Anders Edvik   Anders.edvik@ts.mah.se
Peter Parker   Peter.parker@ts.mah.se
Malmö university

Sensemaking and teamwork- understanding the relationship between management discourse and work practice

Paper prepared for IWOT 11, September 10-11, 2007, Lyngby, Denmark

Abstract

We have studied an organizational change in a medium sized factory in Sweden (about 120 employees). The overall purpose of this change was to create an organizational climate/culture in which the employees were to take an active interest in the daily work and to develop a larger extent of responsibility (such as planning the manufacturing orders).

The reason for these changes was an experienced need for increased capacity of production, increased rates of effectiveness and productivity. This organizational development is vital for the factory because there have been few technical investments during the last few years and there is also an estimated overcapacity totally in production among the plants Sweden. Factory management in active cooperation with the local union decided that improvements could be achieved by organizing work in teams and by developing a new organizational climate/culture. These changes were felt to be integral in securing the plant and jobs in a long term perspective.

Our interpretation of the situation in the factory is based on interviews made with team leaders (about 25 persons), union leaders, managers and other personnel. Findings indicate that the meaning and understanding of work have negatively changed instead of the opposite. Instead of experiencing increased responsibility and opportunities to plan the daily work, the employees felt a decreasing sense of competence since their jobs became less demanding and more routine. There is a sense of frustration both in management and among the workers as to how to bring about constructive change that increases both competence and competitiveness in the workplace.

This paper explores developments in the factory from a sensemaking perspective. We seek to develop an understanding of the factors shaping how teamwork is understood. An important finding of the study is that the meaning of work in teams is intimately intertwined with factory-wide processes of sensemaking. The character of production and different positions within the social system of the factory are important elements in shaping the meaning of work in teams and thus the performance of these teams.

Introduction

We know from previous research that teamwork varies in different organizations (Thompson & Wallace 1996). Furthermore teamwork initiatives are received in very different ways in different organizations Recent research on teamwork initiatives show that introducing teams may be difficult and that resulting interpretations of what teamwork entails vary extensively (Coupland *et al.* 2005; Knights & McCabe 2000; Vallas 2003a; Vallas 2003b). While this is the case there seems to be little research exploring the sensemaking processes that shape how work in teams comes to be understood in different organizations.

For the most part research using a sensemaking approach to teamwork has focused on process of interpretation in the teams, often in response to an acute situation. The present paper takes a somewhat different perspective in focusing on processes in a factory as a whole that shape understandings of teamwork. The paper is also concerned with relatively late processes in sensemaking and with the social mechanisms that determine selection and retention of different possible interpretations (Weick *et al.* 2005).

This exploratory case study of a medium sized factory in Sweden (about 120 employees) takes its starting point in an organizational change initiative involving the strengthening of team based organization. We seek to explain why the initiative despite the interest of both management and unions fails to achieve the desired outcome and also the variations in ways that teamwork is enacted in the factory. Thus our focus in this study has been to explore how the meaning of teamwork has been shaped in different parts of the factory. The situation in the factory provided an unusual opportunity to study how meaning was created in work and particularly evolving interpretations of teamwork since the participants themselves actively sought answers to similar questions.

The purpose of this study is to contribute to an understanding of sensemaking and identity processes in a factory setting and how these impact on the understanding and practice of work in teams. We seek to explain both the difficulties of the team initiative in the factory as a whole and also the variable success in implementation across different teams in the factory.

Method

The direction of our research has been to build a composite understanding of factory from many different perspectives and explore what factors shape work organization and particularly team organization.

This exploratory case study has been conducted using primarily qualitative methods. The authors jointly conducted this research over a period of three months in the spring of 2007. Generous access was given to materials and ample opportunity was provided to observe and interview. The authors spent some 15 days on site with many opportunities for exchanges with different teams and to take part in meetings and presentations. Our interpretation of the situation in the factory is based on interviews made with team coordinators (about 25 persons), union leaders, managers and other personnel. All in all more than 30 formal interviews were conducted. Interview materials and data were recorded separately by each of the authors and interpretations compared. The interview materials and observations were supplemented by a simple network questionnaire which served the purpose of exploring communication channels in and between teams.

Interviews started with management. We sought to understand their perspective on the organization as a whole, their priorities and to understand how they sought to communicate their vision of the organization to employees. Only thereafter did we begin to interview team coordinators in the factory in a systematic way. The interviews were semi-structured. We sought to explore how team coordinators understood their role and how they perceived joint problem solving on the team and factory levels. Preliminary findings in interviews with team coordinators were discussed with management and will be presented in the factory as whole.

Teamwork at SmK

The following is intended as a largely empirical description of teamwork in the factory context. It is structured in the following manner: first a brief overview of production and the organizational context is provided. This is followed by a more in depth discussion of particular aspects of production social process affecting how employees come to understand production as a whole and their role in it. The section ends with a brief description of uncertainty or ambiguous interpretations that indicate ongoing organizational sensemaking.

Production

The heart of production in the factory is the machine that runs the entire length of one wall. Nine people work in team on this machine to make corrugated board. The rest of the plant contains machines for printing, cutting and folding corrugated board into appropriate packaging. An automated trolley system enables the flow of material.

There is an extraordinary number of different ways in which material can pass through the plant depending on for instance on print quality requirements and specific packaging needs of the customer. However, the main flow of processes can be laid out as production of board, printing and cutting, folding and loading.

The main part of production is conducted in two day shifts; an early shift from 5am to 2pm and a late shift from 2pm to 11pm. The day shifts are rotated every two weeks such that they alternately do early or late work. Regular daytime hours from 8am to 5 pm also exist for certain support and management functions. Finally there is also a flexible night shift that runs when extra capacity is needed.

Each of the two day shifts is composed of approximately 50 persons and 6 main teams. Each day shift also has a full-time coordinator who work in close cooperation with the production manager and also provides a critical bridging function in relation to production teams and planning.

Production teams at SmK are responsible for a set of similar machines in the process of making different packaging solutions. Teams are thus made of persons with similar professional orientations rather than integrating highly different competencies.

The team takes on certain weekly production goals and has a certain leeway in how these goals are achieved. Each team has a coordinator but the role is rotated between different persons in a team on two-week cycles. The team coordinator has a responsibility to make sure that machines can be staffed and run in ways such that goals can be met.

The organizational context

Factory production at SmK has been organized in teams for more than 10 years. However, views on this organizational form, and the extent of implementation have varied over time. The current form of team organization came into being with the installation of a new management team five years ago. At this time the factory was notoriously ridden by strife and relations with corporate headquarters were strained. When new management was set in place its top priorities were to address these issues. A number of initiatives have been taken by management to reform relations in the factory and also to demonstrate for corporate headquarters the value a reformed organization in which workers feel they participate.

Several initiatives undertaken by the new management have been extraordinarily successful. For instance a drive has been going on to improve safety and health in the plant. This has been undertaken with very small investments and primarily in a concerted effort at awareness and a number of small improvements. The overall effect of these safety measures was so substantial that the plant was nominated for awards of most improved plant and best overall plant within the large international corporation to which they belong. The new management has also been highly successful in showing that improved relations in the plant enable increases in productivity if the capacity is needed. For instance the head of the plant challenged corporate headquarters in stating that they could produce 65 million square meters of annually of corrugated board using the same personnel and machines with which they currently produce 40 and would do so if corporate headquarters made sure that there was sufficient demand. Although corporate headquarters failed to deliver its side of the bargain, the plant showed it could achieve its part producing packaging at a rate corresponding to a potentially increased volume. These and other significant achievements in revitalizing production by using small means have been possible because of good relations in the plant. They are of interest because they demonstrate something of the ability of the factory to mobilize to achieve different factory wide aims.

In general management sets a large store on employees feeling a sense of involvement in work and taking on responsibility. The idea of a team based organization is seen as an important component in creating involvement and enabling development in the factory. The union, both on a national level and locally is supportive of this kind of organization as it seen as a means of widening job content and allowing for increased autonomy. In contrast to other initiatives in the factory however, attempts to strengthen a team based organization have met with only partial success. There is something about the team organization that seems to stump management and employees alike.

Changes in team organization

At the time the new management was instated the existing team organization had been deeply affected by technological change and specifically the introduction of more powerful enterprise management systems. New information systems made it possible to obtain immediate and accurate information on machine capacity utilization. This in turn provided a better foundation for central planning and simultaneously made one of the roles that team coordinators traditionally filled superfluous, namely bridging the situation on the floor and objectives of production planning. The increased availability of information shifted power in the organization toward planning.

The shift in communication brought about by IT also inadvertently caused increased separation groups in the factory. As planning becomes more centralized communication

between groups on the floor lessens simply because there is less need to coordinate on changes. As the role of team coordinators lessened so do the relevance of horizontal communication across teams. This has some adverse effects. Although team coordinators are able to take part of the overall situation in the factory via terminals at their machines there was less need to do so since they no longer had an active part in shaping it. These consequences of increasing IT support thus have implication the way people find meaning in their work. Although arguably these information systems provide much more effective dissemination of accurate information and concomitant benefits they have also changed the set of relations in the plant and the ways that work is understood.

IT systems naturally only supply certain kinds of information and in some teams there is a kind of resistance in relation to production planning which they claim takes too little of their knowledge into account.

Faced with a weakened teamwork organization management sought means of ensuring the best possible use of personnel and competence in these teams. A number of steps were taken to address the situation. A first step was to work out and set down in print basic roles and responsibilities of the team organization. At the same time an extensive effort was put into to formulating a common set of values at the plant. Emphasis was placed on values such as feeling a sense of responsibility in production and in relation to co-workers. A second step was to institute a role of shift coordinator. Each shift now also has a shift coordinator apart from the team coordinators. The shift coordinator is supposed to fill a kind of coaching role, helping the team coordinators fulfil their role. A third step was to pay greater attention to weekly production targets. These targets are reviewed by each team individually with the production manager on a weekly basis.

On the whole however, there is still a strong sense among team coordinators that teamwork is not what it should be. In several respects the situation has developed in a direction opposite that intended. Rather than create involvement and participatory development production seems in anything more fragmented. As one employee phrased her experience of being a team coordinator:

We used to keep track of the big picture, what had been delivered and what was in process [in the factory as a whole], *there was more involvement, now it's just dead.*

This sentiment is echoed in many but certainly not all interviews. There are also employees who find the situation changed for better in precisely the same dimensions

… the role of team coordinator is different now. It is about understanding the whole. It is about taking responsibility and making sure that information about production gets to my colleagues. It is about having tolerance and accepting colleagues, it takes all kinds. Some have a hard time understanding the big picture and that can create problems…it is better now than it used to be.

To understand why teamworking seems to meet limited success but also local variation between teams in the factory it is necessary to attend to aspects of how meaning is shaped in production practice and the local situation of different teams.

Repetitive interdependent work

The character or work in the plant varies somewhat depending on what machine is being worked and the particular product but for the most part there is an evident character of mass

production is dominant. In other words work is characterized by repetitive tasks and the challenge is to control variation in input to create a given output. Tasks are also, for the most part highly interdependent such that output from one team is input for the next in the flow of production. This kind of work affords advantages of specialization, that is, build up of skills in relation to a specific process.

Work in teams is dominated by a sense of professional skill. Individuals take pride in their ability to work the machines and generally feel a sense of accomplishment when they can keep things running smoothly despite varying inputs and complexity of outputs. In a sense, a really skilled machine operator is someone who rarely needs to work since problems are foreseen and minimized. The machine after all works best when it is running without human intervention. One team coordinator stated this quite clearly:

I: what characterizes good teamwork?
TC: when there is a flow in production, everything is running smoothly.
I: but it could be the other way around couldn't it. I mean your skill is really tested when there are problems, right?
TC: I have been at this for twenty years, believe me we still get new stuff all the time. There is no need of extra excitement.

This way of perceiving individual skill and team performance in work has some interesting consequences. It creates a strong incentive to eliminate visible standstill and foul-ups i.e 'keep it running'. It makes mistakes rather than learning visible. Moving from a machine that a person knows well to one that this person knows less well entails having to work more actively and visibly fouling things up more often. Thus there are certain incentives to go deeply in a particular role and less incentive to shift roles in the team or move between teams.

The repetitive character of work also has implications for how teamwork in other respects particularly for the notion of production targets. At SmK weekly production targets are set for each team and graphs of actual output in relation to targets are prominently displayed on each machine. Team performance is reviewed on a monthly basis in a meeting with the production manager. In practice however, team level goals are less important than they might seem to be. Even the production manager concedes that production targets exist mainly on the factory level and that these are difficult to break down adequately in terms of different machines and teams. It is not difficult to set relatively clear targets by reference to production plans but a team's results in relation to target will depend on a highly variable input beyond the control of the team. The quality of the team's output may also only be visible in the work of subsequent teams. Even when the team potentially has the resources needed to meet targets and relatively clearly defined notions of quality, the production planning itself remains more relevant than any targets derived from these plans. Few team coordinators expressed an understanding or interest of weekly production targets although certain teams had rules of thumb for what constitutes a good output. Output targets for teams are therefore somewhat illusory in the sense that other aspects of production logic remain more relevant.

The character of work makes an essential aspect of teamworking difficult. Firstly there is little opportunity and incentive for mobility or for constructive forward looking communication in that specialization provides rewards for the employee. Secondly, the team itself fails to become a really meaningful unit in production due to difficulties in breaking down overall production into meaningful targets. The factory as whole and planning for it remain more relevant units.

Collegiality

A particular aspect of what does provide meaning in work quickly became apparent in interviews even though we had not intended to explore this. Many interviewees brought up the sense of collegiality in the teams. It was also frequently claimed that despite problems they could always count on their colleagues to help out when needed. Nicknames are common in the factory and there are a number of activities that employees take part in with their colleagues outside work. Many employees live locally and have worked for many years in the plant. Having worked ten years at the plant could be considered a relatively short period. We asked each of the team coordinators what they wanted to be doing in five years time and the overwhelming majority stated that they preferred to be where they are. The reason for this was unrelated to challenging work content, or for that matter wages. Nonetheless the extent of collegial support and solidarity in different teams varied. Some team coordinators also discussed social problems quite openly. It is our understanding of the interview data as a whole that a large extent of meaning in work was related to collegial belonging and that this for the most part was highly positive factor for teams in that ties within the team allowed for a greater sense of collective responsibility and a notion of ones own work within the team context.

Status differences

One of the most important blockages to communication and collegial support seems to be status differences in production. As in most organizations production at SmK contains groups and subgroups and corresponding outgroups. Status differences between groups seem to reflect the extent that a group is seen, heard and taken into account in production. Thus status differences reflect the importance of different machines for production, the amount of investment in different machines, the visibility of the machine. The flow of production itself is also important such that people who affect others but are not themselves affected by others tend to be viewed as higher status. Finally, the character of work as more or less manual is important. While these differences may seem trivial from an outsider's perspective they are importantly shaped by very real concerns in daily work. For instance if problems at a machine are caused by deficient maintenance or perhaps lacking investment than these has very real effects on daily work and the way that a team as a whole is made visible in production.

Perceived differences in status contribute to lessening internal mobility and create problems of communication. For instance one team works with the folding of different packaging solutions. There are two main machines for this placed side by side at the "far" end of the factory. Although one machine is more modern neither is considered particularly prestigious to work with. The work is traditionally of low status in the factory but the team is known to have a good atmosphere of internal cooperation. Members of this team readily switch machines and positions on the machine so that each has a relatively good grasp of the whole. In contrast high quality printing is conducted on two machines placed at different ends of the factory. The more modern and advanced machine is closer to the "front" of the factory. The more advanced print is considered cutting edge and status differences between the machines, as well as physical distance contribute to lessening mobility in the team such that certain individuals most often are either one machine or the other and this is a cause of some difficulties when it is necessary to bring in new personnel.

Perhaps the most extreme example of how status differences affect the team and overall factory production is in the corrugated board machine itself. Work at the machine is divided into wet and dry ends and a control room with its own little tower. Status differences in these different aspects of work contribute to making communication in one team notoriously bad. The team as such is hardly a meaningful unit for the workers here. Nor are they very receptive to listen to other teams with consequences for problem solving in the factory as whole. It is not that status differences are caused by the process of production but the production process lends itself to making such distinctions.

Communication outside the team

A final aspect of the production system at SmK deserves attention in understanding the relative success of the teamwork initiative. This is the character of communication across teams.

The most visible instance of communication across teams is at the start of each shift when team coordinators meet. These meetings are intended to address several issues. Firstly, they are a forum to resolve issues of manning different machines according to prioritization. This requires of course that team coordinators know the present situation in terms of who is on site. Secondly, team coordinator meetings are a means of disseminating information. The team coordinator meetings are of interest because they are an important place to observe communication across teams.

The feeling of most coordinators is that the meetings do not quite work at present. In part this is due to lack of discipline of other personnel. The team coordinators are not always well informed as to the status of his or her team at the start of the day simply because they take place before the start of the shift and everyone has not arrived. Since the coordinator role is rotating and not vested with particular authority is it easy to imagine how problems of this kind could arise. As to information this also reaches coordinators via other channels, primarily through the IT system.

Since the role of coordinator is perceived by many as being primarily internal, i.e. relating to internal coordination in the team rather than coordination across teams and with other functions this lessens the potential of the meetings as a place for joint problem solving. When wider issues were raised at team coordinator meetings the coordinators almost invariably address the shift leader first.

Limited horizontal communication was also evident in interviews. We asked each of the coordinators to state the persons they felt they discussed work related problems and learned most from in their work. This was asked as means of exploring important channels of communication and knowledge development. The networks uncovered in this manner were to a very large extent inward looking and team oriented. There were some vertical links to management but few horizontal links across groups. Given that teams are highly interdependent, this indicates that problems are not addressed directly at the source and that there is little joint problem solving across teams.

The sense of fragmentation in production was strongly brought out in an interview with a team coordinator:

TC: I don't know[many] people here because there is so little internal mobility. Occasionally when we get visitors shown I have to ask: who works here and who is a visitor? This tends to cause an embarrassing silence, but that is what it is like. Once, when I had been working here for almost ten years my sister sold her condo to a person who worked here. We met but didn't recognize each other despite that this other person had worked here for five years.

This lack of mobility is understandable given the orientation of work and the importance of collegial support discussed earlier. The lack of mobility may also be perceived as advantageous for the individual employee in that they may obtain a positional identity in production and may be hard to replace because of specific knowledge about production. Lack of internal mobility however certainly exacerbates problems of communication and difficulties for employees to see production as a whole.

Ambiguity in the role of shift coordinator

The role of shift coordinator was instituted of supporting the team organization and was conceived of as a kind of coach for the teams. However, for some teams the existence of a shift coordinator is reminiscent of a foreman and is seen as a further reduction of the role of team coordinators. The role is prone to different interpretations as many of the responsibilities of team coordinators are also the responsibility of the shift coordinator. There is a tendency according to interviewees that the shift coordinator role grows at the expense of the team coordinators thus further undermining the connections of the team with management and in horizontal relations with other teams. This happens they state because the shift leader is paid fulfil this role whereas the team coordinators responsibility is taken in addition to ongoing production.

Team coordinators therefore fall outside the loop and loose their sense of the wider factory context and thus an important element of creating meaning in work.

It [teamwork] doesn't really work like it supposed to. These days our role [as team coordinator] is very limited. Previously we had more of a sense of the big picture and took part in planning. We used to have more contact with planning, production preparation and with other firms. We got a shift coordinator a few years ago and we lost some of this…It has become the simplest way of dealing with things simply to defer to the shift coordinator.,,

The interpretation of the team coordinators is that the shift leader more or less inevitably becomes the critical link between management and production. However there is also a sense that there is a significant difference between the two day shifts with respect to how the shift leader role works.

Over the years the two day shifts have developed somewhat different cultures. These differences are useful in shedding light on team dynamics because the situation for the two shifts are identical in every other respect. Those who are familiar with work on both shifts characterize the differences in work culture in terms of attitudes toward work and primarily in terms of involvement and also in different propensity to help each other out across teams. In short, one shift seems more fragmented into professional groups with more negativity between groups and a more hierarchical kind of leadership. The other shift has somewhat less pronounced team identity in favour of some degree of shift identity which seems to facilitate coordination. Differences in communication patterns in the shift are also indicated to some

extent in our rudimentary network data. Team coordinators in the more communicative shift have roughly 30% more contacts outside their own team than those in the other shift.

Differences in communicative climate between the shifts also correlate with differences in output. Both in terms of quantity of output and quality one shift surpasses the other. It seems plausible to infer the difference in communicative climate is a key aspect of creating the difference in output since most other factors in production are identical. These differences in communicative climate and in production output have not gone unnoticed by management and this helps to explain why such emphasises is placed on trying to build a positive attitude in the workplace.

It is our interpretation that differences in performance between the shifts are largely dependent on the extent of cross cutting horizontal ties in production and a shift coordinator that helps to build communication across groups. Both of these factors contribute to creating a situation in which work is imbued with meaning in a wider production context and which in turn creates a better ground for involvement and joint problem solving.

Discourse meets practice

In interviews we find that there is a strong sense that the teamwork organization does not correspond in practice to the ideal description in discourse. There is extensive support for wanting to reshape and improve work organization by strengthening the role of teams and extend the responsibilities of the team coordinator. However, there are also different positions on why teamwork seems to work only partially. Proponents of the present organization tend to attribute the problems of the teamworking initiative to individual attitudes. A recurring theme in these explanations is that people are different and not everyone is appropriate as a team coordinator. In essence the argument comes down to having the right kind of people in these roles. Critics of the present initiative tend to pinpoint formal or structural aspects the organization, in particular it seems that the role of the shift coordinator as seen as unintentionally reinstating a more hierarchical form of leadership with detrimental effects on employee participation. While both explanations have an element of truth neither explanation seems to point toward a constructive means of improving the current situation. .What still seems to puzzle everyone is how to make it work.

The findings in a sensemaking approach

A starting point for this case study was that teamwork is important because it creates shared meaning and involvement in work. In the previous sections we began to outline a framework for understanding how meaning was created in the work at the factory. The arguments are empirically derived. In this section we seek to interpret these empirical findings in the light of a sensemaking approach.

Sensemaking is understood as an iterative and social process where events are attributed meaning and interpreted. An important aspect of the approach is that interpretation is not given from the start but develops in social interaction. The process of making sense of a new event or situation makes use of narratives. Narratives provide a set of categories, valences and links between categories but it is in direct social interaction that these categories are tried out, negotiated and woven together in new ways. New interpretations lead to social action which then provides a basis for new interpretations and narratives. The results of a sensemaking process are neither entirely determined by structural factors nor arbitrary but more like an

ongoing process of selection. Interpretations that are plausible in the sense that they allow for constructive social organization tend to be selected in the sensemaking process. Later in the process interpretations are integrated with other aspects of identity and linked to other interpretations. Weick et al call this latter process retention (Weick *et al.* 2005). Retention explains how certain interpretations become entrenched and taken for granted.

The case study has sought to show how a range of different possible interpretations arise in the factory and that how different interpretations come to be entrenched in different groups. In our interpretation of teamwork at SmK we highlighted four factors which allow us to understand difficulties facing the teamwork initiative as a whole but also the variable success of the initiative in different teams and shifts in the factory. Each factor helps to explain the social context in which making sense of team work takes place. An understanding of the social context of the sensemaking process is a key to understand how teams work.

The first of these four factors was the character of work itself and the professional orientations of the workers. The repetitive and interdependent character of tasks made it difficult to break down work into meaningful way for teams. As such team production targets were somewhat illusory and not part of the way in which individuals in teams construct meaning in work. This first factor, the character of work, helps to explains why teamwork is difficult to make meaningful in the factory generally. Production targets are not conceived of as something requiring much more than routine attention and they do not become an object of sensemaking in the team.

The second factor collegiality simply indicates the extent that there is social support but also exchange of information and trust within the group. A higher extent of collegiality thus enables individuals in a team to see their own work in relation to the others on the team. In short, collegiality makes for a better understanding of individual work within the team context.

The third factor affecting the way teamwork is understood in the factory setting is status differences in and between teams. From an outsider's perspective status differences in an organization may be difficult to perceive or understand. However, the ingredients for this kind of differentiation are abundant in environments where tasks are highly interdependent. Status differences build upon and create barriers to communication and mobility. As such they have an important impact on how individuals perceive work and their own role within the organization. Barriers in communication limit the context wherein work is understood.

Fourthly and finally, the case brings to light the function of cross-cutting ties for team performance. In other words ties outside the team may be essential for understanding its performance. These ties are important because they enable team members to see their work in a wider context of meaning. Important external ties may be persons in middle management that fulfil boundary spanning roles, translating from one group to the other. It may also be simply that there is a denser weave of contacts that in themselves provide channels of communication and allow individuals and teams to coordinate activities.

These factors are useful in explaining internal variation of the way different teams perform and the sense they make out of their situation. The last three factors provide us with a kind of quick means of assessing the social context and thus also the particular context in which sensemaking takes place.

For instance, a close interdependence between tasks in production creates an environment where differences between teams may become interpreted as differences in status. This is not a necessary interpretation merely a possible one. However once such an interpretation has been selected and retained in a group it will have implications for how people communicate and therefore for the social context in which they will create new interpretations. Thus in teams were status distinctions are strong there is less likelihood that the team will be seen as whole. This creates difficulties in joint problem solving in the team. It will also be less likely that that they will communicate well with other teams as they fail to recognize the team as a meaningful unit.

Similarly one day shift has more developed external relations in their teams. These relations enable the teams to make sense of their situation find meaning in work in relation to a broader production context. This has created a greater sense of involvement in work and a greater capacity for joint problems solving which in turn has implications for the shifts performance as a whole.

Our findings so far are preliminary and need to further explored and tested. Some inroads to further research include following specific instances of sensemaking as they evolve such that the mechanism of selection can exposed more clearly. A more in depth study of communication patterns and orientations of different teams could also be an important step in establishing the validity of the findings.

The most important result of the case study so far is perhaps that specific historic developments in the sensemaking of the organization as a whole are important for understanding how teams work. Both the production process itself and different positions in it are important components in shaping how work in teams is understood.

Our analysis of sensemaking at SmK also points toward means of moving the teamwork process forward. The key point is to create circumstances where the context of interpretation can be shifted in an appropriate manner either to create team wide or factory wide understanding. Different possible solutions are not hard to imagine.

Conclusions

The study shows how a sensemaking approach can be used to understand how work in teams is imbued with meaning in different parts of an organization. The creation of shared meaning is an essential part of teamwork yet surprisingly little work seems to have been conducted exploring how the meaning of work, and particularly the meaning of teamwork is shaped.

The study highlights four factors in the social process of sensemaking in the factory. The character of tasks conducted in work and work orientation is important, as is the extent of collegial support, status differentiation in and between groups and the linkages between the team and the wider organization. These aspects of the social organization of the factory help to understand the social context in which sensemaking processes take place for people in different parts of the organization. The relevant context of interpretation, in turn, determines to a large extent the ability of teams to solve problems jointly internally or in relation to the wider production context.

An important finding of the study is that the meaning of work in teams is intimately intertwined with a factory-wide processes of sensemaking. The character of production and

different positions within the social system of the factory are important elements in shaping the meaning of work in teams and thus the performance of these teams. Teams thus cannot be appropriately understood without reference to this wider social context. In particular we argue that important factors determining team performance may be external to it i.e. the bridging role that makes working in the team a meaningful part of a larger whole or status differences that cut the team off from important aspects of production.

Referenser

Coupland, Christine, Blyton, Paul & Bacon, Nicholas (2005). A longitudinal study of the influence of shop floor work teams on expressions of 'us' and 'them'. *Human Relations,* vol. 58 nr. 8 s. 1055.

Knights, David & McCabe, Darren (2000). Bewitched, bothered and bewildered: The meaning and experience of teamworking for employees in an automobile company. *Human Relations,* vol. 53 nr. 11 s. 1481.

Thompson, Paul & Wallace, Terry (1996). Redesigning production through teamworking Case studies from the Volvo Truck Corporation. *International Journal of Operations & Production Management,* vol. 16 nr. 2 s. 103.

Vallas, Steven P. (2003a). The Adventures of Managerial Hegemony: Teamwork, Ideology, and Worker Resistance. *Social Problems,* vol. 50 nr. 2 s. 204.

Vallas, Steven P. (2003b). Why Teamwork Fails: Obstacles to Workplace Change in Four Manufacturing Plants. *American Sociological Review,* vol. 68 nr. 2 s. 223-250.

Weick, Karl E., Sutcliffe, Kathleen M. & Obstfeld, David (2005). Organizing and the Process of Sensemaking. *Organization Science,* vol. 16 nr. 4 s. 409.