TABLE II.—Patients.

No. of Case.	Change in Pulse.	Change in Pressure.	Dose of 1/1000.	Subjective Symptoms.
1	80-130	135-145	III x	Severe.
2	100-120	130-150	III viii	Very severe.
3	10-120	120-145	III v	Slight.
	100-125	130-145	III v	Slight.
4	75-110	135-170	III v	Nil.
5	120-105	100-300++	III xx	Patient collapsed before and after.
6	120-120	130-130	III v	—

It is unnecessary to quote all these cases in detail, and a few remarks in addition to the charts of Cases 1 (Chart 2) and 5 (Chart 3) will be sufficient.

Chart 2: Case 1 of the second series. At 6.40 an injection of adrenalin 1/1000 III x was given. n represents an interval of one hour during which no observations were made. BP = Blood pressure in mm. Hg; P = pulse.

The first case was a woman of 50 who had had an operation about two hours previously; her pulse before the operation was about 60; after the operation it was 80, but quite regular. Twenty-five minutes after the injection the pulse was 130 and irregular. The systolic pressure at first rose slightly, then fell slightly. Three hours later the pulse returned to 100, and the patient made an uninterrupted recovery. The subjective symptom was that of cold.

In the second case the patient had a rigor, and blankets and hot bottles were applied; symptoms rapidly passed off, and the patient made an uninterrupted recovery.

The fifth case was much collapsed from haemorrhage, and the 20 mm. of adrenalin was given in a pint of saline, and for this reason all the effects cannot be said to be due to the adrenalin, but to those people who have seen many salines given it will not be difficult to see that most of the effect was due to the drug. The radial pulse, which was very weak before the injection, improved for a short time, but soon disappeared. The patient was infused a second time with saline only, but died later in the day.

The sixth case showed no changes in the pulse, which was already rapid.

The cases of most value for showing the result of treatment by the drug are those in which shock was only very slight, and in those cases the benefit was such that I do not intend to use adrenalin again for the treatment of shock and collapse. It is for the pharmacologist to explain the action of this drug, but as one of the people on whom observations were made, I would suggest that its vaso-constrictor action is by no means its chief action, but that there is in addition a cardio-accelerator and cardio-augmentator action.

It is well known that adrenalin is very often used in the relief of asthma with instantaneous results, but two patients have told me that "it made their heart beat so hard that they thought they were about to die."

Chart 3: Case 5 of the second series. At 11.25, 1 pint of saline + 1/1000 adrenalin III x was given intravenously. At 11.55 half a pint of saline was given intravenously without any adrenalin. In all three charts the observation on systolic pressures are marked by circles with dots in them, and the pulse by simple dots.

ALCOHOL, HOUSING CONDITIONS, AND CONSUMPTION.

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THE campaign against tuberculosis, which has been greatly strengthened by the sanatorium provisions of the National Insurance Act, is not likely to be entirely successful unless certain inquiries are made which will enable us to deal effectively with the predisposing causes of consumption.

Sanatorium, hospital, dispensary, and domiciliary treatment, while doing a great deal to alleviate the sufferings of the majority of the consumptive patients, and in a fair percentage of the early cases producing a cure, are not capable of rooting out this terrible disease entirely. Those of us who have been engaged in this work for some time feel the necessity for knowing the actual predisposing causes, and how far each is responsible, in order that they may be removed.

I have investigated two predisposing causes of this disease—alcoholism and housing. I have chosen alcoholism as an indication of the habits of the people which can only be removed by education, and have endeavoured to determine how far it can affect either the onset or the progression of tuberculosis, and housing conditions as one that can be remedied by the State.

The investigation is by no means complete, and can be extended in other areas, when the whole of the results ascertained by different observers can be compared and useful statistics drawn up.

I. ALCOHOLISM.

I have personally investigated 301 cases of tuberculosis in Bradford, including men, women, and children.

Of 117 men—	Of 100 women—
33.33 per cent. were drinkers	8 per cent. were drinkers
40.17 per cent. were moderate drinkers	36 per cent. were moderate drinkers
26.5 per cent. were teetotalers	56 per cent. were teetotalers

Of 84 children, 100 per cent. were teetotalers

Of these 84 children—

In 7.14 per cent. both parents were drinkers
In 22.61 per cent. one of the parents was a drinker
In 29.75 per cent. one or both parents were drinkers

Dr. Crowley, in 1900, after a careful inquiry into the alcoholic habits of 62 adult male patients admitted into a Poor Law sanatorium for consumptives, including a considerable number above the "pauper" class, found that 43.6 per cent. were heavy drinkers, 40.3 per cent. moderate drinkers, and 16.1 per cent. teetotalers. Friedrich, investigating 451 cases of phthisis, found that 133 were alcoholic—that is, 29.5 per cent. Dr. Villy, investigating 25 adult male cases of phthisis in his private practice, found that 40 per cent. were drinkers.

Adding together these four sets of figures from independent investigators, it appears that of 655 adult male cases of consumption 209 were admittedly drinkers—a percentage of 31.9 per cent.

It is necessary to compare these figures with the drinking habits of the population in order to show whether there is a larger number of heavy drinkers amongst consumptives than the normal population. This is an extremely difficult matter, and can only be estimated statistically, or by inquiries from a small proportion of the population (a sample population).

(a) A statistical estimation of drinkers in the United Kingdom, calculated by George Wilson, B.A., Secretary, United Kingdom Alliance, on figures given by Dr. Branthwaite, the Home Office Inspector under the Inebriates Acts in England and Wales, and made referable to Bradford, shows that 1.71 per cent. males and 1.48 per cent. females "drink more freely than is consistent with strict moderation, or are occasionally drunken."

(b) An estimate from a sample population was made in respect of 133 males (over 18), including 23 male relief

cases, 100 of the working class, and 10 of slightly better positions, and 100 women.

Of 133 men—	Of 100 women—
10.53 per cent. were admittedly drinkers	2 per cent. were heavy drinkers
68.4 per cent. were moderate drinkers	29 per cent. were moderate drinkers
21.07 per cent. were teetotalers	69 per cent. were teetotalers

The figures of drinking habits of the sample population are much higher than those obtained by the statistical estimation; they have been taken from the same class of people as were those for the drinking habits of the consumptive patients.

It would appear that alcoholism is more prevalent amongst the male consumptive patients than amongst the normal male population, and it also appears to be in excess amongst the females.

It does not necessarily mean that alcohol, of itself, has a great deal to do with the onset or progression of consumption, but it does mean that alcoholism, with its associates—late hours, irregular feeding, the poverty which it may entail, the crowding together in ill-ventilated public-houses where the best hygienic conditions do not obtain—has a considerable bearing on the consumptive question.

If alcoholic habits can be taken as an indication of the habits of consumptive patients of the poorer class, these figures point to the conclusion which I have held for some considerable time—that if consumption is to be eradicated the habits of a large number of the patients will have to be greatly improved.

II. HOUSING.

Mr. Dunne, the Secretary of the Charity Organization Society, and myself have investigated the housing conditions of 1,307 cases of tuberculosis. I have had placed at my disposal the reports on 865 of these cases visited by the nurses attached to the staff at the dispensary.

Of the 1,307 cases of tuberculosis investigated—

1,244 live in private houses and the remainder live in common lodging-houses, etc.

Of the 1,244 living in private houses—

376 live in a through house,

868 live in a back-to-back house.

Therefore, for every 1 tuberculous person living in a through house there are 2.3 living in a back-to-back house.

These figures may be compared with those derived from the Census, 1911. The actual number of back-to-back houses in Bradford is not known, but, as a general rule there, a three or less roomed house is a back-to-back. There are 30,834 houses with three or fewer rooms in Bradford, containing 105,744 persons, and 177,577 persons live in through houses. Therefore, for every 1 person in Bradford living in a through house, 0.595 live in a back-to-back.

Some conditions prevalent in the housing of the working classes are more likely to be remedied by education than by the State. One of these is overcrowding, which leads directly to close contact of the individual in the house.

I am of opinion that prolonged intimate contact of tuberculous patients with healthy persons is likely to lead to the development of tuberculosis in a fair percentage of these persons.

From 20 to 30 per cent. of contacts examined at the dispensary have been found to be suffering from one or other form of consumption; therefore I have had the sleeping arrangements investigated in the houses where there are tuberculous patients, and have tabulated the results:

Sleeping Arrangements in Houses with Tuberculous Persons.

I. Separate Bed- room.	II. Separate Bed, but Others in the Room.					III. No Separate Bed; Others in Bed.				IV. Kitchen.		V. Downstairs in Front Room.
										Alone.	With Others.	
323	1	2	3	4	5	1	2	3	4	13	9	15
	8	10	3	1	2	345	20	7	28			

This table is almost self-explanatory. The numbers 1, 2, 3, 4, 5, under the heading of "Separate bed"

(column II), indicate the number of others in the room. The figures below represent the number of consumptive patients sleeping under these conditions—that is, under the heading of "Separate bed, but others in the room," there are 8 consumptive patients in Bradford sleeping with one other in the room, 10 with two others, 3 with three others, and so on.

Cleanliness.

569 were clean.
215 were dirty.
81 were very dirty.

Sanitary Conveniences.

476 had a w.c.
338 had a privy.
51 had a plug closet.

These figures point to the following conclusions:

1. That there is more phthisis in back-to-back houses with no through ventilation than in good, through, well ventilated houses.

2. That as contact with tuberculosis cases is likely to play an important part in the spread of the disease, it is necessary that the people concerned should be told of the great danger they are running, as there is ample proof that such a danger does exist.

3. That the cleanliness of the houses is not all that is desirable and may also play a part of no inconsiderable value, but the proportion of sanitary conveniences very little.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A NOTE ON ONANISM AND ITS EFFECTS ON THE MAN.

As the word "onanism" is so often wrongly used as a synonym for masturbation, it may be as well to begin by stating that what is here meant is the interruption of coitus before emission with the object of preventing conception—a practice as old at least as the Bible story of Onan, and how much older nobody knows.

Apart from its influence on the declining birth-rate, the reasons why I wish to say a word about this particular form of conjugal check or "fraud" are: That it is widely prevalent at the present time; that if persisted in it is probably always injurious sooner or later—to the man at any rate; and that its evil effects do not appear to be adequately recognized.

I do not propose now to discuss details. I only want to say just enough about its effect on the husband to attract, perchance, the interest of some of those who may not have thought about the matter, and especially of the family doctor to whom opportunities for advising and warning would chiefly occur. As regards the wife, I will not venture to say more than that the effect on her probably depends mainly on the extent to which sexual feeling is present in each individual woman—a matter about which little is accurately known.

The most likely explanation of the widespread prevalence of onanism seems to be that it does not require help from outside, and consequently it is resorted to by well-meaning people who would hesitate to use either mechanical or chemical means, and who look upon onanism as the least unnatural and therefore the best way of achieving their purpose, instead of, as it really is, the worst of all ways. It is a deplorable fact that there are so many people who practise it among those who are best qualified to produce good and useful citizens. Occasionally a man soon finds out for himself that the practice is affecting his health, and abandons it. Probably much more frequently it is continued for a considerable time and sometimes for many years. Then, after a period which varies greatly according to the nervous organization of the patient, he becomes irritable, nervous, and depressed, and by-and-by may present a more or less typical picture of what is now called neurasthenia. Sometimes accompanying, sometimes preceding, and sometimes following the onset of nervous symptoms there is in many cases impairment or total loss of sexual desire and pleasure, together with impairment of power varying in degree up to complete impotence. I have also seen acquired aspermia, which could be attributed to no other cause than onanism.

As accounting to some extent for insufficient recognition of ill effects it should be borne in mind that a man does not usually seek advice about onanism directly. This is