

the process I have described as managing. When we provide for putting into actual current practice any part of this managerial process, say, for example, the devising of incentives, we must recognize that this devising is a managerial process every component element of which must be gone through explicitly or implicitly if it is to be fully accomplished.

Take for example establishing an understanding—giving instructions—a part of the managerial process yet in itself a complete managerial task. The results of previous instruction of employees must be observed; the significant facts selected and put down. In what general direction a better job of instruction might be attained must be visualized, previous experience analyzed with this visualized goal in mind, and better, more effective schemes than the old actually devised; and then these new methods must be themselves got across to the people who are to instruct the employees.

3. Job Analysis of Managing Applied to Actual Tasks of Management

A. MAINTAINING QUALITY OF AUTOMATIC PRINTERS (BY FOREMEN)

(All these steps are going on continuously—there is no beginning and no end to this task—and several series go on simultaneously.)

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| UNDERSTANDING | (f) OBSERVING
(The quality of each printer is rated and noted in a book daily. Records are kept of all errors and complaints. The causes of poor quality are observed.) |
| | (g) EVALUATING
(The quality being produced is constantly being evaluated against the previous performance of the department, the performance of the best workmen, and the possibilities of the machines.) |
| | (h) CONCEIVING
(An image of "quality work" for the department as a whole is constantly kept in mind.) |
| DEVSING | (i) ANALYZING
(When the individual job falls below the "quality image," the points in which it is "sub-quality" and the causes which make it "sub-quality" are analyzed.) |
| | (j) CONTRIVING
(Means are devised to remedy the defects and remove their causes by changing methods, changing the design, assigning the work to a better man, or increasing the attention of the workman to the production of quality work.) |

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| PERSUADING | DIRECTING
(When new methods or new assignments are necessary, instructions are given accordingly to order writers, etc.) |
| | (k) TEACHING
(When new methods are tried out the worker is taught how to use them. When better workmanship is needed, he is shown how the better work can be done.) |
| | (l) INDUCING
(When the man has neglected quality, he is persuaded to strive to improve his quality, sometimes by explanation of the importance of quality, sometimes by comparison with the quality of others, sometimes by financial or other inducements, potential discharge, chance of promotion depending on quality, etc.) |

B. CURTAILING LABOR WASTE IN AN AUTOMATIC MACHINE DEPARTMENT

(Note: In this department machines were operated by girls and cared for by men "adjusters" who made the changes required for different orders, repaired minor breakages, etc. When any machine was "down" for adjustment or repairs, the girl who operated the machine went to "the table" where she wrapped packages. The girls were paid piece rates while operating the machines and were given their piece rate average as time payment when at "the table.")

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| UNDERSTANDING | (f) OBSERVING
(The large number of girls constantly at "the table" was noticed in connection with general supervision. The causes for this were discovered by investigating cases. Records of the amount of "table time" by causes were established.) |
| | (g) EVALUATING
(The labor cost to company while a girl is at "the table" was figured and its importance disclosed.) |
| DEVSING | (h) CONCEIVING
(The ideal condition was conceived to be having adjusters always busy, girls always running machines, machines never idle except when being adjusted.) |
| | (i) ANALYZING
(This condition was found on analysis to involve the following conditions: If adjusters are always to be busy, they must always be working on some machine; if the girls are not to go on "the table," there must be no girl for any machines which are being adjusted; if the machines are never to be idle, there must be enough adjusters to work on all machines that are "down" at all times and therefore at times more adjusters than are necessary.) |

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| DEVSING
(continued) | (j) CONTRIVING
(A plan was evolved to satisfy these conditions by assigning one adjuster with three girls to each group of four machines, rotating the girls from machine to machine, and having the adjuster operate one machine whenever all four were in operation.) |
| | DIRECTING
(Full instructions to govern the new plan were worked out with the foremen and issued to girls and instructors.) |
| PERSUADING | (k) TEACHING
(Foremen and adjusters were taught how to work new plan and how to handle emergency situations. The plan was fully explained to the girls.) |
| | (l) INDUCING
(Adjusters and girls were shown how they would be affected by the plan, the reasons for it, and they were induced to try it out.) |

(Note: This entire process of observing, devising and persuading was carried on continuously, with slight modifications, throughout the entire installation of the plan and its first months of operation.)

If the claim be brought forth that this method of analysis is too complex, I shall insist that the industrial situation is immensely complex and each member of the industrial concern is himself complex, and that we have suffered more bitterly so far from oversimplifications than complex analyses. Management, moreover, has so often been very partial, incomplete and ineffective through the neglect of some of its necessary components that a check list, better undoubtedly and more concise and accurate than I have suggested, will have its own considerable practical value. How much that goes by the name of management do we all know which fails to give any adequate study to the available, applicable facts? How much management has attempted in anything more than the most half-hearted way, to picture the goals it meant to reach? And how much has failed utterly in getting across to its executives or its employees a real understanding and, hence, a real ability to put into effect its methods?

4. Tools of Management

But it is as a great deal more than a useful check list that I am placing before you this analysis. I mean it to supplement the too habitual concentration of attention on the tools through which we manage rather than the function itself. Systems, machines, rules, authority, incentive plans, are devices through

which the managing function can accomplish its ends. The best of all these devices—the finest machines to the most perfect profit sharing plan—are fully capable of lying idle; mismanaged they are capable of doing harm. Precisely as a mechanical device in the typical case saves hand labor but calls for brain labor—and the more hand labor it saves, often the higher grade of brain labor it requires—so with management machinery. The higher the perfection of organization, the greater the degree of ability it takes to run it—and well run, the greater its measure of success.

5. Authority Versus Management

Merely having a management, moreover, a head office with general manager or a crew of officials, is in itself of no importance unless they go through the complete managing process of understanding, of ingenious devising and effective persuasion. This analysis throws into its own insignificant position the mere giving of orders, or the making or enforcing of rules. Laws and rules, I say, are devices—tools which can be effectively or ineffectively constructed, effectively or ineffectively used. Attempting to manage without rules is doing by hand what might be better done by machine; attempting to manage entirely through rules—to let rules manage for you—is to overmechanize and to suffer from rigidity and from oppressive psychological fixed charges. If any form of analysis can make American management see that rules have no virtue in and of themselves, and that on the other hand to do without them is boneheadedly to refuse mechanical assistance, such an analysis will be deeply worth-while. It should make us see the true distinction between rules and *cases* and realize that one man's rules are another man's cases.

This analysis also would make us see more clearly that "authority" is no living part of managing at all, but a tool or device which managing uses. In the ordinary day's work *having* authority is too likely to be glorified into a matter of importance, whereas *using* authority is the only real matter of importance. In a similar way we usually miscalculate the function of "responsibility," it being strictly speaking in the nature of an incentive; and like other incentives it must be correctly calculated to its end and used with great skill. "To hold a man responsible for results" is nothing more than a form of words and a very harmful form of words at that, unless he who "holds" is accurately and specifically acquainted with what "results" should be—in other words, with proper standards of performance. With still more radical effect