Per-Ola Börnfelt: Change competence on the shop floor. Continuous change work in the border-land between lean production and socio-technical work organisation.

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## Abstract

One trend in today's manufacturing industry, partly influenced by lean production, is that employees are expected to involve themselves in different forms of improvement work related to the production system. Therefore employees need to develop change competence, which can be an advantage, not only to the company but also for the employees themselves. The direct work in lean production is however repetitive and monotonous without control for the worker. There is thus a contradiction between work that is de-motivating on one hand and expecting employees to take initiative, and solve problems on the other hand.

Aim of the study: To study under what circumstances work groups in the manufacturing industry develop change competence and what circumstances lead to the opposite i.e. passivity.

Questions:

1. Do workers in work groups develop competence to change their workplace and in that case how advanced is the competence?

2. How has the competence been constructed or been hindered to develop?

Case studies in three companies have been conducted using a action theoretical approach. The employees are acting in an environment – the organisation. The environment sets limits to the workers' range of discretion. Methods used are observations, informal conversations with employees, shadowing and interviews.

Six different levels are identified: 1) final passivity, 2) resistance competence, change competence on a: 3) reactive level, 4) rule based pro-active level – structured by systems of rules, 5) goal oriented pro-active level – based on the workers' own goals or company goals e.g. to make work easier or to improve quality, 6) double loop level – change of the organisation's or the group's norms, policies or goals.

One form of final passivity is based on the workers' understanding of work as monotonous and without meaning. Another form is based on workers' understanding of unfair treatment. In both cases the passivity is an intentional and knowledgeable reply.

Resistance competence is based on the driving force to resist changes that result in

negative consequences for the group.

There are gains in change competence on all levels when workers understand their work as meaningful, are content with their work situation, and consider themselves treated fairly. There are several prerequisites for change competence in the work environment: possibilities for decision-making, a reasonably complex work content, and possibilities for creating mental models of e.g. the production system. These are features of the sociotechnical work organisation. Two of the cases are characterised by such work content. These two companies also have a control system influenced by lean production but these control techniques have little effect. They also have lean production structures for improvement work, which limit the workers' range of discretion and in many cases delimit changes to the rule based level. At the same time these structures facilitate change work by decreasing uncertainty. Change competence on the double loop level, on the other hand, probably requires work with a considerable range of discretion, high complexity, and possibilities for developing advanced mental levels. In the three companies in this study there are limits in the latter, combined with delimiting structures, which result in the teams not reaching the double loop level.