

of progress; it is a sign of the elevation of mankind; a sign of hope, not of despair; it is a token of the increasing spread of sound morals and rational religion. It is, we may firmly trust, the sure omen of a gradual and incessant improvement in the condition of civilized mankind.

## THE SOCIAL ENGINEER.

BY WILLIAM H. TOLMAN.

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In the changed industrial and economic conditions of to-day the great concentration of capital and the massing of thousands of the employed have brought about new problems. In the old times, master and man lived and worked together—there was a daily point of contact, a continuous personal touch. To-day all is changed. The employer, in many cases, is as much of an absentee as were the nobles in France in the latter part of the eighteenth century and the landlords of some of the worst tenements in slumdom. With the growing intelligence on the part of the workers, evidencing itself in a dissatisfaction with their social and economic surroundings, they are slowly learning how to crystallize their incoherent wants and their smothered discontents into definite propositions for an improvement of their conditions.

The personal touch between employer and employed has largely been lost, and it is not desirable, even if it were possible, to return to the earlier days. But for the successful conduct of the business of the twentieth century a point of contact must be sought for and established, though in a different way. This need has created a new profession, that of the social engineer, a man who can tell the employer how he may establish such a point of contact between himself, his immediate staff, and the rank and file of his industrial army. Thus the writer was summoned in this capacity some time ago to advise a firm employing 2,000 men and boys on the subject of a building to serve as a social center for their employees and also for the community where the factory was located.

On another occasion an employer of 5,000 men asked me what form of industrial betterment he could begin. This led to a few questions on my part. First, were the men allowed to drink beer on the premises, especially at the noon hour. "Oh, no," was the answer; "we are very strict about that." Secondly, I inquired whether any rooms were provided in the factory where the men could eat their lunch, or any kind of a shelter outside to protect them from the hot sun of the summer. I found that nothing was provided. In summer they were obliged to eat their luncheon in the shadow of the buildings; frequently their heads were shaded while their bodies were exposed to the hot sun. Under these conditions it was not surprising that the men went to saloons where they could have their beer and the privileges of the free lunch counter in comparatively cool and comfortable rooms.

To change these conditions I advised the fitting up of a room with plenty of windows and fresh air, and a temporary shelter in some part of the yard for summer use. I reinforced my suggestion by the instance of a certain factory where one large room is furnished with tables and benches. A kitchen is provided where plain, substantial food is furnished at cost price. The men are divided into sections and are given cards on which they write down their orders for the following day. One of their own number serves as waiter, going to the kitchen five minutes before the whistle blows to get the tray with the food which has already been placed there, corresponding to the written orders given on the cards. As soon as the men are seated at the tables, the food, smoking hot, is placed before them, so that there is not a moment's loss of time. The average price of a meal is 15 cents.

After dinner they may adjourn to one end of the room where are tables filled with reading matter, trade papers, technical journals, magazines—in fact, just the kind of reading matter that will appeal to the man at the bench who has a few minutes' leisure after eating. The men are also allowed to smoke for half an hour after they return to their work. The manufactured product is such as to permit this privilege in nearly all the rooms. There are very few factories where

smoking could be allowed, but the fact that it is allowed here shows that the employer is willing to do all in his power for the comfort of his men. My visit to this factory happened on a Friday, when a religious talk of seven minutes is given to the men after luncheon. The speaker gave the men a straight from the shoulder gospel talk on the Prodigal Son. I watched carefully to see how many would stay for the talk. With the exception of about 20 men, who were reading, the remainder, 180, stayed for the address. When you consider that the men took their own time to listen to the religious talk, it is very significant. Since the establishment of this factory lunch room three saloons in the neighborhood have gone out of business, and the fourth is having a hard time. In this particular factory the men appreciate the co-operation of their employer, and show it; however, in the majority of cases appreciation is not expressed, even if it be felt, but that fact does not lessen the obligation of doing one's duty. Noblesse oblige was never truer than to-day.

One of the first steps, in the writer's opinion, towards improving the condition of the employed is the provision of clean and comfortable rooms where men or women may eat their midday meal away from the noise, dirt, and routine of the workbench or machine. The most farsighted employers have been quick to see that taking care of their employees is good business, and have fitted up kitchens where a warm meal of plain, substantial food may be served at cost. The captains of industry are slowly learning a lesson from the captains of war, who lay great store on the physical equipment of their army, fully recognizing that the best fed and the best nourished soldier is the most efficient one.

In a large paint factory it was found that a great deal of illness was caused by poor drinking water. This was a loss to the men, who could not work while disabled, and also to the firm, who lost the continuous service of good workmen. On making a study of the local conditions, it was ascertained that a service of filtration would overcome these evils, and accordingly a complete filtering installation was added to the factory equipment at considerable expense, with the result that now typhoid cases are unknown there.

In the dry color room in this same factory the workmen are provided with two sets of jumpers, which they wear daily. At night the outer one is laundered. In the morning a clean one is put on next to the underclothing, while the inner jumper of the day before becomes the outer one of the next day. The lavatory is fitted up with spray baths, and each worker is obliged to use them, being given time of the company for this purpose. Those who wish may have their underclothing washed at the factory laundry. By the baths the pores of the skin are kept open, so that all impurities are worked out of the system. Formerly in this department a man lasted only five or six months; now lead poisoning is a thing of the past. The employee gains in having good health, and the firm do not lose time and experience in breaking in new workmen.

For the purpose of stimulating the employee to do his best, an increasing number of employers are offering cash awards for the best suggestions from their staff. In one large company a wagon driver called the proprietor's attention to the poorly paved streets about the freight stations, stating that he was never able to haul a full load of merchandise, to say nothing of the needless wear and tear on the horses and wagons. The attention of the city authorities was called to the poor paving, with the result that the streets are now in a proper condition. Thus the whole city gained by the suggestion made by one driver to an employer who had drawn him out by the offer of an award for suggestions.

These are some typical conditions, and their betterment, which confront the social engineer. He must inform himself of all the various phenomena, while referring each manifestation to the underlying principles. In that way he accumulates a store of principles, with their applications, which will enable him to be of practical service when he is next called in consultation. In every case the local conditions and needs must be carefully studied so that the necessary adaptation may be made, for a brilliant success in one factory may be a dismal failure in another of the same kind, without a study of the local environment.

In the great problems of railway transportation, there is the question of administration, the purchase of the raw

material to be worked into the finished product by the company itself, and the actual operation of the railway itself. Some of the large lines are maintaining pension funds, libraries, and various movements for recreation. Take the New York Central railroad by way of example. In the operation of the 10,453 miles of this system the services of an industrial army of 87,200 persons are required. Mr. Cornelius Vanderbilt had a building put up for the railroad branch of the Young Men's Christian association to be used by the employees of the line. This was practically a railroad man's club, for there were then no social secretaries who were trained for the all round management of such a club. This New York Railroad Man's club is typical of the many others established along the line of this one road. On entering the building, it is almost impossible for the newcomer to escape the observation of one of the officials, who are there for the express purpose of serving the newcomer in any way. It may be that he is seeking information about the club and its organization; if so, the necessary explanations are given, and he is made to feel at home. If he is a member, he has access to dining rooms, sleeping rooms, libraries, reading rooms, gymnasiums, and baths; religious services, lectures and recreations. Provision is made not only for the temporal and mental, but also for the spiritual welfare of the employed.

The widening care of the road for the employee is further evidenced by a system of hospitals along the lines for the sick and injured. Traveling hospitals, as they may be called, are maintained—that is, emergency boxes containing articles necessary for use in case of accident or injury, placed in cars, shops, and roundhouses, the men receiving instructions in first aid to the injured.

Closely allied to industrial betterment is social betterment, for every movement adding beauty, comfort, and satisfaction directly promotes a better communal feeling. In line with this thought, the engineering department of the same railway has established a system of horticultural gardens and greenhouses, from which plants and shrubs may be prepared for use at the various stations, and trailing vines are supplied for the purpose of covering up the bareness of fences, poles,

and buildings, adding beauty by the subtraction of ugliness. This form of social betterment is not confined to the New York Central company. It can be extended still further, for there seems to be no reason why the employees of the road should not be supplied with the vines, plants, and shrubs for their own home adornment, at cost, and, under certain conditions, free, provided that they would agree to plant and care for a definite amount. By that means each employee becomes a missionary of beauty, bringing the delight and pleasure of the flowers not only to his own home, but to the community.

In preparing the programme for the great industrial betterment meeting which was held at New York by what is known as the Get Together club, employers of 258,000 employed told what was being done to improve the conditions of their people, looking towards self help and self advancement. Mr. George H. Daniels, of the New York Central railroad, in telling at this meeting why his road was doing all these things, said:

"First, those responsible for the management of the New York Central lines, believing in the fatherhood of God and the brotherhood of man, realize that a sacred duty devolves upon them to aid, in so far as it lies in their power, their employees, who are associated with and more or less dependent upon them. They are, in a sense, of our household, and it is our duty, as well as our pleasure, to assist them in living better, and, therefore, more useful lives.

"The second reason is a patriotic one. Those to whom is intrusted the management of these companies are impressed with their responsibility as citizens of this great republic, and are conscious of their duty to the state and national governments to set an example to their employees which shall be an incentive to them to become wiser and better citizens, and to enable them to perform those important services to the public that are a part of the duties of so many of the employees of transportation companies.

"The third reason is a business one. It is considered good business to surround our employees, so far as we possibly can, with healthful, helpful, homelike, temporal, as well as

moral, influences. It is desirable, from a purely business standpoint, that every employee who is away from his home, on completing his work for the day or night, should have a regular resting place which he can call his own, and where for a reasonable outlay he can secure a comfortable bed, good, wholesome meals, good papers and books to read, and good companionship. We consider that there is no excuse for such employees to be found in improper places or in questionable company.

"The employee who is surrounded by such helpful influences is ready at any moment to perform the duties devolving upon him in a manner which contributes to the safety and comfort of all who serve and are served by the railways. The construction by the New York Central lines of buildings such as I have briefly referred to, which will bring within the reach of their employees all those aids to correct living, the attainment of higher ideals of life, and help in the formation of sterling character, which is so essential in railway employees, will go on from year to year, until eventually at every division point there will be means provided, through the co-operation of the companies and their employees, for all these helpful agencies."