MAKING MEANING OF THE PIECEWORK SYSTEM

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Piecework is often considered a means to enhance performance in construction. Unlike a fixed hourly wage, workers are paid based on units produced or tasks performed, and at first glance, the relationship between piecework and performance might seem linear. However, the piecework system can be considered both a field-level construct negotiated by professional associations and trade unions, and an organisational-level means for organising, conducting, and remunerating construction activities. As such, it can be understood in multiple ways depending on the perspective from which the system is viewed. Drawing on insights from neo-institutional theory and organisational culture theory, the purpose of this study is to establish a multi-level understanding of the piecework system, considering both institutional and cultural factors. The empirical material is based on ethnographic data collected in a construction company division that manufactures prefabricated units. The study adds to construction management research with new insights into how meanings about the piecework system are mutually shaped by prevailing notions in the organisational field as well as the organisational culture. It also explains why these are difficult to reconcile in practice.

Keywords: ethnography; meaning systems; neo-institutional theory; organisational culture theory; piecework

INTRODUCTION

Piecework (or price work) is a system in which workers are paid based on the amount of work they deliver (Miller 2023), with high efficiency being rewarded and low efficiency penalised. It is often "hailed as more efficient than the fixed hourly rate system, since it motivates the laborers to apply skills and effort to the work as a matter of self-interest" because the crew will reap the financial benefits themselves (Kreiner 1989: 68). However, the piecework system has long been debated (Jaques 1951), and scholarly inquiries have identified several negative implications associated with piecework in relation to construction safety (Oswald *et al.,* 2019), managerial practices (Kreiner and Førrisdal 2004), and on-site productivity (Bronke and

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Frederiksen 2023). Brown (1973: 3) goes as far as to claim that piecework can be considered "an aggravator of wage inflation, a provoker of strikes and an anathema to orderly industrial relations."

Since piecework is often applied in crews, this adds a socio-cultural aspect to the activities related to piecework. Crew efficiency depends on the efforts of all crew members, thereby creating an interdependent relationship within the crew that influences the performed activities and unfolding behaviour (Shearer 1995). Although piecework is said to be a particular 'management system' to control performance at the organisational level (Brown 1973), it is also influenced by industry-specific market forces and bargaining power. For example, in the Danish construction industry, wages are primarily based on a labour market-regulated price list describing the minimum wages per piece of work performed. However, in practice, this price list is of little significance to the bargaining process, as other aspects, such as the workers' experience with time spent on each piece and the manager's attitude towards how much they are willing to pay the crew, influence the process (Kreiner and Førrisdal 2004). Different values are thereby connected to the piecework system, and questions of 'fairness' in terms of price levels easily become an ongoing debate among pieceworkers, with bargaining pressures stressing the system (Brown 1973).

This study contributes to the debate about the social consequences of remunerating workers by piece rates by establishing a multi-level understanding of how construction workers make sense of piecework. At the industry level, the piecework-system serves as an appropriate and highly rationalised account of remunerating construction activities. At the organisational level, the piecework system informs how to organise and conduct construction activities in a rational manner, thereby permeating culture and meanings in construction companies. To understand how both levels inform the meaning-making among construction workers and hence affect social aspects of construction in practice, we draw on insights from neo-institutional theory (NIT) and organisational culture theory (OC), as both theoretical realms focus on meaning-making (Pedersen and Dobbin 2006). Specifically, NIT focuses on how meanings are created among organisations, analysing groups of organisations associated with the organisational field (Pedersen and Dobbin 2006). Correspondingly, OC explores how meanings are created within organisations by focusing on cultural manifestations produced and expressed by groups of organisational members (Alvesson 1993). Recent studies have emphasized that bridging insights from these theoretical realms can enrich each other in analyses of meaning-making by considering both institutional and cultural factors (Hatch and Zilber 2012; Zilber 2012). In this regard, by incorporating both perspectives, this study contributes to the construction management literature with a more nuanced understanding of the meaning-making associated with the piecework system, considering institutional (industry level) and cultural (organisational level) factors.

THEORETICAL BACKGROUND

NIT and OC share an interest in studying meaning systems in an organisational context (Pedersen and Dobbin 2006; Aten *et al.,* 2012; Hatch and Zilber 2012; Schultz and Hinings 2012). Scholars within these theoretical realms respectively argue for 'border conversations' between the theories to explore how they can add value to one another (Aten *et al.,* 2012), for example, by understanding how institutional logics and organisational cultures interact and may even conflict (Schultz and Hinings 2012). To

engage in this conversation, we will first describe the two theories separately, and then how they can be mobilised in the study of meanings related to the piecework system.

Neo-institutional theory

In NIT studies, organisations are widely perceived members of an organisational field, defined as "sets of organisations that, in the aggregate, constitute a recognised area of institutional life" (DiMaggio and Powell 1983: 148). Members of an organisational field are said to participate in a 'common meaning system' (Scott 2014) and adhere organisational structures and activities that have attained a high degree of legitimacy and are considered appropriate within the field. In a processual perspective, the status of legitimacy indicates that structures and activities have proved their worth and thus have reached consensus among members in the field (Suddaby *et al.,* 2017). Seminal work on organisational fields has demonstrated the important role of regulatory agencies, such as professional associations and trade unions, in organisational fields. For example, Greenwood *et al. (*2002) demonstrated that regulatory agencies possess the ability to both reinforce existing prescriptions for appropriate conduct as well as endorse and diffuse new ones. Moreover, regulatory agencies have a prominent role in determining norms, values, and beliefs associated with professionalism and managerialism dominating the field (Bévort and Suddaby 2016; Meyer and Hammerschmid 2006). In this regard, trade unions determine appropriate conduct associated with the profession (i.e., professional logic) while professional associations determine appropriate conduct associated with running a business (i.e., managerial logic). Gadolin (2018) explains that this institutionalisation of management has challenged the previous dominance of the professional logic and might be incompatible and a source of conflict in organisational settings. This is also demonstrated by Bévort and Suddaby (2016), who in their study of a global professional services firm show how department managers adhere to a managerial logic for the benefit of the firm's business, meanwhile practice managers adhere to a professional logic, building on professional knowledge and expertise. This challenges the occupational function, thus making the ideal-typical logics of professionalism and managerialism inherently contradictory because of their opposed ideological axioms of how work should be organised and controlled (Gadolin 2018) and how performance is rewarded. Given that field-level prescriptions for appropriate conduct might differ significantly from organisational cultures (Hatch and Zilber 2012), scholars have suggested that research on institutional fields and institutional logics explore how logics, when mobilised at the level of the organisation, interact with cultures (Schultz and Hinings 2012). This stems from a critique of institutional theorists (Zilber 2012) and research in culture in construction (Petersen 2023) neglecting micro-level explanations of meaning in favour of field-level explanations, even though organisational cultures influence, for example, how logics are enacted in organisational life (Schultz and Hinings 2012).

Organisational culture theory

In OC studies, organisations are seen as expressive forms of subjective experiences in which the social patterns of organised actions are explored (Smircich 1983). OC can thereby be defined as a set of value systems within an organisation, creating a mosaic of organisational realities (Morgan 2006), or, drawing on Geertz, local systems of shared meaning (Smircich 1983). These organisational realities or meaning systems are constructed, maintained, and reproduced by people, meaning that organisational members are creators of culture while also being products of culture (Alvesson 1993).

This implies that OC is continuously being produced and reproduced by organisational members through human interaction, prompting OC scholars to study how this production and reproduction occur. OC studies thus focus on studying human practice and day-to-day interactions. Attention is especially paid to the subjective, interpretive aspects of organisational life, emphasising the nonrational qualities of the local meaning systems (Smircich 1983). This means that OC theory acknowledges that organisational members may act irrationally even within an organisational context, and it is elucidated how these irrationalities contribute to shaping organisational meaning systems on an interpersonal, micro level. Methodologically, ethnographic studies and 'thick descriptions' of human action and interaction are often employed in OC studies to provide insight into the rationalities and irrationalities of day-to-day activities, exploring how organisational members perceive the organisation. From these varying perceptions, similarities and differences are examined, and patterns in meaning systems are elucidated. By adopting this focus, the organisation is treated as a closed system (Pedersen and Dobbin 2006) with the formal organisational structure defining the cultural boundaries. This is despite the meaning systems produced and reproduced not originating solely within the organisation but having their roots outside the organisation, as organisational members come and go, each contributing their experiences from which single and joint meaning-making processes occur. Therefore, critics also argue that by focusing solely on organisations as closed systems, OC studies "fail to connect these meaningful dynamics with the larger culture outside the organisation" (Zilber 2012: 89), and perspectives on the origin of meaning systems and their consequences beyond the organisation are disregarded. However, as culture is a broad term perceived in many ways (Alvesson 1993), and as it can be difficult to discern what constitutes culture, operating within the formal organisational boundaries can be seen as an epistemological choice to focus the analysis and avoid "cover[ing] too much" (Alvesson 1993). Paraphrasing Morgan (2006), seeing is also a way of not seeing, and what is observed when adopting a cultural approach to studying organisations is how local systems of shared meaning unfold on a micro level, providing insight into why organisational members behave the way they do within the organisational context.

RESEARCH DESIGN

To investigate how meaning systems related to piecework occur, a single case study has been conducted. The case pertains to a division of a construction company manufacturing prefabricated façade units for various construction projects undertaken by the company. The division employs sixty construction workers, the majority of whom being carpenters with experience in piecework. Some are nearing retirement age having chosen to work in the division due to their extensive work experience from construction projects, often as foremen. Additionally, they find this type of work gentler on the body than piecework on the construction sites. Others are either carpenter apprentices or experienced carpenters waiting for a piecework vacancy at one of the company's sites. Machine operators and truck drivers deliver the prefabricated façade units to the construction sites, and some unskilled workers are also part of the division. All these workers are remunerated by time rates. However, a few plumbers and scaffolding workers, serving the company's different construction sites, also have their daily base in the division premises, and these workers are remunerated by piecework. Therefore, the division represents different types of construction workers with varying experiences and attitudes towards piecework,

which is why this case has been chosen. The first author conducted 75 hours of participant observation in the division, closely following and engaging with the construction workers in their natural setting (Kawulich 2005). A total of 38,000 words of field notes has been produced, with insights about piecework being extracted and used as empirical data for this study. In the following, an analysis is provided, offering initial insights into the perceived benefits of piecework at an industry level and, subsequently, demonstrating the intraorganisational social consequences of piecework permeating the organisational culture.

ANALYSIS

To analyse the systems of meaning related to piecework, we present a multi-theoretical analysis of the manufacturing division, drawing on NIT and OC theory. The first part of the analysis shows the influence of the piecework system as a field level construct, promoting competing notions of appropriate conduct in terms of managerialism and professionalism in the division. The second part demonstrates how local realities or patterns of meaning exist and evolve simultaneously among the workers in their day-to-day activities.

Piecework and neo-institutional theory

In the context of the Danish construction industry, piecework agreements, including payment for various tasks, are negotiated and determined by the professional association, Confederation of Danish Industry and trade unions, such as the United Federation of Workers. The confederation represents more than 6,700 construction companies that employ approximately 120,000 construction workers. In contrast, the United Federation of Workers consists of 60,000 members who, among other roles, are represented by asphalt workers, bricklayers, carpenters, concrete workers, demolishers, roofers, and scaffolders. The piecework system can thus be considered a field-level construct, encompassing piece-rate lists and general conditions for piecework in construction. In new build projects, all construction tasks can be required to be paid on a piece-rate basis, if desired by the employer (i.e., the construction company) or the employees (i.e., the construction workers). In this way, the piecework system serves as a regulatory element at the field level, which can be activated if required by either the employer or the employees. The confederation and the trade union are thus mandated to determine normative prescriptions for payment and can coercively use their powerful positions to ensure conformity at the level of the field.

While piecework is a common form of remuneration in the industry and in the construction company's divisions involved in conventional construction activities, the manufacturing division differs from field-level norms by remunerating construction workers with hourly wages. Despite the division formally being a unit of the construction company and employing workers who share a professional background with those working in the company's divisions conducting work on the construction sites, the management of the division has purposefully endeavoured to embrace and promote an alternative 'factory-like' identity. For instance, the management refers to the division as a 'construction factory' in everyday speech, emphasising the manufacturing of prefabricated units in a controlled factory environment as a means to achieve higher quality and more efficient construction processes. Additionally, it advocates for adherence to a managerial setting that is not incompatible with piecework. Consequently, many workers in the division perceive the abolition of piecework as an inappropriate and illegitimate decision. For example, as explained by

a carpenter with twenty years of experience who is in favour of hourly wages, it is considered unfair that hard work in the manufacturing division is not rewarded, while colleagues on the construction sites are rewarded for providing a special work effort. This demonstrates that the carpenter not only sees himself as an employee in the manufacturing division but also as an integral part of a profession and, consequently, compares himself with others associated with the carpenter profession. In line with this, another carpenter with whom the ethnographer spoke one day over lunch, who had 18 months of experience in the company and three months of experience in the division stressed that piecework is personally rewarding as it "motivates [and] fosters good collaboration among crews and improves quality." This indicates that piecework is not only considered a means to obtain a higher wage but also an operational framework enabling workers to conform to prescriptions for appropriate conduct associated with the profession.

From a NIT perspective, piecework can be considered distinctly intertwined with notions associated with managerialism and professionalism. In relation to the former, the division has abolished piecework with the argument that it is not reconcilable with its core activities and has conducted identity work to foster notions about the division being a factory. In relation to the latter, the abolishment of piecework is considered by some workers as a decision that prevents them from conforming to prescriptions for appropriate conduct associated with the profession and as something marginalising them compared to their colleagues working on the construction sites.

Piecework and organisational culture theory

In analysing the fieldwork data from an OC perspective, it becomes apparent how two different discourses among the construction workers dominated the conversations about piecework in the division, in which piecework was seen from either a positive or a negative point of view. Those in favour of piecework described it as a work structure that fosters motivation and collaboration. For instance, one day over lunch in a conversation with the ethnographer, two carpenters, who had not previously worked together but only knew each other from the division, agreed that "piecework fosters higher work ethics and more motivation and collaboration because everybody is interested in making as much money as possible and is thereby more willing to help each other." Their past experiences with piecework were in this conversation united in a shared understanding that piecework functions as a structure which motivates productivity across professions, encouraging subcontractors to work towards a shared goal of high productivity and maximising earnings. The phrase "higher work ethics" reflects the pride connected to high productivity, emphasising that a high work pace is an important job motivational factor. The viewpoint that piecework motivates a higher working pace was independently supported by all the construction workers who were in favour of piecework in the division. Even two apprentices working together, where only one had previous piecework experience, agreed that when doing piecework "(…) more is going on. There is more to do so you don't end up standing still." Despite their limited experience, and one of them not even having been remunerated by piecework before, it was clear that the two apprentices had a strong idea about piecework identical to the construction workers in the division who were pro piecework. Thus, the positive discourse was reproduced in the division even among those who had not yet gained their own experiences with piecework.

Past experiences of the downsides to piecework were also the main driver in the arguments against piecework. As explained by a carpenter referring to his former

experience with piecework: “It was a battle of all against all where people stole each other’s ladders to be able to finish up fast.” In the conversation with the carpenter, it was evident that he disliked the negative competition that, according to him, the piecework system fosters, and that he did not share the experience that piecework encourages collaboration. Instead, it was argued that time rates lead to better physical and psychological health and safety compared to piecework. For example, two young carpenters installing windows argued that “doing piecework is hard on the body” and “piecework leads to stress leaves.” While comparing their own job situation being remunerated by time rates to colleagues doing piecework, they preferred “having time with their families,” saying that being on time rate remuneration supports a better work-life balance. To them “a good work environment with a kind tone of voice is most important” in a job which was how they felt about their current job remunerated by time rates.

Furthermore, piecework was seen as a structure that increases inequality, and the negative attitude towards piecework was based on personal values and how one sees these personal values reflected in the piecework remuneration system. A value that appeared as an important factor to some was the feeling of unfairness. As expressed by an experienced operator during the ethnographer's first visit: “The plumbers here make up to DKK 800,000 (€108,000) a year!” expressing a clear dissatisfaction with the plumbers' allegedly higher piecework wages compared to the rest of the workers' hourly wages. Furthermore, in a conversation with two carpenters working together in a different hall, they also described the wages in the division as unfair: “It is unfair that the workers on the construction sites make more money than us when we all serve the same goal.” This was despite these two carpenters directly stating that they preferred hourly wages as piecework, according to them, leads to conflicts. To them, other negative emotions besides unfairness reflecting their personal values were also connected to piecework.

As argued by the one with twenty years of experience: “Piecework is not about good craftsmanship or professional pride!” saying that high work pace and good craft cannot be united. Furthermore, the argument shows that his values about delivering a good piece of work cannot be met when doing piecework. Wages among construction workers thereby appear to be a very personal and sensitive subject. However, despite the sensitivity behind the statement, the participant observations also showed that there might be some truth in saying that piecework and work quality are related. In a conversation with a young carpenter appraising piecework, he explained: “Big projects are about optimising your time. Good craftsmanship is saved for home projects, for example if you make a nice tabletop, you take a picture for Instagram and show others your work. Today, construction work is about improving your work pace so you can make as much money as possible.” Whereas the former carpenter with twenty years of experience expressed good craftsmanship as a motivational factor in his work, this was not the case with this young carpenter who was positive towards piecework and was motivated by making money.

Different motivational factors thereby support the different emotions connected to piecework. In some cases, the negative attitude towards one wage system was even used directly as an argument to applaud the other. As expressed by a plumber and a scaffolding worker preparing roof parts for one of the construction sites: “People doing piecework are more willing to work. Those paid by the hour are not productive.” Some construction workers thereby have prejudices against each other based on the wage system they each prefer. Although the case does not reveal what

consequences these prejudices might have on collaboration across remuneration systems, it indicates that meanings and values related to piecework affect how construction workers think of each other and of their own and others' performance.

From an OC perspective, it appears that two dialectical and simultaneous meaning systems, pro and con piecework, exist and are being reproduced in the division. Both discourses are formed by former experiences from the construction workers' site experience and personal values shared within the division, affecting how even new organisational members without site experience understand piecework.

DISCUSSION

Different opinions about piecework are maintained and reproduced through everyday practices and interactions within the division, with these meanings varying significantly from notions about appropriate conduct dominating the field. At the field level, piecework is established as an appropriate and highly rationalised account of organising and remunerating construction activities. For some workers in the manufacturing division, the absence of the right to be remunerated by piecework, as per industry norms, is perceived a threat, as piecework is deemed a central means of ensuring appropriate conduct associated with their profession. The managerial logic guiding the division, which determines that construction workers should be remunerated based on hourly wages, conflicts with the professional logic, with one group of workers in the division advocating that piecework is a way to ensure high professionalism. However, as shown in the OC-informed part of the analysis, another group of workers do not associate piecework with high professionalism but see it as diametrically opposed to high professionalism. This illustrates that different meanings related to the piecework system exist and are reproduced through everyday practices and interactions within the division. The meaning-making of piecework is thereby influenced and shaped by individuals' social and local contexts, which cannot be explained rationally. A consequence of the local meaning-making is that prejudices occur among workers, establishing a negative point of departure for interpersonal interaction and hence collaboration (Shearer 1995). Despite both groups, those in favour and those against piecework, using the same arguments to praise their preferred remuneration system, they also share the same interests in maintaining a good work-life balance. However, past experiences with and the meanings expressed in the division regarding piecework reproduce a silo mentality, which makes the two groups unable to conform to one another. Thereby, construction worker collaboration is challenged by the meaning-making processes which each construction worker has engaged and engages in. These findings add to research on piecework by demonstrating how remuneration has an impact on construction collaboration.

By drawing on insights from both NIT and OC theory, we have illustrated how prescriptions considered rational from a field-level perspective turn to be irrational organisational behaviour. These prescriptions affect the daily life of organising, showing that organisational culture is a dynamic construct in constant flux with life outside the organisation. Taking an open systems perspective on OC thereby contributes with a more nuanced understanding of the local meaning systems created and maintained within the organisation. In this study, the flux manifests in practice as workers affiliated the division are in close contact with construction site life, such as having recent site experience or awaiting the next piecework job opening. This suggests that the cultural patterns within the division also extend to construction workers outside the division, implying that the meaning-making processes related to

construction remuneration can be traced to the industry in general. However, how organisations, and in this case a manufacturing division, translate field-level prescriptions into organisational life can benefit from a closed systems perspective, which enable more in-depth insights into how organisational micro-level dynamics, including organisational cultures, are affected by notions about appropriate behaviour at the level of the field.

CONCLUSIONS

This study contributes to the border conversations between NIT and OC, in which the cultural analysis elaborates the field-level perspective. These theoretical realms can mutually thereby enrich each other and offer novel explanations incorporating both field-level and micro-level dynamics of meaning. In this study, a multi-level understanding of meaning systems associated with piecework remuneration has been established. It demonstrates how multiple meanings are connected to piecework, revealing that the link between piecework and performance is complex, influenced by field-level prescriptions as well as micro-level interaction. These meanings are shaped by prevailing notions in the organisational field as well as in the organisational culture, and contradictions exist among the two analytical levels as well as within the organisational culture itself. Reconciling the meanings evolved on the different levels are thereby difficult in practice. However, understanding the different meanings produced and reproduced will thus help to uncover and explain social conflicts forming organisational behaviour. Hopefully, these insights will contribute to better informed decision regarding construction remuneration.

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