THE EMANCIPATORY SIGNIFICANCE OF TAYLORISM

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Taylorism, we are told, is essentially alienating. This paper argues the opposite thesis. I submit that Taylorism represents a fundamentally emancipatory philosophy of job design. Since Taylorism continues to exert enormous influence in the practice of job design — as witnessed by current enthusiasm for Total Quality Management, ISO9000, and a host of management techniques for bringing greater discipline to manufacturing, clerical and professional work — this debate matters.

By Taylorism, I refer to a pattern in job design practice and theory that privileges short repetitive work cycles, detailed prescribed task sequences, and a separation of conception from execution. What I will call the "standard critique" sees such job designs as essentially alienating and thus engendering low levels of motivation and commitment. Under the view expressed in this critique, enlightened job design must break with the heritage of Taylorism in order to augment worker motivation and commitment by vertical job enrichment and horizontal job enlargement.

Auto assembly has been the locus classicus of Taylorist job design. In my research on one auto assembly plant, the NUMMI plant in Fremont California, I found a job design that was fundamentally Taylorist: work cycles on the assembly line were around 60 seconds, the worker's sequence of gestures was prescribed in great detail, and the worker had very little autonomy in deciding that task sequence or its pace of execution. But I also found that workers at NUMMI evidenced relatively high levels of motivation and job commitment (see Adler 1993 for supporting evidence). The NUMMI case presents the additional interest that most of its workers had previously worked at the same facility when it was a GM plant, and that when NUMMI was formed as a joint venture of GM and Toyota, the new company's day-to-day operations were put under Toyota's control.

While the apparent contradiction between the standard critique and my findings at NUMMI can arguably be resolved by reference to any number of idiosyncratic factors, I argue that it also reflects two fundamental flaws in the standard view. This standard view makes two psychological assumptions that I will contest in turn, namely that work is truly motivating only to the extent that (a) it resembles free play and (b) it is largely autonomous. Tied to a norm of free play, the standard critique imputes to workers an infantile psychology incapable of delayed gratification. And tied to a norm of autonomy, it imputes a similarly underdeveloped and one-sided individualism.

Beyond free play

The standard critique of Taylorism begins with the contrast of extrinsic and intrinsic motivation. Starting with those polar opposites, it argues that Tayloristic job

designs void work of its intrinsic motivating potential, leaving only the possibility of an instrumental attitude to work.

This polarization of intrinsic and extrinsic motivation ignores the spectrum of intermediate possibilities. Ryan and Connell (1989) argue theoretically and show empirically that the bases of motivation can be arrayed along a spectrum from external, to introjection, to identification, to intrinsic (see Exhibit 1: the examples come from their study of students' motivation to work hard at school). The standard critique implicitly adopts as its norm the fourth position on this spectrum: work will only be truly motivating when the basis of motivation is the intrinsic fun it provides. By contrast, I submit that job design at NUMMI taps into the third basis of motivation -- identification -- a form which relies on the process of internalization by which values concerning goals and appropriate means are absorbed and adopted.

[insert Exhibit 1 about here]

I see three factors at NUMMI supporting this identification, factors that engender three sources of motivation hidden from the view by a norm of free play:
• first, the desire for excellence, the instinct of craftsmanship, the desire to do a job well done;
• second, the recognition by psychologically mature workers of what Freud called the "reality principle";
• and finally, the respect and trust that management showed workers -- behavior that elicited a reciprocal commitment from workers.

The first motivating factor, the desire for excellence, is visible in the following comment from one of the workers I interviewed:

The great thing about standardized work [NUMMI's job design system] is that if everyone is doing the job the same way, and we run into a problem, say a quality problem, we can easily identify where its coming from and fix it. If everyone is doing the job however they feel like, you can't even begin any serious problem-solving. [...] Before, when I saw a Chevy truck I'd chuckle to myself and think, "You deserve that piece of crap if you were stupid enough to buy one." I was ashamed to say that I worked at the Fremont plant. But when I was down at the Monterey Aquarium a few weekends ago, I left my business card – the grunts even have business cards! – on the windshield of a parked Nova with a note that said "I helped build this one." I never felt pride in my job before.

If Tayloristic detailed procedures and short cycles are seen by workers as helping them become more effective in their jobs, this enhanced sense of competence can be a powerful source of motivation. This argument was advanced long ago by Morse and Lorsch (1970) in their critique of McGregor's Theory Y. The underlying mechanism could be related to Bandura's concept of self-efficacy (1977), although his formulations focus on the subjective feeling of self-efficacy rather than on the objective fact of enhanced competence. The argument could also be related to McCelland's (1953) concept of "need for achievement." but McClelland too sees this (and other needs) as dispositional features, whereas the NUMMI case shows that workers who evidenced very little need for achievement (nor much of any "growth needs strength") at GM-Fremont could, once in the NUMMI context, reveal quite different orientations.

The second source of motivation that emerges from the interviews is related to what Freud (1911) called the "reality principle." It is the maturing child's acceptance of the conflict of the reality principle with the pleasure principle that allows the child to delay gratification. This is not the place to engage the increasingly vitriolic debate on the value of Freudian theory; an equivalent story can be told using Ryan and Connell's distinction between identification and intrinsic bases of motivation. However, NUMMI workers' grasp of something like the reality principle – and the corresponding strength of identification as a basis of motivation -- seem to expressed in comments such as this:

> Standardized work does mean that we work a bit harder and we have more responsibility. A lot of people were used to sitting down and reading the newspaper between jobs. But we're competing with people around the world now, and a lot of them are hard-working people. So now we have to earn our money the old-fashioned way.

I conclude from comments such as these that we cannot assume that workers are so captive of the pleasure principle that high levels of motivation must come from the immediate pleasure of intrinsically meaningful work. The evidence suggests that at least some of NUMMI workers were powerfully motivated by the simple recognition that they would now have to "earn their money the old fashioned way." While I do not doubt that NUMMI workers' motivation level could have been even higher had it been possible to redesign their work to make it intrinsically motivating, they appear to have been psychologically mature enough to maintain a high level of commitment to the production system that they thought was more compatible with the demands of the market for high quality and low cost products.

My interviews also suggest a third powerful motivating factor. The respect and trust that management showed workers in NUMMI's ongoing operations elicited a powerful reciprocal "gift exchange" response. Jacobson (1986, pp. 68-69) describes how management's responsiveness to workers' requests for things like gloves and mats led spontaneously to efforts by workers to respond to management's concerns.

The motivational effect of management trust and respect for workers takes us back to the old Human Relations tradition in organizational behavior research and the "Hawthorne effect" (Roethlisberger and Dickson, 1939). It is a tradition largely ignored by theorists today, but the NUMMI case suggests that some of its central constructs may nevertheless be very powerful elements of motivation. Neo-marxists have castigated this tradition for its assumption of goal congruence. But workers at NUMMI appear to assume that their goals and management's are sometime congruent and sometimes not. Whether we interpret workers' actions as motivated by affective trust or by calculative trust, workers respond to management actions that indicate commitment to workers' interests with reciprocating actions that indicate their own commitment to a job well done.

Beyond Autonomy

A second, closely related, and equally problematic feature of the standard critique of Taylorism lies, I believe, in the importance it attaches to autonomy. Whether it is individual autonomy or the autonomy of the workgroup, the ability of the lowest levels to choose their own methods and pace of work is conventionally seen as crucial for sustaining high levels of motivation and involvement.

My interviews at NUMMI, however, suggest that autonomy is not a critical motivating characteristic of jobs. On the assembly line, there is obviously very little scope for individual autonomy, and NUMMI's "team concept" offered little of the group autonomy that characterizes many work-redesign efforts (Hackman and Oldham, 1980). Teams at NUMMI were tightly coupled with teams upstream and downstream through the just-in-time kanban system; their work methods were determined by a broad-scale effort involving workers, managers and engineering specialists; and these methods were tightly coupled with those used by the corresponding team on other shift.

Yet the fact that this tight interdependence was seen by workers as the most effective way of managing operations seemed to ensure its endorsement. As another worker said:

> The work teams at NUMMI aren't like the autonomous teams you read about in other plants. Here, we're not autonomous, because we're all tied together really tightly. But it's not like we're just getting squeezed to work harder, because it's us, the workers, that are making the whole thing work -- we're the ones that make the standardized work and the kaizen suggestions. We run the plant -- and if it's not running right, we stop it.

This suggests that when workers can establish a feeling of organization-wide responsibility for the effectiveness of their work, they will accept sacrifices of individual autonomy and of work-group autonomy. As long as these sacrifices are seen as effective ways to accomplish necessarily interdependent tasks, low individual and workgroup autonomy can coexist with high motivation.

If we push this analysis a step further, two lines of reasoning and future research seem indicated. First, one could hypothesize that it is the notion of autonomy that leads us astray. Autonomy is the absence of external constraint; but the more important factor behind motivation and satisfaction might be the obverse -- self-efficacy (Bandura, 1977), or the power to accomplish significant objectives (Sutton and Kahn, 1987). When a job design -- even though it may not be intrinsically very motivating by the standard criteria such as those proposed by Hackman and Oldham (1980) -- fits well the nature of the task, workers will feel empowered in a productive -- as distinct from a socio-political -- sense, and this productive empowerment is a real source of satisfaction and motivation. This argument echoes those made in the previous section. It is only when managers impose an authority perceived by workers as arbitrary and unjustified by common interests that autonomy from such domination appears as an important and desirable feature of work.

The second line of reasoning might be to transform rather than abandon the notion of autonomy. The focus to date has been on individual autonomy and the autonomy of small teams. One might attempt to conceptualize the NUMMI experience as an experiment in plant-wide autonomy: as Holman expressed in a comment quoted earlier, "We run the plant –- and if it's not working right, we stop it." It could be argued that the NUMMI system only worked to the extent that the entire work force as a collective actor took charge of production.

The conjunction of these two lines of reasoning evokes a concept that might help us break more definitively with the romance of autonomy: Marx's notion of the socialization of production. In the Communist Manifesto of 1888, Marx and Engels wrote:

The bourgeoisie, historically, has played a most revolutionary part. The bourgeoisie, wherever it has got the upper hand, has put an end to all feudal, patriarchal, idyllic relations [...] In place of the old local and national seclusion and self-sufficiency we have intercourse in every direction, universal interdependence.

Indeed, it sounds like something remarkably consistent with this hypothesized vector of development that we hear in the voice of this worker:

In 23 years working for GM-Fremont, I never met with a supplier. I never even knew their names except for the names on the boxes. Now we're working with suppliers to improve our products. Workers sit down with our engineers and managers and the suppliers' people and we analyze defects and develop improvement proposals. We even do that with equipment vendors. Stuff like that really gives us a better perspective on how our jobs relate to the whole process. We're not just drilling holes and slamming nuts onto bolts anymore.

And it sounds a lot like support for Marx's hypothesis that this objective socialization of production should have profound effects on workers' consciousness when a worker explains:

I wish you could talk to the guys' wives about the changes they've seen. I was a typical macho horse's ass when I worked at GM-Fremont. When I got home, I'd get a beer, put my feet up and wait for dinner to be served. I'd figure, 'I've done my eight [hours], so just leave me alone.' Now, I'm part of a team at work, and I take that attitude home with me, rather than dump my work frustrations all over my family. I'm much more of a partner around the house. I help wash the dishes and do the shopping and stuff. My job here is to care, and I spend eight hours a day doing that job, so it's kind of natural that I take it home with me.

And finally, it sounds a lot like Marx's hypothesis that this socialization of production would tend to undermine and obsolete capitalist relations of production when we hear a worker say:

The GM system [in the old GM-Fremont plant] relied on authority. People with rank — the managers — ruled regardless of their competence or the validity of what they were saying. It was basically a military hierarchy. At NUMMI, rank doesn't mean a damn thing — standardized work means that we all work out the objectively best way to do the job, and everyone does it that way. I might make some minor adjustments because of my height, for example, but I follow the procedure we've laid out because it makes sense.

Conclusion

In this short article, I have sought to point out some of the more problematic aspects of the standard critique of Taylorism. I have focused on aspects that figure in widely -- though certainly not universally -- accepted psychological theories of motivation. There are, of course, other components of the standard critique, more sociological and technical. Analysis of these other components must await another forum; but I believe that all three interrelated critiques, psychological, sociological and technical, are one-sided and therefore misguided. In a nutshell, I think they all miss the profoundly empancipatory import of Taylorism as a step forward for humanity's capacity to manage large-scale complex organizations.

REFERENCES

Adler, P.S., "The Learning Bureaucracy: New United Motors Manufacturing, Inc." in Barry M. Staw and Larry L. Cummings (eds.) <u>Research in Organizational Behavior</u>, vol. 15, Greenwich, CT: JAI Press, 1993, pp. 111-194.

Bandura, A. "Self-efficacy: Toward a Unifying Theory of Behavioral Change" <u>Psychology Review</u>, 54, 1977, pp.191-215.

Freud, S., <u>Formulations on the Two Principles of Mental Functioning</u>, Standard Edition, Vol. 12, London: Hogarth Press, 1958 (1911).

Hackman, J. R. and Oldham, G.R. <u>Work Redesign</u>, Reading MA: Addison-Wesley, 1980.

Jacobson, E.K., <u>NUMMI: A Model in Human Relations</u>, BSIE thesis, General Motors Engineering and Management Institute, 1986.

Marx, K. and F. Engels, "The Communist Manifesto," in <u>Marx and Engels Basic Writings on Politics and Philosophy,</u> edited by L. S. Feuer, Garden City: Doubleday, 1959, pp. 1-41.

McCelland, D.C., Atkinson, J.W., Clark, R.A., and Lowell, E.L.,<u> The Achievement Motive</u>, New York: Appleton-Century-Crofts, 1953

Morse, J.J. and Lorsch, J.W., "Beyond Theory Y," <u>Harvard Business Review</u>, May-June 1970, pp. 61-68.

Roethlisberger, F.J. and Dickson, W.J., <u>Management and the Worker</u>, Cambridge, Mass.: Harvard University Press, 1939.

Sutton, R.I. and Kahn, R.L. "Prediction, understanding and control as antidotes to organizational stress," in J.W. Lorsch (ed.), <u>Handbook of Organizational Behavior</u>, Engelwood Cliffs NJ: Prentice-Hall, 1987, pp. 272-285.

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Exhibit 1:
Four bases of motivation

EXTERNAL	INTROJECTION	IDENTIFICATION	INTRINSIC
• following rules • avoidance of punishment	• self- and other-approval • avoidance of disapproval	• self-valued goal • personal importance	• enjoyment • fun
• because I'll get into trouble if I don't • because that's what I'm supposed to do • so the teacher won't yell at me • because that's the rule • so others won't get mad at me	• because I want the teacher to think I'm a good student • because I'll feel bad about myself if I don't • because I'll feel ashamed of myself if I don't • because I want other students to think I'm smart • because it bothers me when I don't • because I want people to like me	• because I want to understand the subject • because I want to learn new things • to find out if I'm right or wrong • because I think it's important to • because I wouldn't want to do that (negative behavior)	• because it's fun • because I enjoy it

[Adapted from: R.M. Ryan and J.P. Connell, "Perceived Locus of Causality and Internalization," J. of Personality and Social Psychology, 57, 5, 1989: 749-761]