There can be no controversy concerning the fundamental importance of keeping men on machines fully employed as far as is practical. The achievement in this direction is, as Mr. Lewis admits, due not to any particular application of scientific management but to the fact that as a matter of national policy a restricted immigration law became effective. Restricted immigration has forced management unquestionably to consider more vitally the question of conservation of human resources and has unquestionably been a factor in stimulating the use of improved types of labor-saving machinery.

Summing up, Mr. Lewis' paper, although giving an excellent group of objectives for scientific management, falls far short of being a general platform of American industry. He has written too much from the standpoint of scientific management as a panacea for most of our industrial ills. Certainly scientific management has not been responsible for all of the prosperity. Scientific management has not yet "come of age." It has made immense contributions to American industry. It is continuing to make them. It has gained experience and through that experience it has modified to quite a considerable extent its original conception. Its original conception of "mechanistic absolutism" gave rise to a conflict which necessitated a much more liberal recognition of human values.

The paper discounts to too great an extent the influence of such factors as the abundance of raw materials available in this country; the tremendous domestic consuming market; the change from a debtor to a creditor nation; large reserves of money available; contributions made by our technical institutions through research; training of competent technicians; the effect of a high protective tariff; and other fundamental factors of a similar character.

It may seem presumptuous to propose a number of planks for a program of American industry. Some suggestions, however, are offered to cover American industry as a whole rather than one phase of it—scientific management. The following planks of such a platform are suggested for consideration:

1. Liberal endowment and support by industry of technical education and research.
2. Promotion of economic research to secure basic information on fundamental economic changes, their causes and effects, through an organization having continuity of existence, financially underwritten on a long-time basis with a crew of trained investigators working under the direction of an advisory board, made up of representative leaders of all interests involved.
3. Promotion of scientific management to secure precision of measurement, synchronizing of materials and processes of manufacture; development of the best technique in organization and control.
4. Co-operation with labor. The recognition of the right of organization of both employers and employes.
5. Continued restriction of immigration.
6. Revision of Sherman Anti-trust legislation consistent with modern economic development, toward consolidations and maintenance of price levels to avoid violent fluctuations.
7. National program for the conservation of raw resources including coal, timber, oil and others.
8. Constructive, co-operative relationship with foregin nations.
9. Continued promotion and development of the Federal Reserve System to insure financial stability.
10. Continued and further development of a program for simplification and standardization and elimination of waste.
11. Consolidation of railroads and integration with water transportation to effect economies in transportation.
12. Comprehensive public policy in development of water power and supplemental steam power.

The above is by no means a complete program. It is merely suggestive. It would be a great contribution if the Taylor Society could draft a program for American industry and show clearly where scientific management fits into such a program.

Mary B. Gilson.[5] Mr. Lewis says that in spite of increase of output in the fields of agriculture, manufacture and transportation "little if any unemployment has resulted." Unfortunately, there are no adequate statistics of unemployment in the United States, but there are signs at present pointing toward its increase.

In a confidential statement recently issued by a large industrial corporation, it is noted that a

[5]Industrial Relations Counselors Inc., New York.

surplus of labor is available in most sections where their plants are located and that in some places the increasing number of unemployed presents a real problem. Certainly coal mines in general have a large unemployed surplus. The steel industry is operating with reduced forces or on short time. Railroads are not projecting any increased requirements. The automobile manufacturers, other than Ford, cannot look for any great increase in the demand for men. Furthermore, the shift in type of building activity away from dwelling construction calls for fewer workers. The Federal Reserve Board reports that 11.1 per cent fewer people are employed in the chief manufacturing industries in the United States, which now require 450,000 less workers, than in 1923. Whether these workers will be absorbed by new industries remains to be seen, but certainly the employment agencies are reporting increasing difficulties in placing an increasing number of applicants. The State Industrial Commission reports that the number of employers applying for workers in the state of New York has steadily declined from February, 1927, in comparison with the corresponding period of last year, until in July, 1927, there was a decline of almost forty-two per cent as compared with July, 1926. The Commission also reports a steady decline in the number of persons placed during this period, until in July, 1927, over forty per cent fewer workers were placed than in July, 1926.

May I suggest that the use of cover-all averages is likely, too, to give us too good an opinion of ourselves? Mr. Lewis says that between 1919 and 1923 the output per worker in factories increased about twenty-four per cent and between 1923 and 1925 it increased again about eleven per cent. Statistics compiled by the Bureau of Labor Statistics show that in the boot and shoe industry the increase in production per capita in 1925, over 1914, was only six per cent. The significant thing is that in 1921, production per capita in this industry was sixteen per cent higher than in 1919, dropping during the subsequent years.

Also, while it is true that production per capita in leather and tanning was, in 1925, twenty-six per cent higher than in 1914, yet in 1923 it was as much as thirty-four per cent higher, declining to twenty-six per cent during the next two years. Other examples might be cited to show that production per capita has shown a downward tendency in some industries during the last few years, in comparison with the years just preceding. It might be mentioned also that there is in general a low level of wages in the consumption industries manufacturing necessities, and averages of wages, therefore, are not a true picture of the wages of large numbers of our workers. It is unfortunate that we have no adequate statistics for the cotton and woolen industries, nor are there any statistics which would give us even approximately adequate data concerning small plants. In fact, if the automotive, auto tire and petroleum industries were omitted from the cover-all wage averages Mr. Lewis quotes, they would be reduced by about one-half.

I have been interested in Mr. Silcox's views concerning the antagonism of the interests of workers and employers and his acceptance of the theory of ineradicable belligerence and struggle for power. While I am not sufficiently optimistic to hope that this belligerence can ever be wholly eliminated I believe it can be very materially reduced. But, to reduce it our basic philosophy must be right. If ever we needed what Frederick Taylor so aptly termed a "mental revolution" it is on the subjects of wages and hours. It is true, as someone has said today, that wages are a matter of science and management and technique and not merely a matter of exhortation, yet we must acknowledge that the most elaborate structure of science and technique must rest on an ethical foundation. And the first important step in laying this foundation is to operate on our superiority psychoses.

We have in truth progressed a long distance beyond the philosophy of the mercantilist period when, although the laboring class was considered of supreme importance as a national asset, it was considered defensible to reduce the share of the worker in the general wealth of the nation to the lowest possible terms. To maintain the laborer in his position as burden bearer of society, every attempt was made to exclude him from all avenues of social advancement and to order his life for the benefit of the state. True, the mercantilist stressed the importance of steady employment, but his fear that the "lower orders of society" might become depraved and therefore of little value to the state unless they worked long hours at low wages, was his chief concern, and he seemed to have no idea of improving the status of laborers as a sound means of improving national prosperity. To be