

TABLE 1
DISTRIBUTION OF MEN BY PLANTS AND BY THE
METHOD OF PAYMENT

PLANT No.	TIME	PIECE	BONUS	TOTAL
3	1			1
4	14		31	45
5	1	10		11
6	2	11		13
8	2			2
14	4		32	36
20	15	23		38
23			14	14
25	26	38		64
26	22		54	76
31	11			11
32			57	57
35	12	196		208
36	3	10		13
37	13		33	46
44	11		45	56
46		58		58
49	21		31	52
53	5	5		10
54	28	16		44
55	2		31	33
56	35			35
57	1		10	11
63	21	116		137
208	8			8
209		1		1
211	4		28	32
227	31			31
323	2			2
347	1	7		8
400	9			9
475	10			10
477	1	4		5
529	5			5
570	11		1	12
604	1			1
646	4			4
674		2		2
710			17	17
717	2			2
765	25			25
773	16	182		198
815		13		13
TOTAL	380	749	327	1456

piece and bonus earnings tend to occur in an ascending order is a conclusion which is supported by a more detailed analysis of the present data and also for occupations other than those here considered.

What may account for these differences in earnings is a logical question but unfortunately there

TABLE 2
DISTRIBUTION OF MEN IN SPECIFIED OCCUPATIONS
BY METHOD OF PAYMENT

	TIME	PIECE	BONUS	TOTAL
Drill Press Operating	59	142	44	245
Milling Machine Operating	46	124	37	207
Planer Operating	23	16	19	58
Turret Lathe Operating	24	53	48	125
Screw Machine Operating	58	150	52	260
Engine Lathe Operating	148	161	103	412
Boring Mill Operating	22	103	24	149
TOTAL	380	749	327	1,456

TABLE 3
AVERAGE HOURLY AND AVERAGE WEEKLY EARNINGS BY
METHOD OF PAYMENT FOR SPECIFIED OCCUPATIONS

SECTION A AVERAGE HOURLY EARNINGS			
	TIME	PIECE	BONUS
Drill Press Operating	59.2	64.2	68.0
Milling Machine Operating	63.7	67.5	83.3
Planer Operating	66.3	71.2	78.0
Turret Lathe Operating	66.2	70.9	75.9
Screw Machine Operating	64.3	72.1	80.0
Engine Lathe Operating	66.0	76.1	81.0
Boring Mill Operating	70.9	71.9	85.6
COMBINED OCCUPATIONS	64.7	70.6	78.7
SECTION B AVERAGE FULL TIME WEEKLY EARNINGS			
	TIME	PIECE	BONUS
Drill Press Operating	29.42	31.52	35.29
Milling Machine Operating	32.30	32.60	43.15
Planer Operating	35.07	37.45	40.25
Turret Lathe Operating	34.23	37.15	38.18
Screw Machine Operating	31.12	34.75	42.32
Engine Lathe Operating	33.46	40.79	41.31
Boring Mill Operating	37.29	38.61	44.43
COMBINED OCCUPATIONS	32.67	35.79	40.53

is as yet no satisfactory answer to it. That time earnings are lower than piece and bonus earnings is perhaps less surprising than that there is a persistent difference between piece and bonus earnings. And yet some employers have declared very emphatically that different methods of payment are merely different routes to the same ends; that wages are about the same under any method of payment. To such individuals all the findings here presented are contrary to their expectations. But to other individuals the more unusual feature is the difference between piece and bonus earnings.

In the absence of information which accounts for these differences some speculation may be warranted. In the first place it is conceivable that

the ability of workers may tend to vary, at least in certain occupations, with the method of payment employed. This might be the case if one method of payment is better suited for some kinds of work where one grade of labor is used than for another kind of work involving a different grade of labor, or it might be the case because of circumstances surrounding the method of payment itself. Since bonus earnings tend to be higher and since they are, in the aggregate, about 20 per cent above time earnings, it is interesting to notice that a rather recent experiment among operators of taffy machines in England shows a difference of about 20 per cent in the ability of workers. While this similarity proves nothing it is suggestive in that it causes one to wonder whether there may be a tendency to about 20 per cent difference in ability within a given group. If so, then one may wonder whether, in the selected machine tool occupations, the best grade of workers may be attracted by and receive earnings proportionate to their ability under bonus plans even though the technical features of these plans vary. This is, of course, very loose reasoning and can be thought of as nothing but suggestive.

It is also conceivable that there may be differences in the effectiveness of the wage plans in

Wyatt, S., "Machine Speeds and Output," *Industrial Psychology*, October, 1927.

INDUSTRY does not affect wage-earners merely as persons possessing labor which they dispose of on a basis of time, skill, and energy. For most men and women, the conditions which surround industry, and the output of industry, represent all that is possible for them in the way of health, happiness, and life itself. Both as consumers and producers, they are affected by all that affects production. Their position, industrially, touches at some point, and usually more than touches, is indeed interwoven with, every relationship of their lives. It is as members of com-

stimulating the efficiency of workers even when the workers have approximately the same grade of native ability. This might arise out of the fact that despite variations in technical features of bonus plans there appears to be in general more careful attention given by management to establishing standards and rates for bonus than for piece work.

It is well to remember that the foregoing analysis rests on actual earnings and actual working time in a period of one week. There is a possibility that such a period is too short to obtain a representative sample of earnings under bonus methods of payment. While there is evidence of this difficulty arising in particular cases there is no indication that such instances are numerous.

Whatever the reasons may be for these differences in earnings the fact remains that judged by the present study the differences appear to be very deeply rooted. Because of this entrenchment there is abundant reason for giving attention to the methods of wage payment in making market comparisons.

While these findings pertain to a local situation the analysis has been made in one of the large markets of the metal industry and nearly all the leading metal manufacturing establishments in that market contributed data. Consequently there is reason to suspect that the conditions shown in this market may be found in other markets also.

munities that the workers experience the pressure of economic conditions. As the community circle widens, the sum of influences affecting the well-being of its members is increased. As the circle of industrial relations widens, the sensitiveness of the inter-relationship between industry and the community is correspondingly increased. As both expand beyond the radius of local and national bounds, and become increasingly cosmopolitan in character and scope, world influences hitherto unknown come into play. (W. L. Mackenzie King, *Industry and Humanity*, pp. 30-31.)