

Notation of the points of view and social interrelationships
of departments at Hawthorne directly concerned with wage
problems by E.C. Tessman. 1936.

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NOTATION OF THE POINTS OF VIEW AND SOCIAL
INTERRELATIONSHIPS OF DEPARTMENTS AT
HAWTHORNE THAT ARE DIRECTLY CONCERNED
WITH WAGE PROBLEMS

(The following notations on the social interrelationships and points of view of the wage departments have been based upon a two weeks visit to the Labor Grades, Time Standards and Wage Incentives Departments. It is realized that some of the assumptions made and conclusions drawn may be inaccurate and lack substantiation. However, the purpose of this report is to note and to arrange in an orderly manner the information gained during the two weeks visit. The noting of the following information was considered necessary at this time in order that ~~the information~~^{it} ~~gained~~ might be recorded while it is still fresh in the mind, and before it becomes confused with other information. If visits and interviews are to be arranged with the Piece Rates and Operating Departments, no doubt many of the following statements can be substantiated or ~~they can be~~ shown to be incorrect. The attempt has been made not to let subjective opinions enter in, but to make authentic statements of the points of view and social interrelationships of the departments visited.)

The ensuing discussion is made in the following order.

Each of the three departments

- 1 - Time Standards
- 2 - Labor Grades
- 3 - Wage Incentives

is taken in and a discussion is made of the social interrelationships existing between it and each of the other two departments and also with the Piece Rates ~~Operating~~ Departments. Also state-

ments are made concerning the attitude of the three departments toward the Industrial Research Department. In conclusion a discussion is made treating with the points of view of each of the three departments.

Time Standards Department

Notation of the time standards department's attitude toward the Piece Rates Department will be made first. The standards department assumes rather a superior attitude toward the piece rates department, and yet they make a concerted effort to maintain a friendly and cooperative relationship. The attitude of superiority may be attributed to the following causes:

- (a) The two departments are engaged in similar work, so the quality of their work is being continually compared by the ~~Time Standards Department~~ and the standards department feels that its completed work is very much superior to the piece rates departments results.
- (b) The personnel of the standards department feels itself to be superior in background and training.
- (c) The nature of the Time Standards Work. The standards department is a ~~member~~^{member} of the staff organization Engineer of Manufacture. They are engaged in redoing the work of the Piece Rates Department. This naturally shows up many inaccuracies of the Piece Rates Departments work.
- (d) The results of the Time Standards Department's work is passed on to the Piece Rates Organization to guide it in setting piece rates.
- (e) The superior attitude may be partly a temporary and artificial one, since apparently the Time Standards Depart-

ment has not as yet had to concern itself with flat rejections of its work. In other words it appears that the acid test for the time standards department is yet to come after its time standards are literally applied at the work level, and the department is called upon to defend their exact application face to face with the plant operators. To date not many time standards are in force *and most of those now in effect have been altered somewhat before their application.*
The following manifestations of this superior attitude

toward the Piece Rates Organization were noted:

(a) Direct statements and mannerisms of the Time Standards Engineers regarding the quality of work and ^{the un}progressiveness of the Piece Rates Organization.

(b) They take specific and conscious steps to develop the good will of the Piece Rates people. The piece rates department is looked upon as ~~someone~~ ^{that} ~~who~~ must be treated in such a manner that ^{LE} ~~they~~ may be used to aid in carrying out the objectives of the Standards Department.

(c) Although they want to employ three or four more time standards engineers the standards department diplomatically refuses to select anyone from the Piece Rates Department.

(d) Standards engineers are careful to inform the workmen in the plant that the standards engineers are not to be confused with the Piece Rates engineers.

(e) There is almost no informal social intercourse during the day between the two departments although they are both located in the same large office and are separated only by some filing cabinets. Whenever interdepartment visits are made it has been from Time Standards to Piece Rates.

No visits from the Piece Rates Dept to Time Stds. were noted. (This fact may be significant because the function of the Time Stds. Dept would normally make them do aggressive)

In predepression days there were some intense antagonisms built up between the two departments. The present, newly established time standards department is doing its best to dissipate these antagonisms. It is probable that some ill feeling still exists. A better picture of it will be achieved after some time is spent getting the Piece Rates attitude toward time standards. Mr. Nelson gave evidence that the mutual understanding and cooperation of the two departments is not complete, when he asked the writer to tell him of his reactions as to the attitude of the Piece Rates Department toward Time Standards. (This request for information on the Piece Rates peoples' attitude was made when the writer informed Mr. Nelson that he might spend some time in the Piece Rates Department to gain an insight into their work.) The following reasons are listed as some of the causes for the antagonism between the two departments:

- (a) Time standards were formerly too complicated, not clear and concise.
- (b) The future jobs of the Piece Rates people were threatened by the Time Standards Department activities.
- (c) The quality of the standards engineers; their work was not satisfactory.
- (d) The Time Standards were forced on to the Piece Rates Organization without giving consideration to the opinions and criticisms advanced by the Piece Rates People.

The struggle between these two departments was ended by the depression when the Time Standards Department was disbanded. Until the discontinuance the Piece Rates people used certain defensive tactics to combat the Standards department. They refused to use the time standards

after they were presented to them and closed their minds to a reasonable analysis of the standards. Also, they spared no words in criticizing the quality of the standards.

Profiting from past experience the present time standards department realizes the necessity of establishing and maintaining friendly relations with the Piece Rates people. Their procedure in doing so has evidently been quite successful. The standards Department is anxious to maintain a friendly relationship because the Piece Rates people have charge of the application of standards in the operating departments. The piece rates people may refuse to accept standards as presented to them. It is apparent that a friendly attitude between the departments would make the way much smoother for the application of standards. The piece rates people are really between two fires. There is pressure from the work groups for looser ^{Piece} ~~output~~ rates, while the time standards people stand back of their work and ^{usually} call for an exact application of the standards. It appears that the group that can achieve the greater degree of intimate social relationship with the Piece Rates people should be the ones to swing the balance in their favor. Mr. Nelson says that there is a much better feeling being built up between the two departments. As evidence of this opinion the piece rates people now often ask the Time Standards people to establish time standards and to aid in the settling of more accurate and uniform rates. The reasons for the increasingly more friendly spirit may be listed as follows:

*Time standards
for higher rates
original here
or from higher
executives of
standards*

1. A more diplomatic ~~and thorough~~ department head is in charge of the Time Standards Department.
2. Time standardization work is much more thoroughly and capably done than formerly.
3. Predepression time standards have been thrown overboard. This serves to eliminate the actual objects toward which Piece Rate antagonism was directed.
4. Piece rates organization can reject the time standards if they are not suitable to them.
5. Time standards now are clear, concise and easy to apply, thus eliminating much misinterpretation and misunderstanding.
6. They are more and more realizing their community of interest. (11)
7. The initial threat to the jobs of the piece rates department has passed and the employees still have their jobs. In fact, the *Piece Rates* Personnel has recently been considerably increased, which makes the old employees feel more firmly entrenched in their jobs.

Beyond the above mentioned reasons, there are certain extraneous conditions that may have tended to bring the two departments closer together.

1. Employee representatives are reflecting a more and more questioning attitude on the part of the workers to know more details about rate setting. If the Piece Rates people can back up the rates that they have set with evidence of the thorough methods that the time standards people use, they will feel much more confident of their position.

2. The ^{piece rate} program of rate equalization must be done quickly and capably. In the shift over to product type shops some piece rates ^{admittedly} are ~~such~~ too "loose" while others are too "tight." As long as the different piece parts worked on do not shift out of a department, the unequal rates tend to even out, but with the shift over to product shops many combinations of piece part manufacture will be broken up and new combinations for a group to work on will be arranged. In order to save a good deal of confusion and the exposing of poorly set rates, the Piece Rates Department must hasten to reset rates before piece rate pay is reestablished in the new type shops.
3. Piece rate earnings over the base rate have been climbing over the past years. Eventually the Piece Rates Department has to face the issue of the increasing discrepancy between day rates and piece rates. Time standardization study offers them one way of stopping this undesirable upward curve.
4. One of the co-founders of time standards study at Hawthorne, Mr. G. M. Fullarton, now heads the Piece Rates Division. This should permit time standards ideas to gradually filter into Piece Rates Division.

The social relationship of the Time Standards Department to the Wage Incentives Department will be given consideration next. The two departments appear to be bound by a friendly and cooperative spirit. It may be well to restate here that these two departments are of equal rank in the Engineer of Manufacture Staff Organization. Evidence^{ence} of this friendly relationship is shown by both the informal and official borrowing of engineers in one department to aid during a rush in the other and informal conferences between the departments during the day. In accounting for the friendly feeling between the two departments the following reasons are listed:

- (a) Nature of the work, both are concerned with the wage problem but different parts of the same problem.
- (b) They view wage problems from almost identical points of view.

Almost every man in both departments is, I believe, a college trained engineer and there is a very noticeable tendency for both departments to see a wage problem from a typical engineering viewpoint.

In comparing the functions of the two departments it can be seen that the wage incentives department may be placed in a rather superordinate relationship with Time Standards. No evidence was accumulated which pointed to the existence of such a relationship other than Mr. Snell's general attitude toward his departmental function and by his general rather smug mannerisms. However, the personal attitude of one man is not sufficient basis to declare that this superior position does exist. So, at this time the possibility of this relationship

I
 only will be recorded. In this manner the possibility of this relationship may be investigated as study of the wage problem progress. The Wage Incentives Department is instrumental in formulating and putting into effect management policies on the wage question. For instance, it was the Wage Incentives Department that made formal recommendations to the Engineer of Manufacture to purchase micromotion camera equipment and also to establish the motion ^{Economy} ~~study~~ course ^{for Shop People}. So, because this department makes proposals that may influence directly the course of procedure for the Standards Department, also because wage incentives is probably accorded certain prestige by their face to face relationships and discussion of general wage policies with highest management officials, it appears that the basis may be present for this superior social position in the Plant. However, as stated previously, there are also good reasons for an equality of relationship, so ^{definite} no conclusions can be drawn at present.

The social relationships between the Time Standards and Labor Grades Department *will be discussed next.*

As can be noted on the organizational chart the two departments have equal ratings in the Company. However, the Time Standards Department ^{often rather} refers ^{deprecatingly} to the work of the Labor Grades Department. This opinion is not expressed openly, of course. Apparently the reason for this opinion is found in the methods used to establish labor grades. As may be judged by formal report of the labor grades procedural plan the method used for setting labor grades rather outrages an engineer's sense of accuracy and preciseness. The method used is more fully discussed elsewhere. The adverse criticism is confined to speaking rather lightly of labor grades methods. When Mr. Nelson was asked whether the objectionable method of labor grading may not reflect back on his time standards, he replied that after all labor grades were pretty accurately set, and that it was beyond his jurisdiction to have anything to do with labor grades. Although it is up to the Piece Rates Organization to apply both labor grades and time standards, dissatisfaction with labor grades which might be registered by the Operating Departments will probably be directed at the entire wage system. It is doubtful whether a body of workmen would ^{either} take ^{the} time or be able to determine the exact cause of wage dissatisfaction. It is apparent that the ~~scientifically~~ ^{carefully} determined quantitative analysis of output possible is rendered valueless if a poorly arrived at ~~quantitative~~ ^{qualitative} method of grading a job is used.

~~11~~ Social Relationships of Time Standards and Operating Departments .

~~These relationships~~ can be visualized at the present time only as a result of time spent in the Time Standards Department.

Later, if it is possible to have interviews with workmen to see the relationship from their point of view, a more complete and authentic picture of the interrelationships can be had. The Standards Department does not have direct authority over the Operating Departments, but they do have continual face to face relationships with them. There is little evidence of intimacy between the time standards engineers and the laboring force. However, the Standards Department is somewhat sympathetic with the operating personnel (elaborated upon under Point of View of Standards Department) and they wish to maintain friendly relations with the work force. There are apparently three outstanding reasons for this desire for friendliness:

1. The Standards Department personnel are human beings in face to face contacts with the work force, so for a purely personal desire for amicable ~~spirit~~ social contacts the friendly spirit is desirable.
2. The operating force is really the work laboratory of the Standards Department and at least overtly friendly relationships are necessary.
3. Worker good will is necessary in order to apply the completed time standards to the ~~work situation~~ *operating departments*

Following are notations of evidence indicating the social relationships between these two departments is not very friendly and cooperative:

1. Time Standards people say that a multiplicity of timing and laboratory tests are necessary in order to cope with the restriction of output phenomenon.
2. Examples are cited where operators openly objected to cooperating with Time Standards Engineers.
 - (a) ⁷ ~~The~~ girl who said that she could not work under the new method.
 - (b) ⁷⁷ ~~The~~ automatic screw machine operator who refused to cooperate to the best of his ability.
3. The Time Standards Department ^{apparently} ~~has not realized~~ ^{not} has taken adequate cognizance of the fact that many operators have special self-made jigs to aid them in "beating" a rate. *Indicating necessity*
4. They are apparently oversimplifying the problem that is occasioned by the introduction of time standards, which call for changed ^{human} motions and higher outputs. (Elaborated upon under Point of View of Time Standards Department).

These social relationships will in all probability continue to be rather distant, unless ^{the issue is forced if} the Standards Department meets a great deal of worker opposition in conducting the ^{proposed} ~~new~~ motion study course. It will be very interesting to watch the progress of this undertaking, ^{if approved} to see if the course will serve to bring the engineers closer to an understanding of the attitudes and sentiments of the work force.

Point of View of the Time Standards Department

First it might be said that they are possessed with a typical engineering point of view. The personnel consists almost entirely of ex-section or ex-department chiefs or new carefully university trained selected engineering ~~college~~ graduates. The men are selected with great care by Mr. Nelson and rather than ^{to} chance getting an inefficient and incapable engineer, he is building very slowly. The men proceed almost entirely on their own initiative while on a job.

They were unusually frank in discussing their work and were glad and anxious to lay their procedures and ~~established~~ ^{examination} time standards open for ~~study~~. They are very much sold on their work and feel that they are well able to defend their ~~own~~ standards.

They are apparently satisfied to let their method be proof of itself. They rely upon multiplicity of timings, their own laboratory studies, and their own personal conclusions in setting standards. (It seems that if they should have an objective test of some sort to check their work against the results, the results might ~~they~~ be more trustworthy).

The time standard men as mentioned heretofore have continual face to face relationships with the work men; however, after spending some time down in the work departments with three time standards engineers, there apparently is little show ^{real} of friendship or intimacy. Down in the arc welding department, one of the time standards engineers was subjected to some joking

about his immaculate dress and white hands and was invited to help prepare a "frame" for welding. The engineer good naturedly complied and was subjected to further kidding because he was unable to do the required work. It was quite obvious, however, that he did not enjoy the situation and when asked about it later he said, "Well that sort of stuff is necessary if we are going to have the men's cooperation."

The department maintains the attitude that they wish to give the workers a break, but they insist that their standards are scientifically set and ~~must~~ ^{should} be rather closely followed. They frankly admit that the time standards that they are setting cannot be met by every worker picked off the street. In setting the standards it is assumed that some inefficient motions must be eliminated by some of the operators before they can reach the output standards which are set. The standards are set in the anticipation of improvement in output for which most workers are not yet properly instructed. Efficiency appears to be one of the great objectives which they wish to achieve in the work force. The limits of efficiency possible or the taking of a more inclusive and farighted point of view has apparently not been considered. They gave no evidence of coping with the possibility that a workman may be forced to high activity to the injury of himself or that it may be a ~~cause~~ ^{cause} of unrest and the bringing of outside censure and internal ^{liber} disturbance at Hawthorne. ~~It will be very interesting to follow the results of the new motion study course. Looking at the situation from a sociological point of view.~~ It appears that the introduction of new time standards

100 files (checked)
what time is it?

^{The proposed}
 and ~~its associated~~ motion study course may be in for a good deal
 of worker resistance as its effects ^{and requirements} become more generally felt.
 It seems that success of the time standards program will call for
 generally speeding up the operators and the shaping of operators'
 motions into one mold. This making over of operators' motions
 will probably be regarded by the workmen as a serious imposition
 into their personal habits and mannerisms. It should be very
 interesting to follow the progress of the plan to study the reac-
 tions and attitudes of both wage department people and the workmen.

Mr. Nelson made ^{rather} contradictory statements concerning his
 attitude toward the work force. One day he advanced the idea
 that loose piece rates encourage restriction of output and on ^{an} other
 occasion he said, if we ~~can~~ show the toolmakers where they can make
 twenty-five cents an hour more, they should certainly respond to
 the incentive provided by putting their work on a piece rate basis.
 In his first statement he apparently thought that the chance to
 earn more money was no incentive and in the second instance he
 thought that workmen will respond at once.

All of the ~~the~~ standards formulas are very carefully
 worked out, but it seems that all of the detailed and painstaking
 work is often rendered very inaccurate. This conclusion is
 based upon the fact that a standard five minute period per hour
 is allowed for fatigue and personal time on every plant operation
 no matter what its nature. So, after calculating ^{motions} to hundredths
 of a second, there is always in the end a flat fatigue allowance
 of five minutes per hour. This provision is a Company policy
 though, so it is beyond ^{immediate} the control of this department. The only

apparent reckoning that the Standards Department makes of the

problem is to say that five minutes per hour is too long.

Mr. Nelson said that the workers in general are quite efficient and that they work hard. But he also has the attitude that management has always leaned over backwards to give wage and other monetary favors to the workmen. He seemed to be rather critical of management on this point.

Wage Incentives Department

Attitude Toward Operating Departments

The work done by Incentives Department permits it to be in a decidedly superordinate position in ^{lets} relation to the Operating Departments. The Incentives Department is in a position to affect the operators' work situation very greatly. Intimate face to face relationships with the operators is rare.

Mr. Snell entertains the idea that the work force must be held in check with reference to ~~now~~ allowing them too much

leeway in carrying on work in the Plant. Speaking of the discontinuance of the "A" groups in the operating Departments, his comment was, "Give them an inch and they take a mile."

The wage incentives department is very much inclined to assume the position of looking down from the heights at labor wage problems. Charts are constructed, outside surveys made, etc. The general attitude is one of a formulator and interpreter of Company policy, and not one interested in ^{the human} ~~a single~~ group or a ~~single wage~~ problem.

Relations with Piece Rates Department

The incentives organization assumes a superior attitude toward piece rates also, due probably as ^{stated} before to the fact that incentives is a staff department and its proposals may directly influence the work situation for the Piece Rates people. From ^(said from which to infer that there is) talking to Mr. Snell, there was nothing ~~to~~ any intimacy of ~~relationship~~ between the two departments.

The relationships between the Incentives Department and Time Standards and similarly its relationships with Labor Grades is discussed under ~~Labor Grades~~. *another heading*

Point of View of the Wage Incentives Department

The title of the Department "Wage Incentives" is a very good indicator of the point of view entertained by this department. The words "Wage Incentives" appear to be ~~considered~~ *regarded by the dept as* ~~with~~ *having* rather sacred qualities. That is, the theory back of a wage incentive plan should not be open to question.

Several instances may be noted wherein the human angle is disregarded in the recommendations of the Wage Incentives Department *theory of the* ~~and evidence which indicates that the wage incentive plan should not be open to question~~ *plan should not be open to question*

(1) The first evidence of this disregard is noticeable in the theory of wage incentive payment itself. The following criticisms of the point of view of the department may raise doubts as to the soundness of the theory underlying incentive methods.

- Handwritten*
- (a) Wage incentive methods make monetary gain an end in itself rather than *trying to turn workers attention to* pride ~~in~~ work, loyalty, to the Company, etc.
- (b) It is assumed that a workman will respond to a monetary incentive as if he were motivated only by economic factors.

(2) There is too great a tendency to set wage incentives by mathematical formula, which although they are models of mathematical accuracy, are often rendered untrustworthy because of the disregard for the human factors.

A discussion of point number one will be made first. The incentives department makes the assumption that the worker will respond to a monetary incentive as if it were an end in itself. This assumption is no doubt partially true, since a good deal of sentiment is attached to the acquisition of money for its own sake. However, to leave the analysis here would be an over-simplification of the problem. Further analysis will throw light on the picture and as a result of the ensuing discussion, a conclusion will be reached that a monetary incentive plan tends to give the workman the wrong kind of encouragement for the best interests of the Company.

In a wage incentive plan the assumption is often made that each worker will view the opportunity for monetary gain as if this were a constant end in itself and that each workman is in quest of this end. As stated, the acquisition of money may be a relatively constant end for a few people, but for the great majority the intensity of their desire for monetary gain varies greatly from day to day and hour to hour, and many people do not regard monetary gain as an end toward which to strive. For instance, it is difficult to see why a workman who has no desire to build up a personal fortune should respond to a monetary incentive if he has sufficient funds to care for his immediate needs.

Conceivably this workman may be shiftless ^{and} with little desire to build an estate, or his religious conviction ^{may} arrest his desire for the acquisition of money. In other words, desire for money may hold no influence over a man's life, and it may be only incidental to the other forces guiding a workman's conduct.

A person who needs money to achieve the possession of some property such as a home or an automobile will not feel a constant pressure to acquire money for the payment of his purchases. So it seems apparent that if a wage incentive is in actuality to work as ^{it is} theoretically intended, the desire for more earnings, ^{consequently} and ^{the} rate of output should vary as the intensity of the need for money varies. In other words, if the demand for money is rather remote the worker will not respond to the monetary incentive as he would if in immediate need for funds. It is impossible for him to keep the goal of achieving money ^{at} equal intensity all the time, there are too many other factors in the personal situation of each workman. The wage incentive exponent may say that the above stated unpredictability ^{of a workman's conduct} is sufficient grounds ^{for} putting a plant on ^{a pay for individual effort basis} an incentive basis, since the workman should be allowed to shift for himself. This view may be valid, but the intention here is only to question the theory on which wage incentives are based.

It seems, further, that the encouragement to seek monetary gain may be giving the workman a point of view unfavorable to the Company. It appears that the maintenance of quality may be becoming more and more of a policing job, calling for more rigid inspection and supervision. In encouraging the attention to monetary incentives, ~~thus~~ such things as pride in work, loyalty toward the Company and ^{the} social codes ^{quality of supervision}

^{the work}
of ~~the~~ group are being pushed into the background. The men are being encouraged to develop interests and loyalties outside the control of the Company. With its monetary incentive plan the Company can attract only that part of the personality of a man that does respond to monetary incentive, and it is left entirely to other Company functions to develop ^{more complete} ~~the~~ loyalties of the worker for the Company. To follow the thought further, the workman is encouraged to put his faith into a transitory goal, if attention is turned to money. Fluctuations in the value of money (evidenced by changing costs of living, rents, foods, entertainment, etc), fluctuations in personal financial conditions due to fortunate or unfortunate investments, may be a very disturbing factor to the workman which will be reflected in worker unrest. Of course the reply may be made that the trend toward the independence of the worker is inevitable and one company can do nothing to halt this tendency. This argument may be true, but it does appear that wage incentive plans may have played their part in this liberation movement. Whether a more complete personal independence of the worker is ^a desirable is question by itself and cannot be considered here. In summary it may be said that the desire for ^{monetary} ~~monthly~~ gain is too much of a forceless or non-magnetic factor for many of the workmen, and only one element in his personal situation. This subject is approached from another angle later in the report.

(2) The wage incentives department is too much inclined to set wages by mathematical formulae. The calculations may be models of accuracy, but one phase of the equation in the wage situation is not given adequate decision; namely, the human factor.

Following are some of the recommendations that have just been made or are up for ~~the~~ ^{by wage incentives} consideration ~~of~~ the department now:

1. Automatic screw machine bonus plan.
2. Motion study course (recommendation ~~has been~~ ^{not yet} approved -- the course is now in the formative stage ~~under the department chief of Time Standards.~~ ^{under the cooperative effort of Mr. Snell and Mr. Lake, (a Time Study engineer)}
3. Recommendation for placing labor grading on a more scientific numerical rating basis.
4. Incentive plan for office workers.
5. Minimum individual earnings of an individual on group piece work is now to be the "mean" figure of the group earnings.
6. Wage survey study.
7. Analysis of employee representation meetings by six month periods.
8. Establishing output standards for every job in the Plant (now being administered. (This program is to supersede the task and bogey standards as set formerly by individual supervisors which provided for no centralized supervision of the work.
9. New employee payment policy.

The plan for paying new employees will be examined here to demonstrate a specific instance where the human angle of the wage problem has been disregarded. Within the past year the Wage Incentives Department recommended and had approved a plan for ~~helping~~ ^{helping} beginning workmen off group pay ^{above base rate} for two weeks and then allowing them an increasing percentage of the group pay until the ninth week when they begin to participate fully in earnings.

(Temporary M.D.I. 10.07 2H 12/30/35.) This plan supersedes the old three per cent additional group allowance plan for groups wherein new employees are introduced. In glancing over the M.D.I., it is immediately apparent that the plan is a blanket one ~~generally~~, that is, it provides for the same learning period for all plant operations. It is not fair to criticize the M.D.I., however, without understanding the reasoning back of the plan. The department did realize that the learning period for different jobs does vary. But because of the length of time necessary to study each job, the cost element involved and because constant consideration would have to be given to the problem due to changing job requirements, they recommended that the present plan be set up. The problem occasioned by the varying lengths of time required for learning periods was dismissed with the provision that supervisors could take special action in case a worker showed ability to reach group standards ^{of output} before the regular nine weeks period is over. While, for practical reasons, these provisions may be defensible, nevertheless some statements may be made to indicate that the wage incentives department did not realize or did not care to cope with the human problem that confronted them.

1. The plan is superimposed upon reasoning that is unsound.
2. Efficiency records were used as a basis for judgment as to time necessary for the learning period.
3. Special recommendations are made by supervisors.

The plan was based upon unsound data because past performance of a small group of workmen was used as the basis for the M.D.I. recommendation. Obviously this study of past performance figures does not give them insight into the problem at hand. The M.D.I. may be criticized first because of the small sample of workmen selected

on which to base the recommendation. No attempt was made to study the workmen ~~in the sample~~ personally to decide what type of workmen they were. Perhaps the output data analysis gave them figures concerning average output of beginners, but no analysis of the personalities involved was made. The worker was not contacted to get an idea of the effort required to achieve his output or an evaluation of the problems that he faced. Also, from the standpoint of the large number of workers affected, the sample used was too small. Criticism of the size of sample is rather a criticism of accuracy of method rather than a neglect of the human angle, but the small sample used does infer that the Incentive Department was not too cognizant of personal disappointments or discouragements and possibly dissatisfaction of employees who feel that they must pattern their conduct to the provisions of the M.D.I. In other words, it seems probable that often a new employee rather forces himself to the mold prepared for him rather than achieving it by a more natural development. It seems that more time might have been given to the M.D.I. *formulation*.

Also, because the old three per cent group bonus was abolished when the new plan was introduced may be evidence that the social relationships and unofficial aids given to the beginner by members of the group was not given ^{ample} consideration.

Further, apparently no attempt was made to acquire data relative to the learning period or learning curves for plant operations. They seemed perfectly satisfied to base their conclusions upon past performance with all its greatly varying plant mechanical and social conditions. It seems that it should have been possible

to make some study into the learning problem itself if sound decisions were to be made. Some embarrassing and rather unexpected things happened when the plan was introduced. For instance, on one type of simple unskilled work, the new workers would achieve the group output almost from the first day. The result would be a skyrocketing of the group earnings toward which the beginner had contributed. The old workers were, of course, elated, but after the nine weeks were over, their earnings would again drop, all without effort on their part.

Mr. Snell's reaction to this incident was:

"Well, we didn't mind giving the old workers the extra pay but they often complained when their earnings returned to normal."

Some flexibility was ^{than} given to the plan by giving supervisors some leeway in shortening the learning period.

Efficiency records (reported by the workmen themselves) was used as a basis for judgment as to the learning period required. These records may have been correct, but on the basis of the Bank Wiring Room Study, we know that day to day individual output ^{YE REPORTS} ~~records~~ were not dependable. During the learning period, also, it seems that the workman might tend to have his reports conform to what the Company expected of him rather than a true statement of his output.

The recommendation as to when a beginner should be put on regular group pay is usually initiated by his immediate supervisor. Also on the basis of the Bank Wiring Room Study, we know that supervisors do not always act logically as provided for in the company Technical Organization. Group, loyalties, prejudices against some beginners, may influence against making a recommendation based on facts alone.

The words "Wage Incentives" although possessed with only symbolic qualities, appears to be generally regarded as signifying an objective, proved principle. Some other possible interpretations of incentive plans by the workmen will be made, other than the generally accepted one that a worker will automatically respond to economic incentives. The statement is made that under incentive methods of payment the quantity of output will increase. If this statement is accepted as true (which in many cases it probably is not) there are also other reasons that may be stated that may account for the increasing quantity of output.

1. The quality of the workmen, ~~concerning quantity of output~~, may be improving. This improvement might be caused by the increasing efficiency in choosing the right type of person for certain jobs. Also, it may be caused by the more or less automatic elimination of slower men. If they cannot reach group standards of output their income will be cut and they will probably drift out of the plant and into jobs where output requirements are more easily reached.
2. The higher quantity of output may be achieved, not by motivating the worker of his own free will but by forcing him against his will. The worker may be desirous of maintaining his former income ~~or greater~~ demands may be made on his income because of rising living costs. In instances such as these, it is very probable that the workman expends extra energy to meet piece rate output standards ~~usually~~ against his will. In other words, rather than a plan which should act as an inspiration to a worker, it may develop into one which forces him to meet standards.
3. The improved output may be due to improved machine, or work place conditions, the incentive itself having little effect.

4. The improvement may be due to improved work methods taught to the workmen. ^{rather than the wage incentive.} It may be said that the Wage Incentives Department apparently makes no effort to prove the principle of its plan. No attempt is made to segregate the variable factors to arrive at a true evaluation of the wage incentive principle.

The charge cannot be made that the department is not aware of the human angle. However, on the basis of the two weeks time spent in the three departments it seems safe to say that they disregard the problem sometimes and at other ^{times} they do not cope with the problem at all satisfactorily. For instance, in the analysis of Joint Branch Employee Representation meetings, the Wage Incentives Department makes the statement that much of the employees objection to being downgraded is in reality a protest against not having special consideration shown for long service, and that the workers are protesting against being judged solely on an output basis. However, the only comment made is, "This may later develop into a serious problem and it will bear watching." So, from the observations made it seems that the Wage Departments try to apply their logical mathematical formulas, not giving proper attention to the human problems. ^{and are blind to workers sentiment} They are inclined ^{until the issue is forced.} to guard their strong position in the Company rather jealously. They are instrumental in writing and interpreting management wage policy, but before they can recommend ^{readily} intelligent executive action, they should give more consideration to the point of view of the work force in order to round out their point of view.

LABOR GRADES DEPARTMENT

Attitude toward Operating Departments.

There appears to be a very impersonal ^{and distant} relationship between

Labor Grades and the Operating Departments. The reasons for such a relationship are not difficult to see. In the first place, it is the job and not the men who are being graded. In the second place, visits to work departments are infrequent, since jobs are graded mostly by comparison and not by a detailed or drawn out analysis of the work situation. Also, the only time that a labor grade is required, is when an operation not now graded is introduced by the Development Department.

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account
toward future*

The Relationship between the Labor Grades and Time Standards Department has already been discussed so it need not be undertaken here.

Relationship between Labor Grades and Wage Incentives.

Although the two departments are of an equal ranking under the same division head, it is probable that the Wage Incentives Department is accorded a superior position in the Plant's social organization. This position is probably due, as stated heretofore, because the Wage Incentives Department often writes wage policy recommendations that may directly affect the Labor Grades Department. For instance, at the present time, the Wage Incentives Department is formulating a ^{Plan} ~~basis~~ for placing a more precise and scientific "numerical rating" on job characteristics to be used in labor grading. Evidence of the Incentives Departments prestige is shown because Mr. Snell often informally borrows labor grade engineers temporarily to aid him in special work.

Labor Grades and Piece Rates Department Relationships.

No evidence presented itself that might definitely be construed as an indication of the relationship between these

departments. It is hoped that some of the relationships may be revealed when the writer visits the Piece Rates Department. It appears though that Labor Grades should be in a somewhat superior position since they are looked upon as the representatives of management in establishing labor grades, which the piece rates department uses in setting rates.

usually permitted only a few minutes of conversation and then suggested that some time be spent with one of his subordinates. Mr. Vincent, the section chief, although very talkative, was not at all consistent in his views. He apparently looked on the task of grading a job as being one of hunting for specific differences between jobs so that differentiation could be made between a job and one in a grade immediately above or below. In fact, he had listed in one of his personal files some stock phrases that he listed as being good ones to use in differentiating one job from another. The whole department appeared to be rather on the defensive *in discussing the function of the dept.*

None of the men interviewed displayed an absorbing interest in the labor grading problems, and none of them revealed a far sighted or administrative viewpoint toward the job. It was more an attitude of getting the job done from day to day. Mr. Oberland, one of the labor grading engineers, after discussing labor grading rather formally for awhile, discussed with considerable enthusiasm^o government surveying project that he had charge of up in Wisconsin during the Western Electric depression lay-off.

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Point of View of the Labor Grades Department.

The department apparently does not have a scientific method of conducting its labor grading work. Grades are established by the engineers' subjective opinions. New jobs are graded by finding comparable, already graded jobs, with which to classify them. Admittedly, it is a most difficult job to differentiate jobs further than skilled and unskilled jobs and it is evident that in grading 5000 or 6000 jobs many arbitrary distinctions have to be made, ~~And~~ because they are superimposing their labor grading system on a general wage level that has never been proved as being the most desirable one, ~~make~~ the job a very disheartening one possessed with a great many obstacles. Wage establishment depends upon management and worker sentiment and is not established on a logical basis.

The department, however, does pretend to establish its grades by the various rating factors mentioned in the ^{formal} report, ~~on~~ ~~the technical function and procedure of the department.~~ They ~~are~~ *appear to be* very careful, however, never to permit themselves to be too definite about a specific job grading. The writer asked one of the labor grade engineers if he could accompany him on an actual grading job. The engineer was evasive and never consented to the suggestion. Mr. Lavigne, the department chief, did not permit himself to be interviewed for any length of time.

Two samples from page 29 here →

Attitude of Wage Incentives, Time Standards and Labor Grades toward Industrial Research.

The general opinion of the above departments toward Industrial Research may be briefly summed up by stating the general

attitude of all three groups: They think, "We are engineers, grappling with concrete problems, engineers are the key men in the Western Electric Company and have been for years and it is from our ranks that administrators should come. Industrial Research is an unproductive department, dealing in intangibles. They are useful in smoothing out a few rough spots for us in our relations with the work departments." The three departments evidenced very little of the point of view of the Industrial Research Department and are ^{apparently} not interested in acquiring it.

A few specific indications of the attitude of these departments toward industrial research follow. Two times standards ^{opinions} ~~of opinions~~ are cited first. Mr. ~~W~~ ^Worth, a Time Standards Section Chief, when informed that the Industrial Research program was again underway, made the following response, "Have they started that "damn" thing up again? I had a lot of those interviews dumped in my lap for my study when I was over in the Inspection Department." As the second instance, an opinion of Mr. Nelson, Department Chief, is cited, when it was suggested that the Industrial Research Department might be of service to his department when Time Standards are introduced into the work departments, responded, "Yes, you can be of great service to us. We would like to have you explain to the workers that our time standards are fair and accurate." He apparently took no cognizance of our Industrial Research Department's knowledge of employee attitudes and behavior. He assumed that time standards application offered no serious human problem. However, the Time Standards Department did try to make a favorable impression, thinking it would be ^{no doubt what} carried ^{back} to the work force ^{in the endorsement of Time Standards}.

Indications of the attitude of Wage Incentives are considered next. Mr. Snell stated that because of unsettled national labor conditions another wage survey is being undertaken at this time. He appeared to be somewhat of the opinion that to prevent Hawthorne labor unrest, ^{all that was necessary was} ~~we should have~~ another wage survey. When Mr. Bushler, one of Mr. Snell's two assistants, was asked whether he thought that a representative of the Industrial Relations Department might not be of service in an advisory capacity in the Output Standards Setting program now under way at Hawthorne said, "I don't see where he could be of any service." At the present time the work is under the direction of the Production Shop superintendents, the Operating Results Organization having detailed charge of it. Tabulating Department representatives, Operating Department Chiefs, a Wage Incentive representative and Business Methods representatives, are on a committee that meet once weekly to settle questions relative to the operation of the program.

A special fatigue study was made several years ago under the direction of the wage departments. It was a typical action of the wage departments to employ an industrial engineer for this study.

One of the principle attitudes displayed by Mr. Snell was his extreme reticence to permit the observation of some work of his department and especially the problems now before department. In reflecting on the probable reasons for this reticence some possibilities are noted. A poor job of interviewing may have been done so that his confidence was not gained. Secondly, it appears probable

that some of the work done is strictly confidential and that higher authority has instructed him to strict secrecy. A contributing factor is also the personality of Mr. Snell. He is very reserved and assumes an ~~aloof~~ aloof manner of considerable importance. Also, sufficient time was not given to interviewing Mr. Snell. He was extremely busy at the time of the ~~two-weeks~~ two-weeks visit to the wage departments. It was considered more advisable to try to establish and maintain a friendly unprying relationship rather than risking the loss of good will and the closing of his department as a source of future wage information. It is also possible that his reticence may be due partly to a reluctance of having the work of his department surveyed by anyone but an engineer. He may feel sensitive to having his work judged from the Industrial Research point of view.

To illustrate, when the writer asked him for a list of the recent problems worked on, his immediate attitude was defensive. He queried, "What are you going to do with the information?" Also, he appeared to be very interested if the writer would ~~take~~ take down notes at any time while interviewing the engineers. He was also desirous of knowing whether a report covering the two weeks' visit was to be written and when informed that there would be one, he at once expressed a desire to see it to be sure that no misinterpretations or untrue impressions were gained by the visitor. It is hoped that more specific information can be gained concerning the attitude of his department. This information should develop in the future, since it is believed that a reasonable favorable impression was created in the department.

No specific attitudes of the Labor Grades Department toward *Industrial Research* ~~Wage Incentives~~ were recorded, other than the general opinion as already previously noted. The most apparent attitude was one of evasion when attempts were made to really discuss the "human side" of the wage question as they termed it.

~~Conclusion.~~

There was considerable evidence of a desire on the part of the three departments to present a good front and create a favorable ~~impression~~ *impression* ~~opinion~~. It might be reasoned that the Industrial Research ~~Division~~ *Dept.* is regarded as being on the "side" of the workers, so too much ~~can~~ *information* not be revealed and yet they do wish to create a favorable opinion so that it ~~can be~~ *the Industrial Research Dept will* carried back to the workers, and so that the Industrial Research Department will not criticize their work in any reports written to management.

It should be restated that many of the assumptions made in this report lack adequate substantiation, however, the report is written more as a means of recording information and impressions gained during the two weeks' visit. In this way it will be easier to substantiate or disprove these assumptions as more information is gathered in visits to other departments.

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