our strength, and sooner or later we get tired and have no more power or energy to work. Then, besides rest, we require food to supply fresh strength and energy to make up for that which we have lost.

(d) *It is by our food that the body is kept warm.*

As our bodies are warmer than the air and most of the objects which surround us, they are constantly cooling down and losing heat. When food is taken into the body and absorbed into the blood, heat is produced, in somewhat the same way as heat is formed when anything is burned. It is the heat derived from our food which replaces the heat lost from the surface of the body, and which prevents us from becoming too cold. This explains why people often feel particularly cold when they are hungry.

(e) *The working of the mind depends on the condition of the body.*

Our minds cannot work well unless our bodies are properly fed and warmed, because food serves to strengthen brain as well as body. Just as the body becomes weak and unable to work if it is not fed, so the brain also becomes less active if not nourished. Thus, children who are not properly fed cannot learn their lessons as well as if they were well nourished. It is, moreover, particularly important that children should receive suitable and sufficient food, because under-nourishment in childhood may starve, not only the body, but also the brain, upon the health, capacity and power of which so much of their future life depends.

4. *Overfeeding and underfeeding.*

While we should always eat enough food to keep us strong and well, we should never take more than is necessary for this purpose. Too much food is not only useless, it also does harm. Extra and unnecessary food either passes out of the body and is wasted, or else is stored up in the body as fat, so that people who eat too much may become very stout. Such people are on the whole less healthy and are more liable to illness than those who have more self-control and eat only enough for their actual needs. Overfeeding may be, and often is, more harmful than underfeeding. It is quite as bad for children to have too much to eat as for grown-up people.

5. *The special usefulness of the different kinds of food. Why people eat various kinds of food and why they are wise to do so.*

The several kinds of food referred to above are all required by the body, and each kind is of use in its own particular way. For instance, meat, fish and eggs help the body to grow, to become strong and able to work; they help to make muscle and supply energy and strength. Cheese (which contains the meat substance of milk) and milk are useful in the same way. Foods

containing sugar and starch also help to make the body strong and fit for work, but they make it warm too. Fat in food both makes the body warm and keeps it from getting thin. Besides these foods, we shall do well to eat fruits and green vegetables, because they too help to keep the body healthy.

It is easy to see why it is not good to try and live on one kind of food alone. If, for example, we eat only bread and butter, we have starch and fat in our food, but that is not enough to make the body grow and keep strong. If we live on meat or fish only, we have not enough fat or sugar to keep us warm. If we do not have fresh vegetables or fruit with our food, we become ill, because our diet then lacks the necessary salts and acids. This is the reason why sailors who made long voyages in sailing ships used to get ill, because in those days it was not possible to store enough fresh vegetables to last for the whole voyage. We must therefore eat a little of a good many different kinds of food if we are to keep well and strong, but we should always avoid eating and drinking anything that is either useless or likely to do the body harm, and is therefore not a real "food," like those of which we have been speaking.

6. Things which people eat and drink for pleasure.

Besides the food that people eat to do them good or make them strong, there are many things which they eat merely because they like them. Children, for instance, like sweets and cakes. Sweets and cakes contain sugar and other pleasant things that are good for us if we do not eat too much of them. If we eat too many sweets, especially between meals, we have no appetite for the other more nourishing food which the body needs, and besides this the sweets and cakes may actually make us ill and so do us harm.

People also drink things because they like them; for instance, tea, coffee, and cocoa. Neither tea nor coffee is a real food; the only food in tea as we drink it is the milk and sugar that we put into it. The difference between milk or any other food and tea lies in the fact that milk gives the body power and strength, whereas tea only helps the body to put forth and use the strength it has gained from real food.* If people drink these things when they are tired, they feel for a short time fresher and more able to work—they feel "stimulated," in fact. This is due to a certain substance which tea and coffee contain, which temporarily increases our capacity for muscular and mental work, and, if taken in moderate quantities, does so without causing any marked reaction. Thus fatigue is in some degree really diminished and not only obscured. People therefore drink tea and coffee partly because they have a pleasant taste and quench thirst, but also partly because of their stimulating effect. If we drink them in moderation they do us no harm, but if we take them too frequently, especially for the purpose of freshening us up when we are tired, then they may be distinctly harmful. When people are tired they do not need stimulants so much as rest and real food, before they begin to work again.

Tea should always be freshly made and should not be strong. To make tea properly, a teaspoonful or more should be put into a clean warm tea-pot, boiling water should be poured in, and the tea may be left to stand three or four minutes. It will then be ready to drink. If tea is left to stand long after it has been made, it soon begins to taste bitter; this is because a substance, "Tannin," is being dissolved out of the tea-leaves by the hot water. The longer the tea stands, the more tannin there will be in it. Besides making the tea taste bitter, the tannin is bad for our bodies: it prevents food being properly absorbed, gives us indigestion and does harm in other ways also. Tea should be drunk soon after it is made because there is then very little tannin in it. Neither tea nor coffee is good for children; they should have milk or cocoa instead. Cocoa is better for children than tea or coffee because it is less stimulating and contains a little more real food substance.

* *Simple Lessons on Health for the Use of the Young*, by Sir Michael Foster (1906), page 61.

7. *Other beverages, such as beer, wine, spirits.*

Besides these beverages, there are others which people take because they like them, such as beer, wine and spirits. These things are not of real use to us, because they cannot make us grow, nor keep the body from wearing away, and they cannot make us strong or warm. They contain little or no meat substance, no starch and no fat, and only a little sugar, and they are therefore not "foods" like the others of which we have spoken. They should not be used as foods therefore, partly because they are unable to help nourish the body but also partly because they may do actual harm by preventing real food substances from being absorbed into the blood. Many people, however, suppose that beer is a real food, and they drink it partly because they think it makes them more able to work. It is true that there is a certain amount of nourishment in beer. There is, for example, a little sugar and there is a small quantity of the food substance found in meat. To obtain enough food from beer really to benefit the body, however, it would be necessary to take an extremely large quantity. For this reason the good that might be done by the nourishing part of the beer would be more than counterbalanced by the harm done by the alcohol contained in so large a quantity of beer. This is one important reason for not taking beer as a food. Another is the expense, for even if no harm were done by the amount of beer which it would be necessary to drink, the cost of such a meal would be far greater than the cost of an equal amount of nourishment taken in the form of ordinary food. For these two reasons, therefore, beer cannot be considered to be one of the "foods" which the body requires.

These alcoholic beverages do not, as a rule, quench thirst as water or tea can do, in fact they make people more thirsty and so cause them to be inclined to go on drinking more beer or spirits. Thirst may be, in fact, actually created and increased instead of being satisfied. If this happens people may do themselves great harm, just as people who drink strong tea too often may do themselves harm; but the harm that is done by beer, wine and spirits is much greater because they contain a substance, Alcohol, which tea does not, and this substance may be very dangerous to the body. Such beverages are especially liable to cause harm when they are taken between meals or without nourishing food.

Children and young people should not drink beer or spirits of any kind. When they are grown up, they will be able to judge for themselves whether they may take beer in small quantities, or whether it is not much wiser and better to refuse to take any beer and spirits, and to use the money which would otherwise have been spent in this way to brighten their own lives and those of others. Children should be given alcohol only when the doctor orders it because they are ill. Doctors do not often order alcoholic drinks for children, because they understand how dangerous such drinks may become and they are generally able to give some other medicine which will be equally useful. Children do not, as a rule, like the taste of alcohol; in fact, wide experience proves that "alcohol is seldom any temptation to the young, but nevertheless, the habit may be acquired and become a temptation later."*

It must be remembered that we cannot harm our bodies when in health by refusing to drink beer or spirits, because the body does not require them, whereas it is always possible that various evils may arise as a consequence of taking such beverages.

We must also bear in mind that if alcohol is used regularly drinking habits may not infrequently result, for a mere knowledge of the dangers of alcohol is not always a sufficient safeguard.

* *Life and Labour of the People in London*, by Right Hon. Charles Booth. Final volume, page 64. London, 1903.

SECTION II.

1. *The presence of Alcohol in beer, wine and spirits.*

Beer, wine and spirits are not useful to the body in any of the special ways in which our ordinary food is useful. They also contain the dangerous substance which was referred to in the last section. This substance is alcohol, which in pure form is harmful to the human body.

2. *Some Characteristics and Uses of Pure Alcohol.*

Pure alcohol is colourless and looks like water, but it has a peculiar smell which water has not, and it also has not the power to quench thirst like water.

It will burn; brandy and whisky, which contain a great deal, will take fire easily; methylated spirit, which is nearly all alcohol, is used for spirit lamps, &c. because it burns so well.

If animal or vegetable substances, such as meat or green vegetables, are soaked in alcohol, they become hard and tough and would be useless as food. Alcohol cannot dissolve food as water can, and therefore cannot help the body to absorb and make use of food. It is able, however, to dissolve other substances which water cannot dissolve.

Alcohol has a great attraction for water, and if substances containing water are soaked in alcohol, they lose this water and become dry and hard. Alcohol is also able to absorb water from the tissues of the body, and this explains why alcoholic drinks tend to make a man more rather than less thirsty. When the body loses water, whatever the cause of this loss may be, thirst is created which calls for a renewal of the supply of water. Alcoholic beverages, therefore, make a person thirsty in the same way as he becomes thirsty after perspiring freely.

These properties of alcohol make it extremely useful in certain arts and manufactures, and for some industrial purposes. As a fuel, for example, it may be used for spirit lamps or to drive motors. The chemist uses it to prepare and purify drugs and other compounds. It is employed to dry and harden substances; many articles and museum specimens are preserved in spirit; and because it is almost impossible to freeze alcohol, it is used instead of mercury in thermometers when an exceedingly low temperature is to be registered.

3. *Proportion of Alcohol in beer, wine and spirits.*

It is not possible to drink pure alcohol, because it causes a hot painful feeling in the mouth, throat and stomach and also produces direct injury. Therefore it can only be taken when diluted and made weaker by mixing it with water or other liquids less harmful than alcohol.

Beer, wine and spirits all contain alcohol. There is some in beer, more in most wines, and a great deal in spirits. (It is for this reason that beer will not burn, though brandy will.) The percentage of alcohol by volume in some of the commoner alcoholic beverages may be stated as follows:—

Lager beer	contains about	4 per cent.
Bottled beer	" "	7 "
Claret, hock, &c.	" "	9-10 "
Port	" "	17-23 "
Spirits	Gin	37 "
	Rum	" "
	Whisky	40-50 "
	Brandy	" "

When people drink alcohol mixed with water or other liquids it does not poison them as pure alcohol would do, but even when it is made very weak, it may still have a harmful effect, especially if taken frequently. (Some of the "medicated wines," sold by chemists and others, contain a large percentage of alcohol, and are purchased freely for use as "tonics" by many people. By the indiscriminate use of such wines harm is done and intemperate habits may be acquired.)

4. *The drinking of Alcoholic Beverages may bring about Injurious Effects and Changes in our Bodies.*

The following are some of the serious effects which drinking beverages containing alcohol may have on our bodies:—

(a) *The Effect on Growth.*

If much alcohol is given to children and young people the growth of the body will probably be interfered with, and instead of becoming tall and big they will most likely remain short and stunted. Let us see what happens if alcohol is given to plants. Cress seeds were planted by Dr. J. J. Ridge in separate glass tubes, some were given pure water and others water containing alcohol in varying quantities. The seeds which had pure water grew up strong and healthy, but the more alcohol there was in the water the less vigorous was the cress, and when the alcohol formed one hundredth part of the water, the seeds were killed. It was also found that the green colouring matter of plants, which is necessary to their healthy existence, is not freely produced if they are watered with even a very weak solution of alcohol.*

Again, Sir B. W. Richardson, M.D., observed that lowly forms of water animals, such as jelly fish, are very quickly killed if a little alcohol is added to the water in which they live. Then, too, if alcohol is given to young animals, such as puppies or kittens, they grow up less strong and vigorous.

Although it has not been proved that alcohol has precisely the same effect on the human body as it has on plants and animals, yet it is probably harmful to the living matter in our bodies in somewhat the same way that it is harmful to the living matter in plants and animals. Alcohol cannot help the body to grow, but rather tends to retard and stunt its growth.

(b) *The Effect on the power of the Body to resist Disease.*

Alcohol taken in excess lowers the resistance of the body to disease, that is to say, a person who habitually drinks much beer or spirits is more likely to contract illness than one who does not. Moreover, such a person is less likely to recover from the attacks of disease. Consumption and inflammation of the lungs are among the diseases to which alcohol may render people especially liable. Then, again, wounds, sores and cuts heal far less readily in a person who takes much beer and spirits than in one who does not, and such a person is much more likely to suffer from blood poisoning.

(c) *The Effect on the Body's Strength and Power to work.*

The drinking of much beer and spirits tends to weaken the muscles of the heart and of the body generally and so diminishes the power and capacity to work. Experiments were made by Dr. Parkes with two gangs of soldiers doing equally hard muscular work (mowing), one gang alternately taking beer during the work and the other not. In every case it was shown that although men taking beer might for a short time gain on the others, yet they soon dropped behind, and at the end of the day the total work accomplished by them was less than that done by those who had no alcohol.† In the South African War it was observed by Sir Frederick Treves, who was with the column which relieved Ladysmith, that soldiers who drank much alcohol were the first to fall out on a long march, and were less fitted to overcome hardships and fatigue than those who either did not drink alcohol, or took it in very moderate amount. Athletes, when training for racing or other sports, usually avoid alcohol because they know the harmful effect it may have upon their bodily strength and endurance. Mr. Brassey says: "Some of the most powerful among the navvies have been teetotalers. "On the Great Northern Railway there was a celebrated gang of navvies who "did more work in a day than any other gang on the line and always left off "work an hour or an hour and a half earlier than any other men. Every "navvy in this powerful gang was a teetotaler."‡ Muscular fatigue following severe exertion is far less readily recovered from if much alcohol is taken

* *Alcohol and Public Health*, by J. J. Ridge, M.D., 1893, p. 23.

† *Ibid.*, p. 36.

‡ *Work and Wages*, Brassey, 1879, p. 17.

during the work or exertion, and the recuperative powers of those who regularly take too much to drink are greatly lessened. Broadly, therefore, it may be said that common experience shows that men engaged in very hard manual labour do their work more easily, in all respects, without alcohol.*

(d) *The Effect on the Proper Digestion of Food.*

Beer and spirits, if taken in considerable quantities, have serious effects on the digestion. When so taken into the body the delicate wall of the stomach is irritated, and if this irritation is frequently repeated, a form of chronic disease is set up. Besides the pain and discomfort which this causes, the digestive functions of the stomach are interfered with, food is not absorbed into the blood as freely as it usually is and the general nutrition therefore suffers. Alcohol, when taken in such quantities, also tends to destroy the natural appetite and the wholesome sensations of hunger which are an aid to good digestion; less food is therefore taken into the body, and this, together with defective absorption, serves to bring about a condition of under-nourishment.

(e) *The Effect on the Heat of the Body.*

The action of alcohol causes the blood vessels of the skin to become very full of blood. This makes the skin feel hot and look flushed while a temporary feeling of warmth is experienced by the body generally. This feeling, however, soon passes away and the man feels cold and chilly, especially if no nourishing food was eaten with the beer or spirits. This is because heat is quickly lost from the hot flushed skin, and alcohol therefore brings about a waste and dissipation of the body heat, and so makes the body colder than it would otherwise have been, while it has not power to replace the heat lost as a real food would do. It should for this reason never be taken to make a person warm, as it really has the opposite effect in the end. Many Arctic explorers have not permitted alcohol to be taken as a beverage by members of their expeditions, partly because it causes this loss of heat, which is especially serious in cold climates, and partly because it so greatly diminishes the muscular strength and the capacity for endurance. A man drinking much alcohol in a very cold climate is likely to suffer severely, or even die, from the cold because of the heat that is lost from the body on account of the alcohol. Persons frozen to death, at any rate in this country, have often died because they were intoxicated when exposed to the cold.† Alcohol has also been found to predispose to sunstroke.

(f) *The Effect on the Control of the Body which is exercised by the Brain.*

The effects on the brain of considerable amounts of alcohol are very noticeable. Though at first it appears to be stimulating, and in fact is so, for a time, partly because of the extra quantity of blood that passes to the brain, it has soon a deadening influence and creates false impressions of comfort and well-being. A man who is under the influence of alcohol believes his external surroundings to be better than they actually are because he is unable to feel or realise his limitations so acutely on account of this deadening effect. The feelings and sensations are blunted and the proper control of the brain over the muscles is weakened. As one result of this loss of control, accidents, such as falls, or factory mishaps with machinery, may occur. It is a significant fact that such accidents occur with greater frequency on Sunday and Monday, after indulgence in large quantities of alcohol on Saturday or Sunday. The trembling shaky hand so often seen in those who take too much alcohol is another result of this loss of control by the brain, and this is especially detrimental to the man who earns his living by the sureness and steadiness of his hand. It has been shown that comparatively small quantities of alcohol may injuriously affect the nerves and the senses (sight, touch, &c.).

* For many instances and particulars under this heading, see *A Manual of Practical Hygiene*, by the late Edmund A. Parkes, M.D., F.R.S. (Section dealing with Alcoholic Beverages).

† *Food and Dietetics*, by Robert Hutchison, M.D., 1906, p. 339.

(g) *The Effect on the Intelligence and Understanding.*

The higher powers of the intellect, such as the will power and the understanding, may also be injured or weakened by the drinking of alcohol. The general intelligence of a man who frequently gives way to drinking in excess is lowered, his power of voluntary attention is enfeebled, and his power of calculation retarded. His memory also becomes bad, and his work is often careless because of this. Then the power to think may be lessened and he is thus unable to reason well and clearly. His judgment becomes less accurate and balanced. Mental activity generally is reduced and the quality of the work that is done becomes increasingly inaccurate and untrustworthy.

Observations made by Dr. Aschaffenburg on the work of composers (which is skilled work requiring an active brain) led him to conclude that when alcohol was taken before work and by men accustomed to its use, fewer letters were set up than when no alcohol was given, although the men themselves were under the impression that the alcohol caused them to work better and more rapidly.* Dr. Leopold Lang finds reason to think that a similar conclusion holds true of marks earned by school children in Holland, Austria and Germany. It has been shown that in "very good" and "good" classes the abstainers head the list by considerable proportions; in those giving "moderate" or "sufficient" results the proportions are about equal; and in those giving "inadequate" or "bad" results the proportion of those who drink is more than twice as great as of those who abstain.

The injurious effect of drinking much alcohol seems to be most marked in the body tissues of the young—hence its especial harm to children—and also in the most highly developed portions of the body, namely, the brain, and again in the most highly developed parts of the brain. Men differ widely, however, in the power of their brains to resist this injury, and alcohol seems sometimes largely to spare the brain of a man who constantly drinks, and to attack some lower organ of the body, especially if that organ be of a low resistive power. It thus affects each person at his most vulnerable points.

5. *The Effects of Excessive Drinking of Alcohol.*

(a) For all these different reasons it is clear that the drinking of alcoholic beverages in excess is likely to be injurious to all parts of the body. A person who frequently takes much alcohol becomes less fit and healthy, partly owing to its cumulative effect. Neither his muscles nor his brain are capable of as much exertion as those of a person who is strictly temperate, and the quantity and quality of the work that is done invariably show more or less marked deterioration.

(b) The health of such a man tends to become worse as the effects of the alcohol on the different parts of the body become more pronounced. He will probably suffer from digestive troubles and malnutrition or from some of the various illnesses to which habitual drinkers are particularly liable. This naturally tends to shorten his life, which is also threatened by accidents of all kinds to which his mental apathy, carelessness, and the loss of due control over his muscles expose him. It has been estimated that about 11,000 men and women at least, and probably many more, die every year in England and Wales from diseases caused by alcohol.† Men and women who have much to do with the manufacture or sale of alcoholic beverages, and are therefore constantly liable to the temptation to drink them in excess, do not live so long as the average healthy man, and the mortality among them is even higher than in many of the so-called Dangerous Trades. (See Note 1.) Further, the experience of Friendly Societies shows that abstainers are less liable to sickness, and on the whole live longer than non-abstainers.‡ (See Note 2.)

* *Alcohol and the Human Body*, by Sir Victor Horsley, F.R.S., and Mary D. Sturge, M.D., 1907, p. 92.

† *The Drink Problem*, 1907, edited by T. N. Kelynack, M.D., p. 132.

‡ *Ibid.*, Chap. VIII.

NOTES TO SECTION II.

N.B.—These Tables are inserted only for the use of the teacher, and are of course wholly unsuitable to present to the child.

Note 1.—The following Tables, compiled from the Registrar-General's Decennial Reports, show (1) the average mortality among occupied males (25–65 years of age) from alcoholism in various trades over a period of 3 years (1890–92), and (2) a comparison between deaths from all causes and from alcoholic diseases.

The figures are based on medical certificates as to the cause of death, and cannot therefore do more than give an approximate estimate of the number of deaths from these causes. Diseases of the liver are included in the second table because they are often closely connected with over indulgence in alcoholic beverages.*

(1) In reading this Table the number 100 represents 100 deaths from alcoholism in all trades and professions, while the numbers below give the death ratio from alcoholism in certain special trades. That is to say, for every 100 men of all trades whose deaths might be attributed to alcohol, 215 coachmen, 400 dock labourers, and 815 inn-servants died from this cause in the years 1890–92.†

Occupation.	1890–92. Alcoholism.	Occupation.	1890–92. Alcoholism.
Occupied males - -	100	Occupied males - -	100
Coachman, cabman - -	215	Dock labourer - -	400
Costermonger - -	277	Chimney sweep - -	454
Coalheaver - -	223	Butcher - -	269
Fishmonger - -	215	Brewer - -	315
Musician, music teacher - -	223	Inn-servant - -	815
Hairdresser - -	269	Inn-keeper - -	708

(2) This Table is to be read in a similar way; in the first two columns the 100 represents 100 deaths from all causes, in all trades and professions, in the second two columns it represents 100 deaths from alcoholism and certain diseases of the liver attributed to alcohol. The other figures represent the death ratio in both groups of causes in certain special trades.‡

Occupation.	All Causes.		Alcoholism and Diseases of the Liver.	
	1890–1892.	1900–1902.	1890–1892.	1900–1902.
Occupied males - -	100	100	100	100
Coachman, cabman - -	121	115	149	137
Costermonger - -	173	192	160	222
Coalheaver - -	160	124	162	117
Fishmonger - -	101	102	164	173
Musician - -	127	123	166	195
Dock labourer - -	192	149	191	168
Chimney sweep - -	138	134	200	180
Butcher - -	115	115	219	217
Brewer - -	150	143	251	280
Inn-servant - -	181	191	413	424
Inn-keeper - -	172	180	717	724

* For further information as to "Industrial Drinking," consult *Alcoholism*, by W. C. Sullivan, M.D., 1906, Chap. VI.

† Supplement to 55th Annual Report of Registrar-General, Part II., p. xci.

‡ Supplement to 65th Annual Report of Registrar-General, Part II., p. cxi.

Note 2.—The following Table shows the Expectancy of Life (that is, the average future duration of life dated from the age in question)—(a) in the general population of England and Wales based on the experience of 1891–1900, (b) in persons insured in a large number of the principal Life Offices based on the experience of 1863–93, and (c) in various Friendly Societies and the United Kingdom Temperance and General Provident Institution. It will be seen how much more favourable is the Expectancy of Life in persons abstaining from the use of alcoholic beverages :—

Age.	General Expectancy of Total Male Population in England and Wales based on Experience of 1891–1900. (Registrar General.)	General Expectancy based on the Experience of Persons insured in a large Number of the Principal Life Offices in Great Britain in Years 1863–93. (Institute of Actuaries.)	Odd-fellows. (Non-abstainers largely.)	Foresters. (Non-abstainers largely.)	Rechabites. (Abstainers.)	United Kingdom Temperance and General Provident Institution based on Experience of 1841–1901. (Abstainers.)
20	41·0	43·2	41·4	43·1	48·8	46·9
25	37·0	39·1	37·6	39·0	44·3	43·0
30	33·1	35·1	34·0	34·8	39·7	38·8
35	29·2	31·2	30·3	30·7	35·1	34·6
40	25·6	27·4	26·8	26·7	30·6	30·3
45	22·2	23·7	23·3	22·8	26·1	26·1
50	18·9	20·1	19·9	19·1	21·8	22·0
55	15·8	16·7	16·6	—	17·7	18·1
60	12·9	13·6	13·6	—	13·8	14·6

The first column of this Table gives the expectancy of life of the general population, whether insured or not. For instance, a person out of the general population at the age of 20 may expect to live 41 years more. The second column gives the expectancy of life as experienced by a large number of insured persons chiefly of a social status above the wage-earning classes, and it will be seen that the expectancy of life is somewhat increased at each age. With these may be compared the experience of the two great Friendly Societies (Oddfellows and Foresters), of whom a high proportion are non-abstainers, and the experience of the relatively small society of the Rechabites consisting only of abstainers. The last column gives the experience of abstaining persons chiefly of small means or who are insured for small sums. Comparing the last two columns with the first four columns it will be noted that the abstainers show a much higher expectancy of life than any of the other groups at each age and in all cases.

Further, it has been ascertained by the Registrar-General that of 61,215 men between 25 and 65 in the community, 1,000 die in one year; but of 61,215 publicans, 1,642 die in one year, while of 61,215 Rechabites (abstainers), 560 die in one year.—(From the *Inter-Departmental Committee on Physical Deterioration*, Vol. iii., Appendix XVI., p. 64. Section II.)

The general policy among Insurance Offices of late years has been to give somewhat more favourable terms to total abstainers, as it has been recognised that such persons are on the whole likely to live longer than non-abstainers. On the other hand, the Prudential Life Company in 1874 added 15s. per cent. to the premium on the lives of “beer-shop keepers, licensed victuallers, and their servants.” A few years later this was raised to 21s., and in 1896 to 2l. It is the general practice of Accident Insurance Companies also to allow a reduction of premium to total abstainers, which varies from 5 to 10 per cent.

SECTION III.

1. *The drinking of alcoholic beverages not only may have bad effects upon the body and mind of the individual, but also may be followed by still more serious consequences, namely, moral injury to himself and great harm to others.*

The last section dealt with the evil consequences to the individual which result from drinking considerable quantities of beverages containing alcohol, and especially about the effects of such drinking on his own health and capacity for work. There are, however, other consequences even more serious and far-reaching, such, for instance, as the evil effects on his own mind and character and the further results of his habits on the lives and social surroundings of those depending on him. It is on this account that civilized states have found it necessary to subject the manufacture and sale of alcoholic beverages to stringent regulations.

2. *The importance of self-control and temperance in all things. Freedom is lost if evil habits are acquired.*

A man who habitually gives way to the temptation to drink too much alcohol, even if he is never actually drunk, gradually loses his power of self-control. Each time the temptation returns it is more difficult to resist, and he yields to it, even though he knows he is doing wrong and fully understands the harm that his weakness causes. The longer the habit continues, the harder is it for him to give it up. Such a man is said to be intemperate.

It must be remembered that temperance and self-control are not only needed to avoid contracting the habit of drinking too much, but that they are also constantly required in everyday life by children as well as by grown-up people. They are needed to keep us from giving way to bad temper, to keep us from greediness and eating too much, and to prevent us from being lazy, extravagant, selfish or unkind to others. A person who is intemperate in one way, is very likely to be intemperate in other ways too, and the loss of self-control in one respect often means moral weakness in other directions also. All children should try to practise self-control in little things to fit them for the time when they will be grown up and will be obliged to practise it in more important things. It is much better to learn good habits when we are young than to wait until we are grown up, and then perhaps have to get rid of bad habits first. Every one knows how much easier it is to form a new habit than to break down an old one. If a man has not got the strength of will and character to overcome temptations he will soon lose his power to choose aright and will become a slave to his bad habits. A weak man will often drink more than is good for him, not because he wants to, but because he has not got the strength of will to say "No" when his friends ask him to take more; or perhaps he is afraid of being laughed at by them, and has not the moral courage to refuse to do what he knows will be bad for him.

In considering temperance we must, however, not forget that too much stress should never be laid on the value of any one quality or habit, and that the cultivation of this one special virtue may lead to the neglect of other qualities equally desirable and necessary. A man who does not drink may be greedy, selfish, untruthful, mean or cruel, just as a man who does drink, and even drinks a great deal more than is good for him, may be really kind-hearted and generous. When we speak, therefore, of the value of temperance we must always have in mind that one of the great aims of education is to build up and form a well-balanced and high moral character, and to produce upright men and women, and that the practice of temperance, though of the greatest use, is only one of the means to this end, and should never be separated from conduct as a whole.

3. *The personal consequences of excessive drinking of Alcohol.*(a) *Waste of money which could be wisely spent or saved.—The Value of Thrift.*

Large sums of money are often spent even by poor people on drink. In the year 1908, it was estimated that the total expenditure on intoxicating liquors in the United Kingdom was 161,000,000*l.* This gives an average expenditure per head of 3*l.* 12*s.* 3*d.* and per family of five persons of 18*l.* 1*s.* 3*d.* This includes, of course, many individuals and families who spend nothing on alcohol. Speaking broadly, it may be said that about two-thirds of the total sum (*i.e.*, about 107,000,000*l.*) was spent by the working classes.* This means that on an average in every working man's family, not less than 5*s.* a week was spent on drink alone. Some families of course spent less, but others spent a good deal more. Let us suppose that the weekly income of a family of five is 25*s.* The average cost of food should be at least 15*s.*, and the rent will be at least one-fifth of the income, that is 5*s.*† If now 5*s.* is spent on drink, there will be no margin for fuel, clothes, lighting, recreation, illness or thrift. There must, therefore, be a saving somewhere, and as the rent cannot be reduced, it probably means that less will be spent on food and other necessities. So that quite apart from the direct effects of the drink on the individual, the family will be under nourished and insufficiently clothed. No one can be healthy or efficient who is deprived of the actual necessities of life.

If 5*s.* a week could be saved and not spent on drink, it might be placed year by year as an Insurance Premium in the Post Office and after 30 years a man would have 422*l.*, which could be invested in an annuity of 12*s.* 6*d.* a week.‡ Or he might save money to buy his own cottage and garden. He could provide, both for himself and his family, the holidays and healthy recreation, which every one requires to make life more cheerful and joyous and to relieve the irksomeness of daily toil. He could afford to place his children well in the world, to make his home pretty, comfortable and attractive, and to guard against temporary lack of employment or sickness. Such a man would be able to meet easily and with sufficient resource most of the misfortunes to which everyone is liable.

(b) *Loss of self-respect.*

A man who frequently takes too much beer or spirits soon begins to show signs of degeneration. He becomes careless about his personal appearance, loses his self-respect, and ceases to take a proper pride in being clean, smart, neat, truthful, and industrious.

(c) *Unfitness for work—loss of employment—pauperism.*

The man who drinks to excess becomes idle and useless and learns to loaf about the streets instead of working. The habit thus tends to make any hard work distasteful, and no one wishes to employ such a man, for his work, when he does any, is usually bad. Instead of being a respected man with a comfortable home and regular wages, he generally has to live as best he can, on any odd jobs that come his way. A man who does not drink too much will do better work, other things being equal, than one who does, and is therefore able to obtain and keep regular employment and to get better wages; moreover, such a man can be depended on while the drinker cannot, and he will therefore be trusted by his employer and may have many more opportunities of getting on and improving his position than will come to the unsteady man.

Sobriety is thus an aid to efficient and productive labour, and as the rate of pay is influenced by the quality and value of the work done, sobriety will help to produce and maintain good wages. Intemperance, on the other hand, tends to have the opposite effect, and is indeed one of the chief causes of pauperism.

* See also *The Temperance Problem and Social Reform*, by Joseph Rowntree and Arthur Sherwell (1901). Popular Edition, Chap. 1, p. 15.

† See also *ibid.*

‡ *Alcohol and the Human Body*, Chap. XVI., p. 343.

(d) Ill-health, disease, insanity.

The heavy drinker is seldom really well in health, partly because he often has not much money to spend, and what he has he prefers to spend in drink rather than in nourishing food, partly, too, because of the illnesses caused by the alcohol which he drinks. Because he is not well he will often feel depressed and miserable, and may then take beer because he is unhappy and because his home is uncomfortable. Though the beer may make him forget his troubles for a little while, this effect soon passes off, leaving him probably more miserable than he was before. Such people comparatively often get disease of the brain and become insane and have to be sent into lunatic asylums.

(e) Neglect of duty, moral degradation, crime.

The general unfitness for work, together with ill-health, often leads to neglect of duty, which may have serious consequences to others. For instance, if a signalman drinks too much and in consequence forgets to alter the signals, or goes to sleep, there may be a train accident. If a sailor steers his ship in the wrong direction after drinking, there may be a wreck. Motor-car accidents may also be caused by drivers taking too much alcohol. The moral degradation which always follows loss of self-respect often leads a man into temptations of another kind; his perceptions of right and wrong are dulled, and if he is unable to earn money he may steal things or rob people to procure it, possibly the value of the articles or the sums of money may be quite small at first, but they generally tend to get larger, and so he gradually comes to lead a criminal life. A man will often take alcohol to give himself the "courage" for a crime that he would probably never commit in his sober hours. Sometimes he may commit a crime and afterwards make the excuse that he did not realise what he was doing because he was drunk at the time. This, however, is not regarded as a reasonable excuse, and a man is held responsible for his actions even though he has had too much to drink.

(f) The ruin of homes, unhappiness and suffering.

The home of a drunkard is always wretched and unhappy. Such a man spends on beer most of the money which should buy food and clothes for his wife and children; often there is little or no money to spend, because he has lost his work, and cannot or will not get more. The home becomes more and more comfortless, because if there is not enough money for food, there will be none for the small luxuries and comforts which so greatly add to the pleasantness of life. Instead of these we find discomfort, and often dirt. The suffering unfortunately falls to a great extent on those who do not merit it, the wife and children, and they not only have to endure a cheerless wretched life, but may also have the actual cruelty of a drunken husband or father added to their other misfortunes.

Though intense misery and suffering often result when the father takes to drink, even more unhappiness may follow when it is the mother who drinks. The consequent neglect of the children is then always greater, it is the little ones and the babies who suffer most. Many a respectable man has taken to drink himself because his wife has disgraced him and made his home wretched and miserable. On the other hand, it must be remembered that a good and careful wife can often prevent her husband taking too much to drink. If his home is clean and comfortable and tidy, and if his food is well cooked and appetising, he will have far less temptation to seek cheerfulness in the public house. The children of drunken parents start life with many disadvantages. With their physical health and energy below the average, they lack the care, nourishment and protection which all children require if they are to grow up well and strong; they are only too well accustomed to squalor, poverty and a low standard of comfort, and therefore often have no desire or ambition to achieve better things, and being thus badly equipped from the outset both in mind and body, their chances of leading happy and useful lives are greatly lessened.*

* It may here be added that, subject to certain exceptions persons are forbidden by law (Children Act, 1908, Ss. 119-120) to give to any child under the age of 5 any intoxicating liquor, and the admission of children under 14 to the bars of public houses is forbidden.

"The use of these things" (beer, wine, or spirits), says Sir Michael Foster, "has brought no end of misery into the world. If we could take away from the world all the ill-health, all the poverty, all the wretchedness, all the cruelty, all the crime which has been brought about by drinking too much wine, beer, or spirits and the like, how much happier, wealthier and brighter the world would be."*

4. *Social Evils which result from Alcoholic Excess.*

The evils of drinking too much are not limited to the man himself and his family, but he may also influence others to follow his bad example, and the harm done by one man may thus be widespread. "One degraded or ill-conducted worker will demoralise a whole family; one disorderly family inexplicably lowers the conduct of a whole street; the low-caste life of a single street spreads its evil influence over the entire quarter; and the slum quarter . . . subtly deteriorates the standard of health, morality and public spirit of the whole city."†

We must therefore consider the effects of intemperate habits on the nation as well as on the individual. Money spent by the nation on drink must be reckoned as money which is largely, if not entirely, wasted, because there is no proper return for it. The expenditure of 160,000,000*l.*, or more, every year, is a drain on the resources of the nation and the direct cause of not a little national poverty. It must be remembered how vastly large is this sum, which, it has been estimated, is equal to all the rents of all the houses, farms, shops, hotels, &c. in the United Kingdom, so that the amount spent on drink alone would be enough to enable everybody to live rent free.‡ To put it another way, it is equal to the cost of all the butchers' meat, bacon, ham, poultry, and game eaten every year in the United Kingdom; it is also equal to the cost of all the bread, flour, milk, butter, cheese, and eggs.§ It is about equal to the national revenue raised by all the rates and taxes.§

Paupers, criminals and lunatics have to be maintained and paid for by the public, and very large sums of money are spent annually in this way. If less alcohol were drunk, there would be less poverty, less crime and less insanity, and a good deal of this money might be set free to reduce the taxes, or to make pleasanter and more comfortable the lives of those for whom the State is not compelled to provide.

Then, again, the prosperity of any nation depends on its workers, and if a large number of these workers damage their capacity for work by excess in alcoholic drinks, that nation sooner or later will degenerate and fall behind other nations because it cannot successfully compete with more sober and temperate races. Competition in the commercial world is becoming keener and more severe, and it is only by cultivating to the utmost our skill, knowledge, energy and ability that we can hope even to retain our present position among other nations. The country has to suffer not only the loss of the productive labour of those who are totally incapacitated through drink, there is also the loss in efficiency of those who are only partially incapacitated, there is the loss to employers and work people generally from accidents of all kinds, from waste of material and idleness caused directly or indirectly by drinking, and there is also the loss due to the shortening of the productive period of men's lives by the earlier death which is so often consequent upon drinking habits.

It is the duty of every good citizen to help and not to hinder his fellow men by his own example and influence, and to endeavour to do something, however little, to improve the conditions under which people live.

* *Simple Lessons on Health for the Use of the Young*, p. 82.

† *The Case for the Factory Acts*, by Mrs. Sidney Webb, p. 48.

‡ *The Economic Aspect of the Drink Problem*, Third Lees and Raper Memorial Lecture, p. 12.

§ *Ibid.*, p. 11.

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