about, I think, in 1910. The bacillus responsible for the epidemic was of the A type. The usual impression is that paratyphoid B infections are much more commonly diagnosed as typhoid fever than are infections by the paratyphoid A bacillus. Lyons believes that paratyphoid A is the more frequent offender, in New Orleans, at least.

He was the first to suggest the use of a mixed typhoid vaccine. If paratyphoid infection is anything like so prevalent as has been stated—10 per cent. of the conditions diagnosed as typhoid fever—even though the mortality-rate be not high, not more than 1, or 2, or 3 per cent. ordinarily, the economic loss due to the illness and enforced idleness is so great that there would seem to be no reason why we should not add the paratyphoids to the regular typhoid vaccine, as mentioned by Dr. Russell.

A short time ago I started an investigation to find out what bacteria are concerned in the infection in typhoid fever after ulceration has developed. I feel that the treatment of typhoid fever by a single vaccine, that is, a vaccine composed of typhoid bacilli alone, is not adequate at this stage. Once in a while therapeutic inoculation with typhoid vaccine is followed by remarkably brilliant results. We feel that at such times, in such cases, the infection is a pure typhoid infection. In other cases the typhoid vaccine seems to do no good at all; and these things happen so frequently that nobody can predict a favorable result. After ulcerations have developed, that is, after the second or third week, when typhoid patients usually reach the hospitals, the disease is not, bacteriologically speaking, a typhoid infection, but is a mixed infection and if one could prepare a suitable mixed vaccine, positive results from therapeutic inoculation might be more frequent.

DR. C. J. HUNT, Harrisburg, Pa.: I understand that in the laboratory in Baltimore the agglutination reaction has been worked out in every case of typhoid fever with *Bacillus typhosus* and all other group members. I should like to be informed whether I am correct in that understanding.

Under the direction of Dr. Dixon I made a tabulated list of the cases of typhoid fever occurring in the Lehigh Valley District, in order that they might know from where some of the typhoid organisms originated which were found in the Delaware. There is no doubt that much sewage escaped disinfection. The German statistics showing a mortality of 10 per cent. are probably more nearly correct, as the details worked out in establishing a diagnosis were studied more carefully. One point which seems confusing in the reports of German investigators is the apparent failure to differentiate between *Bacillus typhosus* B and the Gaertner bacillus. There is no sharp differentiation between paratyphosus B fever and meat-poisoning cases, from which the Gaertner bacillus has been isolated. It is my hope to make a report of these infections later.

The frequent occurrence of paratyphosus A infection has already been noted and is a matter of comment among those working in this field, particularly as to the differentiation between *Bacillus paratyphosus* A and *Bacillus typhosus*. There is apparently a group agglutination for these two microorganisms, a factor which can be determined only by observations on the titer limit in every case. My conclusions in the Coatesville epidemic were that we were dealing essentially with A infection, though I did not advance it as a portion of my paper. Had more extended observations been made there would be some justification for making a definite statement with reference to it. In South Bethlehem during the epidemic of *Bacillus typhosus* infection, I had an opportunity, through the treasurer of the Bethlehem Steel Works, acting for Mr. Schwab, to immunize about 10,000 employees. The result of the first day's work in that borough by ten census-takers showed that the outbreak was already abated and the enforced vaccination would have been scarcely justifiable. The use of vaccine in mixed infection is one I hope to work out in Pennsylvania. I shall, I think, have an opportunity in connection with further studies on this group of microorganisms. The latter will include studies on the titer limit, saturation and bactericidal properties.

THE ERADICATION OF THE SOCIAL DISEASES IN LARGE CITIES *

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No more time need be spent in discussing the possibility or the impossibility of eradicating the contagious social diseases, syphilis and gonococcus infection than in relating their ubiquity or their influence on all classes of society. Suffice it to say that rich and poor, intelligent and stupid, moral, immoral and unmoral, innocent and guilty, are paying the price of centuries of an ignorant, ill-considered false modesty in terms of morbidity and mortality that probably surpass the sum of all other contagious influences combined. If a computation were made of the acute venereal infections, their complications and active sequelae, the brain and cord lesions, the insanities and idiocies, the inherited and acquired deformities and destructive lesions, the partially and totally blind, the abortions and stillbirths, the operations on the abdomens of innocent as well as of guilty women, the male and female sterility, the army of infant deaths, the apoplexies, the lowered vitalities of those not manifestly diseased, the moral bias and weakness, and the degeneracies of mind and heart directly or indirectly traceable to the so-called social diseases, there would result a seriousness and perhaps a tendency to reflection throughout humankind that would forecast at least a profound upheaval. The physical results form only the beginning of the influence of the social diseases on the world at large. The broken homes, the divorces, the desertions, the suicides, the incapacity for work, the wages lost, the hospitals and asylums rendered necessary, the cost of treatment, form only a few of the points at which the diseases of immorality impinge on both the innocent and the guilty portions of society. It seems incredible that up to the present syphilis and gonococcus infection are, officially speaking, non-existent, and that as far as the national and to a great extent the municipal authorities are concerned are deserving only of contempt or complete disregard. In the Army and the Navy alone are they officially recognized by the national government as diseases. The horde of immigrants that enter this country every year is examined for every infection save these two. The accurate and actual cause is placed on the death-certificate, the country over, in every instance save of these two diseases.

There is before us, therefore, a task to which society at large, and especially the medical portion of it, must straightway address itself. The fact that the problem ramifies in and out through animal passion and private and public immorality renders it more difficult, to be sure, but none the less insistent, and none the less finally soluble. Small-pox once appeared hopelessly and permanently beyond control; tuberculosis was only recently regarded with complacent resignation. The social diseases await the same sharp awakening of a people that have been too long asleep, and the application of measures that are within our grasp in spite of all pessimism to the contrary.

AN EDUCATED PUBLIC

In the first place, and absolutely essential to the success of any attempt at controlling influences so insidious

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as the diseases that are fostered mainly by and through immorality, is the sane, quiet, complete sex-education of the American people. Granted not only a knowledge but a realization, a thorough appreciation of the facts, and radical action will follow, on the part of woman-kind at least, and eventually from the side of the traditionally less virtuous male portion of society. On a health basis only, in my opinion, is the social evil a soluble problem. In a competent knowledge of the existing conditions of the public health lies the first and most radical advance toward society's moral and physical cure. Beginning with the teaching of normal sex hygiene to little children at the mother's knee, through the medium of the flowers, and soon through the lower and then the higher forms of animal life — always emphasizing the sacred duty and privilege of reproducing one's kind, and of equipping the body and mind far in advance for this duty — beginning with this primitive, but essential ground-teaching, we can advance through the public and private school to the later sociologic training of the adult citizen. Not only trained teachers are needed, but intelligently willing parents. We are at least one generation distant from the apparent realization of society's physical and moral cure.

COMPETENT AND WILLING OFFICIALS

An intelligent, open-eyed people will elect to positions of responsibility and trust only such men and women as are committed to the moral and physical health of the public. One of the new requirements of eligibility for mayor of a city will be a candidate's thorough acquaintance with the bearing of prostitution on the physical health of the community. He will be required to make in advance an outspoken statement of his attitude toward a continued tolerance of the spread of the social diseases through publicly condoned immorality,— a tolerance that is rendered possible only by the violation of his oath of office in ignoring and failing to enforce existing laws. As a rule these are competent to meet the needs and to insure the protection of the public. Clandestine prostitution furnishes a problem even far more serious than that of public immorality and one that does not come within the responsibility of a city's chief executive. This fact relieves him in no measure from a full and far-reaching responsibility for every public brothel that remains open and inviting to the boys and men contrary to law, or for every case of venereal disease carried from such a house into clean homes to infect innocent, ignorant women and children. In my own as in almost every other city the brothels have long stood open wide. In them a large percentage of our boys and men contract and transmit one or both of the two contagious social diseases. This is in the face of the fact that mayor after mayor has sworn to uphold laws already on the statute-books, and only awaiting official willingness to enforce them.

WHAT CAN THE PUBLIC DO?

The active cooperation of the people with their chosen officials is the ideal method and will no doubt bring the speediest and most thorough result. The people and the officials are not both essential to the success of an intelligently conscientious endeavor. Either can awaken the other, if slumbering, to a sense of duty and inherent power. Either can accomplish much, if necessary, without the aid of the other. In certain of our American cities the immoral and diseased sections have been rendered temporarily clean through the efforts of one man or of the entire body of citizens, in the face of a

reluctant mayor and an openly opposing department of police. In such an event the public may have to seek out the facts for itself. It should, if necessary, deliberately investigate its own improvident expenditure of public funds for the care of those physically incompetent through tolerated public immorality. It should not be called on, however, to assume the functions of the mayor and his subordinates; but in the delinquency of these officials it may and should take their functions over. The public officials are salaried to protect the public by the enforcement of law. On occasion the public is forced to work and to serve without pay. Publicly condoned prostitution means publicly condoned disease and a consequent civic burden in the form of taxes for the maintenance and care of the feeble-minded, epileptic, orphaned, crippled and paralyzed. It would almost seem that the medical portion of the public would feel it incumbent on itself to render these data easy for the people to obtain. It should encourage a full public understanding of the dependence of these conditions in large measure on immorality and consequent disease.

In default of action by their chosen officials the people should not repeat the mistake of placing unwilling men in places of power. The women of a community should demand also that the double standard of physical and moral health be distinctly condemned by the male sex, if marriage and child-bearing are to be continued by innocent, clean girls. Motherhood should not entail invalidism, the operating-table and an unsexing operation soon after the first child is born. What is more, womankind should see to it that the single standard is adhered to, at least by those men who desire to marry clean girls. No laws are needed for the purpose. Let the mother, or better still the marrying girl, offer her prospective husband a physician's certificate of her own freedom, as far as ascertainable, from transmissible disease, and demand the same from him. His answer will of itself go far toward assuring her of safety or danger. In this step the miracle is already well on its way toward accomplishment, the women and children are in sight of physical safety, and the babies far nearer an enjoyment of their right and title to be born alive and to live.

MEASURES TO BE AVOIDED

The public should also study and acquaint itself with the facts regarding measures that have invariably invited and just as invariably resulted in failure. These may be considered under three heads: (1) Indisposition, ignorance, inaction; (2) reglementation, including medical examination, and segregation; (3) vice commissions.

Inaction has been the order of the day for centuries, and has centered in male duplicity and willingness to tolerate feminine ignorance and even encourage blind over-confidence in the worthiness of the stronger and less temperate sex. Most cities owe their sorry moral and physical plight to the fact that they are contented in their corruption in spite of knowing that it is only a short step to civic revolution and to the security of a new and real health.

Reglementation, Medical Examination and Segregation have all been put to a thorough test in Europe and in certain sections of this country. In Germany, France, Austria and England, government commissions have reported not only on their inefficacy, but very positively with respect to their influence in increasing the spread of prostitution and the social diseases. No more ample, no more definite evidence

can be presented to an intelligent people than has been adduced on this point. Nothing further should be necessary by way of determining the action of a wide-awake nation. We should not require the stroke of a mallet on our collective figurative head. Neither should we encourage a further waste of time and money over methods and means that have once and again been tried and found wanting.

Vice Commissions.—I venture to suggest that these are at best a sorry attempt on the part of public officials, from the mayor of a city down, to shift a grave personal responsibility and duty on a long-suffering people. Two memorable vice commissions have made the necessary pioneer investigations and have blazed the way. The fact that they were necessary in their respective cities was a burning disgrace on the executive officers of those communities and on the male sex at large. None the less their work was well done, and their reports have startled all the world except the portions that are still asleep or that do not wish to be shaken out of ignorance and depravity. Cities differ very little with respect to their immoral and diseased sections. Invariably there is a close association between rotten politics and public prostitution. Without a thorough interdependence of these twin evils neither one could continue to exist, because the concealment and misrepresentation that are necessary to the life of the latter would become apparent to the clean portion of the public and action would be prompt and radical.

Every public prostitute and street-walker ought to be accurately known to the police officials. Her exit from a particular city is not a matter of difficulty when this end is desired. A definite notice that she is to cease plying her trade, with the realization that the notice requires attention and observance, is all that is necessary. Nor need she return until the authorities desire or permit her reappearance. When all cities take this matter in hand there will be none that will harbor an acknowledged public woman or house of ill fame, nor one that will permit the presence of soliciting men and women—usually foci of contagious disease—on its streets.

There are indeed difficult phases and perplexing features of the prostitution question, but the matter of a full knowledge of the number and identity of the public houses and of their inmates and of the street-walkers, and ridding the cities of all these, are not among those difficulties. An official suggestion that they are constitutes an insult to the intelligence of the people, and amounts to a self-conviction of unfitness for executive office. Moreover, we may rest assured that a vice commission, from to-day on, will from the time of its appointment until its dissolution meet with unnatural conditions in the city which it undertakes to investigate. My own city is at this instant heralding far and wide the fact that its vice commission, just appointed, is about to begin its labors and report on the condition of the town. Meanwhile during the three months since the first announcement that the mayor was waiting for a public demand for a vice commission all types of public prostitute, house inmate and street-walker, have been quietly and discreetly filtering out of Philadelphia into Atlantic City, Baltimore, Washington, even New York—black and white, male and female—all diseased and transmitting contagious disease, and ready to return to their pursuits shortly after the vice commission has rendered its report on an unnatural and abnormally peaceful state of affairs. In most instances a vice commission

must necessarily employ improper and immoral means to obtain the evidence that will convict. When it does not, it assigns to an impossible task a police or detective force that is usually as well known to the public prostitute as the latter is to them. Perhaps as in the Philadelphia journals of yesterday and to-day the personnel, even the names of the officers assigned to detective duty are spread out to public, and of course to prostitute, view. Every item of the work of a vice commission can and should be accomplished more thoroughly, quietly and quickly by an efficient police department serving under a loyal mayor and director of public safety than by a group of citizens, however willing, but altogether ignorant of the first principles of such an investigation as is placed in their charge. The facts are in most instances already in hand; the moral courage to use them is alone lacking.

Official and Departmental Investigation and Control.

—These are the forces that must be invoked and applied sanely, persistently and without ceasing. The moment they are relaxed human passion and carelessness of inevitable results will answer for the return of moral and physical conditions that are all too apparently serious to-day. In my opinion no city need harbor either the public prostitute or his or her contagious disease, provided it begin now and continue electing only such public officers as both subscribe to solemn oaths and fulfil their obligations to the public and to humanity.

The public should square itself with the public prostitute and acknowledge that in a large measure it is responsible for her sorry state. Social conditions are tolerated and encouraged by many of saintly speech and mien that render it easy if not imperative that the public woman yield to the temptations of passion, vanity, and man's disregard of woman's honor and fair name. Starvation wages, the unattractiveness and poverty of the home, the opportunity of an easy income far larger than that obtainable in an honest or honorable livelihood, a total ignorance of the inevitably early disease and death that attend this calling, the dance-hall, the average theatrical show, the wiles of the procurer and cadet, the long working-hours, the temptation and finery of the department store, the lack of legitimate pleasure and relaxation are the conditions that help, at least, in recruiting the ranks of the 300,000 and more of America's public women, the average length of whose prostitute life is little over five years. The public owes the prostitute something of sympathy, protection, encouragement and of hospital care, at least when she emerges from her low level to an attempt at better things. Her head should not be pushed down again; she should not be refused employment; she should not be raided or imprisoned unless the same treatment is accorded the man. She ought to be taken into God's fresh air under institutional protection and directing care, under ideal conditions, until she can breathe deep and realize that there are human beings still on the earth who have also erred in one or another direction and who are extending to her a helping hand. She has not violated her oath of office as have the mayor and his subordinates who have perhaps allowed her to become morally and physically infected and as a prostitute to spread contagious disease, nor has she yielded in most instances altogether to her own desire. Grim social conditions have oftentimes pressed her down until her weak will has given way in an attempt to reach the only apparent means of relief and escape from intolerable servitude or impending starvation.

Another mistake that is likely to be made is the overlooking by the citizens of the entire absence and lack of hospital provision for the army of girls and women and boys and men whom any wholesale moral upheaval will throw suddenly on the community. In the state of Pennsylvania there is only one hospital that freely admits for treatment persons suffering from the social diseases as such. Without ample hospital facilities and wards in which to furnish treatment free of charge to all willing to apply, the control of the diseases consequent on prostitution is impossible, and the attempt need not be undertaken with any hope of accomplishment. Such extravagances as the recently proposed placarding of the houses of those infected with the social diseases are ill-advised conceptions of those who are acquainted with neither the social nor the strictly medical difficulties in the way. Victims of syphilis or a gonococcus infection must be encouraged to attempt as speedy and complete a cure as possible, not driven to concealment and the inevitable spread of disease. An exaggerated fear of public exposure means simply and surely an endless chain of infections that will cease only when the social diseases are placed as they should be, in the light of day, beside and in the same category with similar contagions, such as small-pox, typhoid fever and tuberculosis, not one of which compares either in morbidity or indirect mortality with syphilis, or perhaps with gonococcus disease.

SALUTARY SANITARY MEASURES

There are practical measures that are likely to contribute toward final success in the partial or ultimately complete eradication of the social diseases. One of the most important of these is the placing of syphilis and gonococcus disease on the list of the compulsory reportable contagions. California enforces such a provision to manifest advantage. Even New York City provides for limited reporting of these conditions. In no instance is the name of the patient reported to the health authorities; simply the fact (by number) that a new case is in the care of the physician, a brief statement of the character of the infection, its origin when possible, and the adequacy of its supervision and care from the standpoint of the public.

Another strictly official health measure should be the provision for a careful and accurate study of the social diseases. Such an investigation must needs be carried on by the authorities to be complete or of any practical value. It could be rendered successful by the use of a questionnaire placed in the hands of every physician in a given municipality.

Side by side with adequate free treatment for syphilis and gonococcus infection should be offered unrestricted opportunities for obtaining a Wassermann test for syphilis, a serum test for gonococcus infection, or a laboratory examination of specimens and slides for the *Spirochaeta pallida* and for gonococci. Quarantine regulations can and should be imposed on patients who refuse proper treatment and thereby endanger the public health.

State control hardly seems practicable at the present time though both the state and national authorities should officially recognize the social diseases as grave problems from the standpoint of morbidity and of indirect mortality. Especially in their bearing on mortality among infants and children should they be listed as hereditary contagions, and accurate statistics be sought after. It may be possible within the near future to spread on the statute books laws similar to those already

enacted in several of our western states providing for the requirement of a certificate of health prior to the issuance of a license to marry. Such a law would at best be merely an educational power. It cannot be enforced except in so far as the individual physician is conscientious and has an eye single to public duty. This end can be accomplished in even fuller measure by the people themselves when they are of a mind to establish the custom of exacting just such a certificate in the absence of a law covering the point.

Another invaluable measure must be the furnishing by every city of all its hospitals with private and free wards for the decent and skilful treatment of syphilis and gonococcus disease. This has already been referred to as absolutely necessary to success.

Another measure might well be the systematic education of all those who probably carry infection, especially of the public prostitute so long as she is an acknowledged member of a community, with respect to her own invariable infectiousness to the public, not only to the men with whom she cohabits, but through them and also independently of them to other and innocent individuals.

Still another would be the posting in the front hall of every building, respectable and otherwise, of the name and address of the owner of the property. If held in the name of a corporation or estate the name of the latter should be displayed. In Iowa an injunction can be obtained against the keeper of a house of prostitution, as well as against the owner of the property. A fine of \$300 may be imposed by the court against the property, constituting a tax lien which takes precedence over a mortgage and serves as a cloud on the title. The property is enjoined forever from use for immoral purposes and for one year from use for any purpose whatsoever, except under certain specified conditions.

A fifth would be the formation of definite organizations whose sole aim would be the securing of ample living wages for girls and women for services actually rendered. This step would be an active preventive measure against public prostitution, and still more powerful in the control of the even more serious problem of clandestine immorality which serves as the most active means of spreading the social diseases among the needy working girls, and through them to boys and men.

Sixth, the cities can and should maintain a real home, an outdoor institutional guardianship, not in the nature of a penal institution, for wayward girls who need and desire a guiding and directing hand back into physical and moral health. Definite provision should be made for the protection of the public against infected and infectious cooks and table servers (hotel, restaurant and lunch-counter waiters), colored and white; also for a full medical certification as to the freedom of certain classes of household servants, especially of nursery maids and butlers, from transmissible disease. One of the largest railroad systems in the country is of its own volition already insisting on a regular periodic physical examination by the company's medical officer of its entire restaurant station and train force on pain of prompt dismissal in the event of refusal to submit to the inspection. For identical reasons the common drinking-cup, the roller towel, and the public piece of soap, should be forbidden by law. The cities can and should furnish properly managed outdoor gymnasiums, baths, dance-halls and playgrounds, not only for its children but for its young adult men and women. From both of these uncared-for classes come the substitutes that fill the ever depleting ranks of the diseased and dying prostitute.

Finally, it would not be an impossible thing for the women of a city effectually to demonstrate to the men that since prostitution is no longer looked on as a physical necessity for either sex, it must no longer be indulged in by the loyal citizen. A prompt handling of all attempts to entice and solicit on the part of men; the public exposure and summary punishment of all males and females detected practicing any form of prostitution; the oversight of the moral and physical welfare of its boys and girls, at least to the extent of safeguarding and preventing them from easy contact with prostitution and from exposure to the social diseases in public houses of ill fame—lie within the power of the large cities and afford opportunities that should not be overlooked of prevention as by all odds the best and cheapest form of cure. The women and the physicians of a community really have the solution of the prostitution problem within their grasp and control. Both prostitution and the social diseases will begin to disappear the moment the women and the physicians so decree. With power comes the responsibility of *noblesse oblige*. With the new opportunity comes also a shame born of oft-repeated unwillingness and refusal. Only through educated, brave men and women and through the intelligent action of him whom we still love to call the family doctor, will that new body of citizens be reared who will know all the facts, and regard prostitution and its diseases as burning life-problems, and who will not stop short of a radical cure of evils for the continuance of which through their inaction they have been in a considerable measure responsible.

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ABSTRACT OF DISCUSSION

DR. R. E. LEDBETTER, Washington D. C.: Venereal disease is one of our greatest problems in the Navy. Last year, 11,150 men were admitted with venereal diseases or their sequelae, 191 of whom were totally disabled and had to be discharged from the Navy. Our personnel being about 45,000, it will be noted that approximately 25 per cent. of our men were infected during the year. The number of admissions, 11,150, corresponds to the number of men required to man ten first-class battle-ships. We now have compulsory venereal prophylaxis in the Navy, and our results since its institution have been fairly good, and we hope for better results in the near future. Briefly, the method consists of injections of argyrol and local applications of calomel ointment within twelve hours after coitus. Just now the percentage of venereal admissions would appear to be greater than ever before, but this is only apparent and not real, as now the medical officers are reporting every case, whereas in former years, many patients were not reported, as they could still work. We hope with venereal prophylaxis and education to reduce the rate of admission to 25 or 30 per cent. of what it is now. The layman can help us by teaching the public to respect our uniform, and by urging legislation to restore the canteen. This would materially lessen venereal infection in the Navy, as on account of their uniform the men, except in Rhode Island and the District of Columbia, cannot enter a respectable café or theater, and must gravitate to the slums, where many of them contract venereal disease. We are doing all we can to educate our men, and assistance would eventually lessen our venereal problem very much.

DR. GUY L. KIEFER, Detroit: I hope with Dr. Willson that the time is near at hand when all houses of prostitution will be banished from our cities, but unfortunately this time has not arrived. It may be disgraceful but we must admit that houses of prostitution do exist and that the inmates of these houses do spread these diseases, and while it is maintained by some that this is a small part of the problem, it is large

enough. We know from the estimates that have been made that the number of exposures in a city like Detroit, for example, are about 750 in a day from this source. It seems to me that it is necessary for a health department to meet this condition. I do not believe in regulation of houses of prostitution in the sense of segregation and regular examination of the inmates because this has been tried and has failed, but I do believe in the examination of all known prostitutes in a given city by the officials of the department of health at irregular and unannounced intervals, with the proviso that, if any of the women are found to be diseased when these unannounced examinations are made, then the house will be placarded. Such a method will result in the reporting of the cases to the department of health, and the reporting of cases of contagious diseases of any kind is the first step necessary in a campaign for the prevention of such diseases. Whenever cases of venereal diseases are reported to the department of health, the infected persons should be removed at once to a hospital and kept there until their case is no longer infectious.

DR. GEORGE M. STERNBERG, Washington, D. C.: It seems to me that the most important thing to keep in mind is the educational campaign. If we can show our young men and our young women an exhibit which shows the results of venereal infection and the statistics relating to the prevalence of these diseases, I think it would have a greater effect than any amount of legislation relating to prostitution.

DR. SARAH J. McNUTT, New York: Much has been suggested as to what should be done with the prostitute woman in order to control venereal diseases. Since it is a well-recognized fact that there are more than twelve prostitute men to every prostitute woman, it would seem neither just nor right that the woman alone should be arrested, examined and, if found infected, retained for treatment, while all the men prostitutes are allowed to go free, and at will to scatter these diseases broadcast throughout the land. If one is examined, retained and treated, so should all be examined, retained and treated.

MR. W. A. HOWE, Albany, N. Y.: It seems to me that the question of prostitution is not the only point where we should attack the prevalence of venereal diseases. To my mind equally as much venereal disease is contracted outside as inside of houses of prostitution. For that reason we should attack both sources of infection, that so frequently are seen as a result of clandestine intercourse, as well as that contracted in houses of prostitution. Here, as in practically every problem of public health, the question resolves itself into one of practical education. It is one thing for us to get together to tell each other that we should educate the people in the suppression of these communicable diseases, but it is quite another matter to determine how we should conduct that education. It is the intention of Commissioner Porter to appoint in the immediate future about twelve prominent women physicians of the state to conduct an active campaign of education among various organizations of women, among working girls, etc., as to the prevalence of venereal diseases and their dangers. A similar line of education will likewise be conducted by a certain number of men physicians who will conduct similar meetings among organizations of their own sex. In our state we have already enlisted the active cooperation of the W. C. T. U., the Y. M. C. A. and various other religious and civic organizations in our crusade of education for the control of venereal diseases. We expect at no distant day to be able to get into the high schools of our state likewise to teach the boys and girls as much of sex hygiene as may be advisable and of material assistance to them in appreciating and escaping the danger of these extensively prevailing diseases.

DR. JOHN F. ANDERSON, Washington, D. C.: It does not seem to me that the placarding of houses of prostitution is going to do a great deal of good. It results in the scattering and depopulation of those particular houses.

DR. H. D. PEASE, New York: All my educational efforts have been confined to the field of tuberculosis. I am, however, much interested in watching the development of activity looking toward the prevention of venereal diseases. In reply to Dr. Sollmann's suggestion, I may say that as far as my recollection serves me, comparatively little relation has been

found between tuberculosis and venereal diseases from a strictly pathologic standpoint. The subject might develop interesting results on investigation.

DR. ELNORA C. FOLKMAR, Washington, D. C.: It seems to me that in dealing with this problem at present from the educational side we must aim to reach certain classes or groups. First of all, we must reach the parents of the coming generation and we must, as far as possible, reach the coming generation. Many parents are not fitted to teach the young concerning sex hygiene and have no time to prepare for the work. We must, therefore, get at the young people themselves. Another group of persons we must reach is the class of employers. We must demonstrate to them the amount of inefficiency that results from venereal disease. When we touch an economic problem we get support which will help us to carry education all along the line.

In the work in Washington, which was undertaken last year under the auspices of the Woman's Clinic and the Committee on Public Health Education Among Women of the American Medical Association, we did not attempt to press the subject home to any group. We announced that we were ready to give talks on sex hygiene whenever they were called for. One request was made, then another and another until at the end of the year, the last month of our educational campaign, which covered other subjects than sex hygiene, almost all the requests were for lectures on sex hygiene. The requests came from mothers and teachers who are intensely interested in the problem "What will become of our sons and daughters?"

DR. ROBERT N. WILLSON, Philadelphia: I omitted an extended discussion of clandestine prostitution from my paper, since it is too large a subject. It is an important field and the largest number of venereal infections probably spring from it. Its consideration does not properly form a branch of public hygiene and is rather a social problem, one of education and sociology, and especially a question of home surroundings and home management. Whether we will ever handle it properly is a matter for Providence to decide. The clandestine prostitute is more dangerous even than the professed public woman, though there is no prostitute more than a few weeks at her trade without infection from one or both of the two social diseases. I think the method suggested of telling our young people, as in the Navy, that there is a possible prophylaxis, would be most unfortunate. I think it is morally unwise, unnecessary and an invitation in the wrong direction. Moreover there is no certain preventive.

I do not think you can frighten any boy into being moral or clean. In the University of Pennsylvania medical department we find the highest percentage of students who suffer from the social diseases; the next highest is obtained in the dental school, and the next in the veterinary. There is always a percentage of infections among practicing physicians; how high nobody knows. Education will not therefore do all. I believe there is a definite relation between tuberculosis and syphilis. I believe the negro race offers a case in point, syphilis existing there side by side with tuberculosis, and offering a ready soil for its development. I have never seen a negro recover from incipient tuberculosis, and believe the mortality of the two diseases is in the negro race a composite one. Last of all, I wish to say that I believe this is not a hopeless problem. I believe the fact that some of the younger medical men and women have within fifteen years seen the work progress from the stage in which all who undertook it were challenged as seeking advertisement to that in which there are demands received every day for teachers and for sane instruction; this, I believe, is the best augury of final success.

No Automobiles in Yellowstone Park.—Physicians who have had vacation outings in mind have inquired whether automobiles are allowed in Yellowstone Park. They are not. It is said that an understanding with the firm that runs coaches in the park stands in the way of the admission of automobiles. Pressure is being brought to bear and it is probable that within a year or two the park will be opened to automobiles. Much improvement in roads will be necessary.

UROBILIN: ITS CLINICAL SIGNIFICANCE

PRELIMINARY REPORT *

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To follow the fate of hemoglobin within the body or to unravel the intricate skein of important functions carried on by the liver cell offers many difficult problems, but we are steadily progressing toward a better solution of them. Probably no substances have stimulated more interest and led to the production of more theories along these lines than urobilin and its mother substance urobilinogen. It now seems beyond reasonable question that these bodies are derived from hemoglobin, either with or without preliminary formation of bile pigments.

While there are several ingenious theories of their production, each one with its fatal defects, the most generally accepted is that of Friedrich von Müller, which is that urobilin comes only from bile pigments subjected to bacterial decomposition within the intestinal tract, and he points in corroboration to the supposed absence of urobilin from the excretions of patients with complete obstruction of the common duct and to its appearance in such patients when they are fed normal pig's bile. Recently from von Müller's own laboratory Fischer and Meyer-Betz¹ have reported finding small quantities of urobilinogen (hemibilirubin) in concentrated extracts of urine from a patient with complete biliary obstruction, a finding which they ascribe to the elimination of small quantities of bile pigment directly through the jaundiced intestinal wall into the intestinal lumen.

Fischler,² from a series of experiments principally on dogs with biliary fistulas, has concluded that not only does a urobilinuria point to an inability on the part of the liver to perform its normal function of modifying the absorbed urobilin that comes to it from the portal circulation, but that the urobilin may be also a direct product of abnormal hepatic cell activity. Severe hemolysis is accompanied by any one of a series of conditions varying from the thickening of the bile from the increased pigment derived from the breaking down of the hemoglobin (pleiochromia) to a hemoglobinuria. With only moderate blood destruction increased urobilin or urobilinogen in the stools and urine are the only indications of a process which, when severe or acute, transcends the ability of the liver to reduce the hemoglobin and so permits its appearance as such directly in the urine. Thus it is probable that the best measure of erythrocytic destruction is to make parallel studies of the amounts of urobilin and urobilinogen in the feces and urine. At the same time much information can be obtained as to the functioning of the hepatic cells.

METHODS

The urobilin group are end-products resulting from the breaking down of the pigment moiety of hemoglobin within the body. The different steps in the process are being gradually worked out, and especially within the

* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

¹ From Laboratory of Medicine, Medical Department of Stanford University.

² Because of lack of space, this article is abbreviated in THE JOURNAL. The complete article appears in the Transactions of the Section and in the authors' reprints. A copy of the latter will be sent by the authors on receipt of a stamped addressed envelope.

1. Fischer and Meyer-Betz: Wlen. med. Wchnschr., 1912, lxx, 749.

2. Fischler: Dissertation, Heidelberg, 1906.