business is largely of a semi-automatic nature, and compared with the output but few employees are necessary. Of the remaining 84 per cent of clerks, about 16 per cent are employed on the clerical work of handling orders, 18 per cent on financial and administrative control, and the remaining 50 per cent on activities connected with advertising, sales promotion and sales.

In another plant there are one hundred clerks, 30 per cent of whom are connected with the works management, the ratio of such clerks to employees in the works being about one to twenty. Of the other 70 per cent, 15 per cent are used on the handling of orders, the same percentage on financial and administrative control, and 40 per cent in sales and sales promotion. This also is a scientifically managed plant.

In still another concern, not scientifically managed, there are ninety clerks of whom 10 per cent are connected with the works management, a ratio of about one clerk to forty employees in the works, observation of which shows that more clerks could be employed in this department to advantage. Of the remaining 90 per cent, 20 per cent handle the orders, 10 per cent the financial and administrative control, while 60 per cent are devoted to the advertising, sales promotion and sales.

In my opinion, however, the sudden growth of clerical help is not necessarily due altogether to new uses that have been discovered for clerks, but rather to the incontestable fact that the office is at present the most poorly controlled function of business. Practically all the attention of the really capable executives in most organizations is devoted to production, finance or sales, and they have no time and little respect for the office. Nevertheless, statistics seem to suggest the startling possibility that this disregarded function, unless speedily brought under effective control, may ultimately devour the profits of all business.

In one of the examples above noted we discovered ten file clerks employed to file matter that could easily be filed by four well-trained clerks; indeed, it is questionable whether it is necessary to file all the material, for investigation showed that 25 per cent of it was of but temporary value. In another case, thirty-six stenographers were found who wrote a daily average of four letters each. And both these instances were in plants which were supposedly operated scientifically —where works operations were nearly perfect and enormous salaries were paid to managers of the sales and financial functions. The office manager was comparatively a low salaried and unimportant executive.

Though to some extent exceptional, these are not isolated examples—they can be duplicated many times. There is unquestionably a very large wastage of human productivity in the office.

Mechanical equipment and systems have been developed to a very high degree in the office, but control, even in the best of them, is lamentably inferior to that in other functions of business. Because of this lack of control, we are rapidly developing a group of "workers" in business who quickly become dissatisfied with any job which requires them to give close and sustained application to the work for more than two or three hours a day.

As proof of my assertion of the almost complete lack of control, let each office manager attempt to answer for himself the following three fundamental questions:

1. How many clerical operations are there to perform in my office?
2. How many clerical hours does it take to do the work that there is to be done?
3. How many hours should it take?

My experience tells me that not one in a hundred office managers can answer these three questions. Yet all will agree that control is impossible until they can be answered.

Today, with nearly three million clerks, we have a group that is far larger than any other single occupation. It is larger than the railroad and coal mining groups combined. And as we regard this vast host that assembles weekly for its pay envelopes, do they not suggest something of the lilies that "toil not, neither do they spin, yet Solomon in all his glory was not arrayed"—in white collars, silk stockings or furs?

At the famous railroad hearings in 1910, Harrington Emerson made the statement that the railroads, because of lack of scientific methods of work and control, were wasting $1,000,000 daily. The clerical group in all industries probably receives $10,000,000 a day in salaries, and it is surely a conservative estimate that 20 per cent of this is waste; which leads to the conclusion that because of lack of scientific control of the clerical expenditure for the entire country, there is a daily waste of $2,000,000, all of which can be saved by the establishment of adequate control in the offices.

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[1]Leffingwell-Ream Company, New York.

Taylor the Creative Leader

A Review of Copley's "Frederick W. Taylor"[1] Which is a Critical Analysis of Taylor's Contribution to the Problem of Human Welfare

By OLIVER SHELDON

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THE HISTORY of the world is but the Biography of great men," said Carlyle. "For, as I take it, Universal History, the history of what man has accomplished in this world, is at bottom the history of the Great Men who have worked here." In that work of the world every man has his share, and more intriguing than any novel, more emboldening than any romance are the stories of the share which this man or that man has taken. "We cannot look, however imperfectly, upon a great man, without gaining something by him," continued Carlyle; and Frederick Taylor himself echoed the same thought,—"I think no book is more stimulating than the history of a devoted and successful life."

This thought of Frederick Taylor is mine as I read Frederick Taylor's own life.

I turn over the last pages of this book, and, as I read of that simple grave on a hill, above the Schuylkill River, I try to sieze upon my main impression. Through many pages I have followed the growth of a man and of a movement. I have seen childhood, youth and manhood; work and pleasure; difficulty and success; home life and public life, in the story of one man. I stand where this buoyant, restless, indomitable stream runs into the inscrutable sea, and I look back. I trace it from its source in Germantown. I see it widening and deepening as it flows through Midvale and Bethlehem and anon the pleasant greenery of Boxly, till it meets the incoming tide. I try to weld my chasing thoughts into some unifying impression, and it is this—that, in the intimacy which these pages have afforded me, I have been treading a pathway in the rare company of the man who hewed it out—a footpath broadening into a highway which leads on further than the lights of this mortal city of mine. I see a man building a road, and the road outstrips all sight. Some men are great, for the fruits of their work are spread for all the world to applaud. Frederick Taylor is great, for the fruits of his work have yet to be garnered. The potentiality of it all is what strikes me most. The greatness of a man is normally associated with the movement in which he played a leading part. Great as was Frederick Taylor, greater still is the movement of thought which he has inspired.

I have seen a purposeful and tenacious mind toiling, through the hard school of experiment and the clanging uproar of day-to-day living, towards a philosophy of which it was not yet aware; I have seen it boldly developing systems which gave that philosophy an actual, workable life; I have seen it pounce upon the various facets of that philosophy, as the light glinted from the stony surface of reality and revealed a principle; I have seen each facet, each principle fitted into its place, like the pieces of a mosaic pavement—and the philosophy is greater even than the thought of him who pieced the stones together. As the philosophy of Rousseau, in the body politic, was greater than Rousseau, so is the philosophy of Taylor, in the body industrial, greater than Taylor. It is, indeed, the privilege of great men, the pioneers and builders of human thought and progress, to be immersed in the movements which they have originated or furthered.

It is well, however, that we should, from time to time, fight our way back to the original work and constructive effort of those who have done outstanding service in any field of progress, that we may know and admire the source of that which we inherit. For, if a great movement is greater than the life of any who served it, yet does such a life inform the movement with something tangible, and bring it within the compass of every day affairs. No great movement but has its great men, and in their lives are hidden

[1]Harper & Brothers: New York, 1923; 2 vols., $10. This is the first of three reviews which will appear in the *Bulletin*. The others will be by Charles de Freminville, an eminent French Engineer, and Irving Fisher, an eminent American economist.

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