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Økland, Gunnar Magne and Croucher, Richard

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The culture of skilled work in a Norwegian shipyard, 1945-90

Gunnar Magne Økland

Richard Croucher

Abstract

We anatomise the culture of skilled work in the Solheimsviken shipyard in Bergen, Norway, from 1945 to 1990, linking it to democratic impulses within the workforce. This independent culture had strong if bounded democratic elements that were ultimately reflected in the institutions of a workers' cooperative which operated from 1985. However, a shift away from shipbuilding immediately preceded the cooperative's foundation and eroded the position of the older skilled workers who had carried the culture, undermining it even before the cooperative's collapse.

Keywords:

work culture, skilled work, industrial democracy, worker cooperatives, employee ownership, shipyard

Introduction

We examine the culture of work amongst skilled workers in a major Norwegian shipyard, arguing that it underpinned their democratic institutions. In the mid-1980s, the yard became worker-owned but by that point the culture was already substantially undermined by seismic changes in production processes.

The case is not presented as in any way ‘typical’. Indeed, Norway’s strong labour movement means that it is likely to be distinctive in a broad international context although it appears that, given extensive commonalities in the history of West European shipbuilding, the culture considered here had much in common with those in other workplaces. Our aim is to reconstruct the industrial culture of skilled work in one workplace and show the extent, nature and limits of its democratic aspects before it was destroyed by global competition. Strong historic links existed between worker identities, their self-image as highly skilled craftsmen and their attachment to industrial and political democracy both inside and outside of the yard. We therefore show how a culture often described by business historians as underpinning ‘restrictive

practices' within shipbuilding (see for example the British Conservative historian Barnett¹) had an industrial democratic dimension.

Some 'cultures of labour' have been identified as shared between management and employees (see for example Shershneva and Feldhoff)², and have been argued to have assisted in making major systemic transitions. Analysts of worker cooperatives have also proceeded by reference to the 'organisational culture' concept widely used in management studies (Gherardi and Masiero)³. The culture we seek to reconstruct here might in these latter terms be described as a 'sub-culture' since, consistent with one influential interpretation of culture's operation in organizations, it was an independent worker culture developed to protect workers from management (Smircich, 1983)⁴. In our case, management recognised its existence, sought to encompass it within an organisational identity and tried to tap into it when seeking to improve productivity. Managers could even on occasions identify with it. Nevertheless, it remained at its core an expression of worker identity.

We show the links between this culture and the yard's eventual conversion to a worker-owned company and-in its own definition- a worker cooperative. Worker cooperatives, being as old as industrialisation itself, have a substantial history and have been the subject of much academic study over an unusually extended period. Since the 2009 financial crisis led many across the world to seek alternative models, political and academic interest in them has grown considerably. Rothschild (2009)⁵ for example took a positive view of worker cooperatives' political effects, advocating them as a means of expanding political participation beyond industry and suggesting that state policy should therefore support them. A pair of researchers reviewing Argentinian experience recently even proposed that worker cooperatives posed

1. Barnett, *The Audit of War*.

2. Shershneva and Feldhoff, *The Culture of Labour*.

3. Gherardi and Masiero, *The Impact of Organizational*.

4. Smircich, *Concepts of Culture*.

5. Rothschild, *Workers' Cooperatives*.

significant questions the answers to which could have potential to revive the industrial sociology field (Ozarow and Croucher, 2014)⁶.

Worker cooperatives may be seen in different perspectives. Here, we take an historical approach, on the grounds that workplace history is important to their foundation and operation. Within the extensive and long-running literature, much research adopts more economic and industrial-sociological viewpoints. As Craig and Pencavel (1995)⁷ noted two decades ago (and this remains the case), strangely, the concrete forms of cooperation are frequently given only cursory attention. When cultural analysis of cooperatives' operation has been undertaken, the approach is frequently limited to the cooperative's history from its foundation, setting aside the structures and cultures which it inherited. Gherardi and Masiero (1987)⁸ for example found two types of cooperative, resting on different organizational bases: the foundation and the coalition. In the former, the founder members' relationships were central but in the latter the coop was considered to simply rest on an attempt to save jobs. The antecedents of these bases were not investigated. In our case, as we show, the yard's democratic life was already in decline, undermined *inter alia* by radically changed skills requirements, before the cooperative was formed.

We also respond to a little-heeded call to examine the significance of workers' cultures in company history (Biggs, 2000)⁹. We adopt a definition of culture—the 'symbolic expressive aspect of social behaviour'—supported by Wuthnow and Witten (1988)¹⁰ and apply two of the methodological approaches which they identify as viable: the subjective and institutional. Our conception of culture therefore fully embraces institutions. We suggest that a 'culture' of work is not simply a matter of shared assumptions or of other 'soft' phenomena such as symbols or

6 . Ozarow and Croucher, *Workers' Self-management*.

7 . Craig and Pencavel, *Participation and Productivity*.

8 . Gherardi and Masiero, "The Impact."

9 . Biggs, *Review of Charles F.*

10 . Wuthnow and Witten, "New Directions."

rituals and routines, but includes ‘hard’ institutional manifestations. Our work therefore builds on the tradition of those ‘old’ institutional theoreticians who, when building the foundations of industrial sociology and industrial relations, recognised a need to study the historical development of workers’ institutions (Webb and Webb, 1894¹¹; Clegg, Fox and Thompson 1964,¹² 1987;¹³ Clegg: 1994¹⁴). However, unlike them we focus on the micro rather than the macro level.

We argue that the co-operative’s foundation should be placed firmly in its historical context as the culmination of longer-term traditions within the local workers’ culture of work. Equally, we make a case for a more historical conception of cooperatives’ origins at the workplace level. The paper is structured as follows. We begin by explaining our method and then locate the shipyard in its broader historical context as part of the Norwegian shipbuilding industry, placing it in its local cultural setting. We then focus on the internal culture of work in the period immediately prior to the worker cooperative’s formation. Workers’ democratic institutions within the cooperative are examined before we summarise and conclude.

Method

Since our research places the history of one cooperative in a longer-term perspective and is also concerned with more recent developments, we used two methodological approaches. In relation to the first strand we used several rich secondary sources in the Norwegian and English languages documenting the histories of the industry and the yard. We were fortunate to be able to draw on ethnographic studies by a researcher and her collaborator who worked and took photographs in the workplace. In relation to the more contemporary aspects of worker

11. Webb and Webb, *The History of Trade Unions*.

12. Clegg, Fox and Thompson, *A History of British*.

13. Clegg, Fox and Thompson, *A History of British*.

14. Clegg, *A History of British*.

experience, we used a range of different sources. First, one of the authors spent a short period working and observing work and social relations in the yard in the 1970s. Second, interviews were held in October 1986 with three individuals with much experience of the workplace; two had been central to the cooperative's formation and operation throughout its life. Ole Egesund led the largest union (Iron and Steel), and was a board member of the Aker Group for many years prior to the transfer of ownership from Aker to local firms in Bergen. He was one of five members of the negotiating committee dealing with the ownership transfer to becoming a cooperative. At the time of interviewing, he had worked at Solheimsviken for 27 years. A second important respondent was Kjell Høibraaten, a sheet metal worker and (until the late 1980s) a Marxist, at Solheimsviken from 1970 until he assumed the role of local deputy union leader for both Iron and Steel and the union 'club' coordinating all unions. He was heavily involved in managing the cooperative. We also interviewed a shop floor worker, Roger Ingvaldsen, who had worked as a certified welder at the yard since 1958. Third, surveys of workers' experience were conducted in the Solheimsviken shipyard and its sister yard Laksevaag in October 1986; the latter yard was part of the same shipbuilding firm as the former but remained in private ownership after the cooperative was formed, presenting a useful contrast. Fourth, local and national newspapers were greatly interested in Solheimsviken because of the yard's local and national significance. They were therefore used in tandem with a workplace newspaper published in the period 1982-1988 which helped to throw light on the social relations of production and democratic governance of the cooperative in those years.

The Norwegian shipbuilding industry and its skilled workers

The Norwegian shipbuilding industry developed from 1850 onwards, experiencing accelerated growth immediately before the First World War and again in 1945. We focus on the post-1945

period, when the major technological change from riveting to welding ships together was well-established. In European terms the Norwegian industry declined late, from 1990 onwards and survives today; the British industry, which provided something of a model for it until the 1950s, also survives albeit much reduced in scale. It arguably began its decline decades earlier (Lorenz, 1994)¹⁵.

The industry was divided into two principal regions, both on the Western coast; in the more northerly of the two, it focused on serving local fishing and coastal shipping. In the more southerly region it grew from similar local roots but post-1945 it centred on a more international market and produced larger vessels. In both cases, the industry drew on local sources of finance and benefitted from strong links with the brokers, insurance clubs, consultants and classification societies that supported shipbuilding and provided a pool of expertise for informing the creation of cooperatives (Andersen, 1997: 464)¹⁶. It also enjoyed extensive connections with the shipping industry and with other shipbuilding and marine engineering companies; the latter was especially significant for the Southerly form of shipbuilding. Strong inter-firm relations existed between the yard on the one hand and shipping companies and supplier organisations on the other, forming a ‘maritime complex’ (Andersen, 1997: 480)¹⁷. It has been suggested by a local expert that cultural and institutional sources of support assisted the Southern region, manifested in strong familial and community relations and a tradition of communal entrepreneurship (Karlsen, 2005)¹⁸.

After a boom in the early 1970s, by the mid-1970s, global competition posed major problems for the entire European industry. This was especially the case for the Norwegian industry’s more southerly part with moves into oil platform production occurring in the 1970s

15. Lorenz, “Organizational Inertia and Competitive.”

16. Andersen, “Producing Producers; Shippers, Shipyards,” 464.

17. Andersen, “Producing Producers; Shippers, Shipyards,” 480.

18. Karlsen, “The dynamics of regional.”

as the large Ekofisk oil field was opened up. From the late 1970s the Norwegian shipbuilding industry was exposed to fierce competition (<http://www.skipsrevyen.no/temaverftsindustrien/>)¹⁹. Technological changes in ships and their construction facilitated Asian competition and Norwegian costs increased as the currency became overvalued due to North Sea oil changing the composition of national income. Despite considerable state subsidies, many Norwegian shipyards succumbed and were forced to close.

The industry's skilled workers constituted a significant part of the long-standing, highly independent but cooperation-oriented Norwegian labour movement. The Iron and Steel Union organized employees in iron and steel workshops, shipbuilding and other mechanical industries (https://snl.no/Norsk_Jern-_og_Metallarbeiderforbund)²⁰. The nationwide union was established in 1891 and affiliated to the general National Labor Union, Landsorganisasjonen, in 1905. After serious conflict, the Iron and Steel Union reached a collective agreement with the Mechanical Workshop Employers' Association in 1907 to create Norway's first modern collective agreement (Myran and Fasting, 1955)²¹. The Norwegian labour movement, reflecting its strong links outside the workplace, had a strong orientation towards social democracy and the state. In the period after World War Two, the bulk of the large-scale shipbuilding industry of which this yard was typical consciously adopted a 'British model' of production which underpinned the skilled craftsmen's (alternatively and revealingly they were often dubbed and referred to themselves as 'tradesmen', a term applied to those working on their own account) position. Relatively autonomous groups of skilled men formed the majority of the workforce, with only small pockets of multi-skilled and unskilled employees (Andersen,

19 . Skipsrevyen.no.

20 . Store Norske Leksikon.

21 . Myran and Fasting, *Herfra går Skibe*.

1997)²². In the British context, this system was later polemically denounced by Correlli Barnett, a Conservative historian, who roundly condemned it as reflecting excessive and restrictive worker control over the productive process (Barnett, 1986)²³. In Norway, a broadly similar set of arrangements obtained until the 1950s; due to small technological changes, work could even shift from the realm of one craft to another (Lorenz, 1994)²⁴. Craft work organisation was therefore reflected in a fragmented union structure with eleven different craft-based unions in the Solheimsviken yard by mid-1984, although 70-80% of the workers were members of the Iron and Steel Union. Large numbers of small unions which differentiated themselves by skill were typical of British and Norwegian shipbuilding until late in their histories.

The pace of change in the industry's productive processes was relatively slow. In the Nineteenth Century, skilled workers had been intimately involved in design and work processes, leading squads of workers and often themselves investing in shipbuilding projects. Their role and self-image therefore went beyond that of wage-dependent operatives. The emergence of large shipbuilding firms in the Twentieth Century ensconced them as tradesmen with a considerable degree of authority and autonomy at work, owning their own tools and organising work. Because of a shortage of formal training, skilled workers developed their skills through apprenticeship, practice and mutual learning. The 'British model' of heavy shipbuilding work involved relatively autonomous teams of skilled workers from various crafts led by the more senior workers, brought together with minimal central planning (Andersen, 1997: 487)²⁵. Despite attempts to shift towards a more systematically planned and 'Fordist' model based on Swedish and American practice in the 1960s, by the 1970s work processes remained essentially traditional, with low levels of automation and mechanization in international terms

22 . Andersen, "Producing Producers; Shippers, Shipyards,"

23 . Barnett, *The Audit of War*.

24 . Lorenz, "Organizational inertia and competitive."

25. Andersen, "Producing Producers; Shippers, Shipyards," 487.

(Andersen, 1997: 467-8)²⁶. Because of the slow pace of change, craft workers could retain much of their position at the centre of work processes and preserve their culture even as it became increasingly anachronistic in relation to actual practices.

Management recognised suitably skilled labour as essential to shipbuilding after 1945, because ship safety remained linked to worker input: the quality of welds was important in preventing sea water from entering ships' hulls and in securing vessels' structural integrity. Locked-in stresses caused by poor welding practice could cause fractures, with potentially disastrous results (see for example Lane et al., 1951)²⁷. In the skilled worker's view, the central necessity was to ensure that only fully skilled journeymen worked on central processes (interview with Ole Egesund). Crafts were socially exclusive and apprenticeships constituted, in effect, extended rites of passage. Thus, young workers who had not completed an apprenticeship were excluded from recognition in the journeymen's community (Alveng and Müller, 1990)²⁸; their low rates of pay in relation to those of journeymen meant that once they were reasonably proficient in certain processes, there was always a temptation for the employer to use them on skilled men's work (Lorenz, 1994)²⁹. Once apprenticeships were over, craftsmen became members of a 'club' which could enforce higher wages than otherwise, but at least as importantly, could also exercise high levels of job control and workplace autonomy in relation to management and other skilled worker groups (interview with Ole Egesund). Craftsmen considered encroachment on their work spheres by either management or less-skilled workers as threatening to their autonomy at work and ultimately to their job security. Management did constantly introduce new working methods and technology that could undermine their position (such as, post-1945, the introduction of automatic welding). Where

26. Andersen, "Producing Producers; Shippers, Shipyards," 467-68.

27. Lane et al., *Ships for Victory*.

28. Alveng and Müller, *Verftet i Solheimsviken*.

29. Lorenz, "Organizational inertia and competitive."

the changes were not fundamental or could be embraced and defined by tradesmen as ‘their’ work, these could be contained and allow skilled workers to continue to assert the craft’s relevance (interview with Ole Egesund). The craft’s integrity was associated with demands for high levels of democratic involvement both within the workplace and in institutions including but not limited to their trade union such as political parties. Membership of a skilled elite engendered a thirst for industrial and political democracy.

Solheimsviken

The Solheimsviken shipyard and its associated marine engineering works was based in Bergen, South-West Norway. Solheimsviken is situated about one mile south of Bergen’s city centre. The Puddefjorden fjord opens out from the yard’s north and a major bridge crossing this fjord connecting the city centre to Bergen west must be passed under to sail north from the yard into open sea. At its highest the bridge stretches 30 metres above sea level, so that bigger ships—but, crucially, not large oil rigs-- can pass under the bridge located about half a mile north of the yard. This limited the yard’s capacity to tender for construction of complete oil rigs in the 1980s; discussion of the possibility of moving the yard to an island off Bergen with much better access to the open sea never led to action (*Dagens Naeringsliv*: 06.02.1989)³⁰. The large yard itself covered about 40 thousand square metres. Shipbuilding and welding halls, each more than 200 metres long, were supplemented by a marine engineering workshop, an iron foundry, slipways and numerous cranes. Most of the modest housing, typically dwellings of some 60 square metres, built by the firm for their workers were situated less than 300 metres away from the yard entrance.

30. *Dagens Naeringsliv*, 12.

The yard was embedded in local industry and the local community, and had long had symbolic importance to the country's industrial profile. Solheimsviken was established in 1855; Laksevaag, its neighbouring sister yard was founded in 1887 (Myran and Fasting 1955)³¹. The two firms built and repaired mainly Norwegian ships and merged to form BMV in 1929. At its immediate post-1945 peak BMV employed almost three thousand workers, and was the biggest employer in Norway besides the state. By 1955 BMV still employed almost two thousand employees. From 1945 until 1965 the yard was owned by a group of local Bergen firms active in shipping, banking and trade. Aker Group, a Norwegian firm engaged in fishing, engineering and construction, owned the yard from 1965-1983. In 1983 a group of some 30 local investors within banking, brewery, merchandising and media acquired the majority of BMV equity (Gilje, 2010)³². Solheimsviken (unlike Laksevaag) became a workers' cooperative in 1985 and remained one –albeit with a 50% equity stake from the French company Bouygues from 1988 onwards--until its closure in 1990.

In large part, the yard acquired its local and international reputation from its workforce's skills. Solheimsviken yard was probably the first shipyard in Norway post-1945 to establish a range of specialized departments including a marine engineering department and an iron foundry, contributing components for complete ships (Braathen, 1987)³³. The craft-based production system described above had considerable advantages for local employers. It allowed the recognition of transferable skills across the industry and raised confidence in skilled workers' capacities wherever they were employed. In Solheimsviken, where training standards were high, its results were relatively good. Thus, the Solheimsviken yard developed an excellent and externally-verified international reputation for the quality of its products and especially its marine engines which derived from the skill and the high degree of collective

31. Myran and Fasting, *Herfra går Skibe*.

32. Gilje, *Skip fra Vik*.

33. Braathen, *Heller Småbruker på Vestlandet*.

autonomy enjoyed by skilled workers in their construction (Jackson, 2009)³⁴. In 1945 – 55 the yard was considered to be nationally leading in one of Norway's most rapidly expanding industries. At Solheimsviken, a vocational training school was created and operated from 1945 to 1952, to address the shortage of skilled workers after 1945. In 1955 – 70 Solheimsviken was in the forefront in Norway in innovating and producing new middle-sized ship types for an international market (Braathen, 1987)³⁵. Traditional histories of the shipyard focused on the ships as products, reflecting workers' sense of pride in their achievement:

The feeling of having done a job, of having welded in such a way that this steel will stand up against any storm at sea, to see «one's own» steel get on top of and be a part of this enormous construction - it makes one feel so indescribably happy - you feel it in the chest like a wave. One has to stretch one's arms and smile until the corners of the mouth click (Alveng and Müller, 1990: 78)³⁶.

The company used a range of methods to stimulate identification with the product, recognising that it could be a short step from there to identifying with the company. It practised a form of paternalism, recognising that the value of their skilled employees was central to their commercial interests. In periods of recession management was reluctant to lay off its skilled workers. To keep them employed, Solheimsviken built ships on their own account, hoping to sell them later, a policy supported by the local community and businessmen, who awarded them shipping contracts (Myran and Fasting, 1955: 21, 23, 98)³⁷. The employer, as in many company towns, also played a considerable role in the local community. In 1857 a primary school for the workers' children was established in Solheimsviken, and existed until the beginning of the 20th century when the town of Bergen assumed responsibility.

34. Jackson, "Bergen's beginnings."

35. Braathen, *Heller Småbruker på Vestlandet*.

36. Alveng and Müller, *Verftet i Solheimsviken*, 78.

37. Myran and Fasting, *Herfra går Skibe*. 21, 23, 98.

The company, like others, long supported certain rituals associated with ship completion. When a ship was launched, workers customarily took the rest of the day off. The owner and managers arranged and paid for a huge party for workers and their wives and girlfriends, and these were massive social highlights in the local community (Myran and Fasting, 1955)³⁸. In common with many other large companies with strong links to their local communities internationally, BMV renewed the tradition of community involvement by supporting leisure events after 1945, and a joint committee with the mandate to allocate money for such purposes was established in 1948. One example of their work was a large cabin with fifty beds bought in the mountains close to Bergen (Myran and Fasting, 1955)³⁹. Bombing of the town in World War Two created a great shortage of accommodation post-war and an explosion of a German ship in Bergen's inner at Bryggen in 1944 damaged more than four thousand houses (Hartvedt, 1999)⁴⁰. In response, BMV built and supported the financing of new accommodation.

These wider cooperative measures were also reflected in the workplace. There was a long history of joint management-worker production initiatives and committees from 1945 right through to 1990. From 1944 an internal newspaper was published on a regular basis in BMV. Well-resourced and produced, it reflected the yard's work daily life and workers' views, while harnessing their ideas for improvements in production practices.

Local skilled workers' culture

Local shipbuilding workers had their own culture separate from that encouraged by the company. The craftsmen at each of the four Bergen shipyards had their own symbols: flags

38. Myran and Fasting, *Herfra går Skibe*. 22.

39. Myran and Fasting, *Herfra går Skibe*.

40. Hartvedt, *Bergen Byleksikon*.

and banners showing ships that were exhibited at central turning points in life such as funerals, in ceremonies in the city of Bergen on May 17th – Norway’s national day-- and on other special occasions. At weddings, these symbols were exhibited behind the bride and the groom.

If such symbols expressed workers’ shared identity in crystallised form, their workplace behavior demonstrated it daily. Hanne Müller, an ethnographic researcher who worked for two periods of four months in Solheimsviken in the 1980s—one during 1981 and subsequently in autumn 1987 during the cooperative (Müller, 2000)⁴¹ argued that the most skilled and senior workers adopted a quite specific range of behaviours—the ways they walked, stood, talked and related to each other:

The more senior and honored workers feel confident in asserting acceptable and normal behavior while young recruits are not. Senior workers have learned how far they can play out their personality. The older Viken-worker used their experiences from the private world and converted them into subjects of humour at the yard. This created its own language... This behavior of moving whilst making jokes is frequently observed among the most skilled workers – those being in their most active stage, at the top of their career in Viken. This type of behavior was non-existent among the young and new, or among the oldest workers (Alveng and Müller, 76)⁴².

She described quite a different set of behaviours among apprentices:

To learn implied a repression of one’s own self, one’s ego, in order to be transformed into a being fit to enter the fellowship. The delicate, sheltered and compassionate son or husband was ground away. As efficiently as the rust was moved away from the steel plates the young worker was polished by the older and more experienced ones through roars of laughter and horseplay, until he finally shone as a hardy workmate who could

41. Müller, *Indre Erfaring som Antropologisk*.

42. Alveng and Müller, *Verftet i Solheimsviken*, 76.

stand up to anything. As time passed by the young boy gradually became fit to be considered a Solheimsviken worker (Alveng and Müller, 74)⁴³.

The skilled workers from different crafts appropriated parts of the yard. They delineated their own 'domestic' spaces within the highly industrial world of the yard, creating a refuge within an environment where vast spaces, massive ships and powerful machinery predominated. These spaces were the home of and coterminous with the most fundamental skilled workers' institution: the booth. The booths were built close to workers' workplaces and were where they ate their meals, took short breaks and deliberated among themselves. They were strictly the preserve of the craftsmen who built them:

The booths are quite different from the places where the people work. Each profession has their own and separate booth. It is unthinkable that a welder goes into the sheet metal workers' booths. When workers are in their booth, they never relate to steel and equipment. They relate to each other (Alveng and Müller 1990: 51)⁴⁴.

They were designed as private living rooms, with tables, chairs, wallpaper and Christmas decorations (Müller, 2000: 75)⁴⁵. The small number of women (some 8% of the workforce in 1986: Økland 1987)⁴⁶ were a part of the appropriate booth community, but their subordinate and sexualized role was symbolically emphasized. There are pictures on the walls in the booths. Many are of naked women with their legs far apart. In a picture in Alveng and Müller, (1990)⁴⁷ an almost naked young woman posed in this way.

The booths were therefore more than a domestic base within the industrial setting. They were also a deliberative institution. Ole Egesund argued that the individual trades and

43. Alveng and Müller, *Verftet i Solheimsviken*, 74.

44. Alveng and Müller, *Verftet i Solheimsviken*, 51.

45. Müller, *Indre Erfaring som Antropologisk*, 75.

46. Økland, *Når Medarbejderne eier*.

47. Alveng and Müller, *Verftet i Solheimsviken*.

their booths were of fundamental significance to the workers' democratic culture. A second, more explicitly democratic institution forged by workers was their union club which brought together all the yard's crafts and unions on a regular basis. According to Egesund, the union club also played a central role in the yard's daily life under Aker and assumed even more importance after 1985 by providing a physical and social space for democratic control of the cooperative. The third institution was the open meeting, used by all eleven unions for many years, with several meetings held each year. They were held during working hours or immediately afterwards in the large canteen. Customarily, all employees, except those absent from work, attended these meetings.

Prior to the cooperative's formation, a white-collar worker Jørgen Dahl commented to the company newspaper *Linken* (no.3, March 1983)⁴⁸ on the extent both of his personal involvement in a wide range of decisions, and that of many other workers:

I have had the opportunity to join the Board, corporate assembly, work in the union and projects in my daily job. I will pay attention to how decisions are made. Everybody seem to have a say in almost all decisions (*Linken* no.3, March 1983)⁴⁹.

The workers' democratic machinery formally included the minority of women workers in the yard, but they felt in some respects that they were at the workplace community's margins. Four women cleaners who worked at both Laksevaag and Solheimsviken reported to the company newspaper in 1983 (*Linken* no 5, June 1983)⁵⁰ that although they were 'respected' by the men, some of the men said they "would never let their wife take such a job". The women referred to their strong relationships between themselves as cleaners as their source of support

48. *Linken*. *Internal newspaper*.

49. *Linken*. *Internal newspaper*.

50. *Linken*. *Internal newspaper*.

in the context. They summed up their feelings by saying that they would like to be “considered part of the total function and treated accordingly...we do an important job and contribute to individuals’ well-being” (*Linken* no.5, June 1983)⁵¹. A skilled woman carpenter, Eva, struck a rather different but consistent note. Interviewed in the same newspaper’s previous edition, she reported satisfaction with her work but added that she would have preferred better physical facilities for women such as wardrobes and lavatories (*Linken* no.4, May 1983)⁵². It appears that the strong union had not prioritised requesting this type of facility.

For much of the post-war period, management accommodated the skilled worker culture and its manifestations. Braathen (1987)⁵³ interviewed 34 engineers and union leaders during spring 1987 focusing on the yard’s organization from 1945. Braathen concluded that the unions and shop floor workers had strengthened their power in relation to the professional engineers. A new CEO in 1967, Osland, sought until he left in 1982 to develop a cooperative climate between top management and unions. The shift in power was manifested in frequent and regular meetings between the union club and top management where the management and operation of the yard was on the agenda. Osland acknowledged that change and prosperity at the yard relied heavily on the skilled workers. From 1970 Osland allocated 3 full-time positions for union leaders. Osland fostered an egalitarian culture where skilled shop floor workers were considered as at least as important to the firm as white collar and professional employees. From 1968 most engineers had to start as shop floor workers for a few years before they could enter their position as professionals (Braathen, 1987)⁵⁴.

However, the entire operation was already under threat when this research was being conducted.

51. *Linken*. *Internal newspaper*.

52. *Linken*. *Internal newspaper*.

53. Braathen, *Heller Småbruker på Vestlandet*.

54. Braathen, *Heller Småbruker på Vestlandet*.

The cooperative's foundation and operation

To contextualise how the idea of employee ownership arose, we now draw on our interviews to examine how employees in Solheimsviken experienced the ownership, management and supervision of the firm in the years immediately prior to the cooperative's formation. In this period, workers felt decreasingly secure in their jobs during and finally, many came to the conclusion that the owners had little interest in shipbuilding *per se*. For some years prior to 1982 the Aker Group wished to sell Solheimsviken, and workers therefore felt their jobs to be insecure. Yet workers continued to feel faith in their skills and many bought shares when invited to do so by the company. Supervisor Jan W. Holten commented to the company newspaper:

I have signed on the list of share buyers. First and foremost I think we all have to do what can be done to alleviate the bad times that we as a yard go through. In addition I am strongly attached to the yard in Solheimsviken. I have worked here for 36 years, and I cannot imagine a better place to work. The staff is highly skilled, all cooperate very well and the social climate and environment is very good. It is very encouraging to see how the youths handle our problems and challenges. Among my colleagues we have several newly-weds who have just started a family, and they have little money. But I have noticed several of those youngsters subscribing to the list to share purchases for an amount equal to one month's rent (*Linken* no 3, December 1982)⁵⁵.

That a manager should comment in this way was predictable, but his reference to younger workers is revealing. Moreover, interest in the share offer was not limited to managers.

55. *Linken*. *Internal newspaper*.

As Hakon Olsen, a carpenter, commented to the company newspaper on why he subscribed to a share issue:

I feel strongly attached to the workshop and yard in Solheimsviken, and I really believe in a future for the yard despite the difficult times we have endured. This faith is not only based on wishful thinking. I know for sure there is a good professional attitude and skills among workers here and I have confidence in the way the restructuring of the yard is being managed (*Linken* no 3, December 1982)⁵⁶.

In 1983-84 Solheimsviken was owned by about 30 local firms as described above (Gilje, 2010)⁵⁷. This period was characterised by a passive board and conflicts over who should be CEO. The local owners had no wish to secure new shipbuilding and ship repair contracts and were suspected of simply wishing to realise the site's considerable value as property in Bergen's centre. When the finance and investment firm Investa estimated the Solheimsviken land to be worth 130 million Norwegian Kroner, they exacerbated workers' sense of insecurity. Their suspicions proved well-founded. In mid-1984 all employees were fired. The owners wanted to shut Solheimsviken.

The idea that employees might become owners was first raised by Kjell Høibraaten in a local meeting of the Iron and Steel Union immediately after the sackings. He also proposed that the social and welfare fund (see below) could buy shares in Solheimsviken. No other forms of ownership were discussed but all employees were invited to buy shares individually in order to expand the firm's equity, recalling the practice of a century previously. The idea won support among all participants at the local union board and was subsequently introduced to all employees at an open meeting. The attitude among employees at these 1984 open meetings was that they believed in Solheimsviken. The workers stressed that the efforts they made to secure

56. *Linken*. *Internal newspaper*.

57. Gilje, *Skip fra Vik*.

the yard's future was in order to keep their jobs, but their arguments also transcended that. They might have jobs if the land were put to another use, but they wished to preserve their skills and the local community. During the initial open meeting, all employees supported collective ownership except one former union leader who left the meeting in protest. In common with a strand of opinion in trade unions internationally (Ozarow and Croucher, 2014)⁵⁸, he felt that employee ownership could undermine the unions' roles as instruments to protect workers' interests.

The employees collectively owned about Norwegian Kroner 1 million through a social and welfare fund, legally organized as a private foundation controlled by the County Governor of Hordaland. Originally established in 1981-2, its purpose was to support the social interests and welfare of all employees. The fund was originally established by agreement between the company and the unions, and was productivity-related. Where less working hours than budgeted were spent on a ship building or repair project, part of the cost saving was paid into the fund. The first project after its establishment generated a contribution to the fund since only 790 thousand working hours were required as compared to an estimated 820 thousand working hours. Prior to 1985, no money was disbursed from the fund (interview with Kjell Høibraaten). The fund was owned and managed by all employees collectively, and no individual employee had any individual rights in it. Those who stopped working at Solheimsviken lost their legal link to it. All of the fund's board members were employees, elected at the open meeting.

In January 1985 the social and welfare fund bought shares in Solheimsviken, purchasing 90 percent of the equity. All employees were included, not simply the 97% who were union members. Once the cooperative had been formed, the workers' democratic machinery took on the essential new role of governance. The union club was linked to the

58. Ozarow and Croucher, *Workers' Self-management*.

workforce via the booths and machinery was established to maintain productivity. Ole Egesund:

Every week booth groups used to have meetings with the head of the union club and a productivity secretary in cases where the group was behind production schedule. It was the union club that actually proposed this arrangement, and the productivity secretary was hired in 1985. And actions were planned at the meeting to keep up with the schedule.

The union club now formally operated as an instrument of control over management, in the account given by Egesund:

(It) organized open meetings among all workers to inform and discuss common firm issues. We as union club along with the workers controlled the firm. Much of this has to do with the fact that we were co-owners. On a daily basis I showed up at the CEO's office to keep up with what was going on. We agreed on most issues, but in a few cases, I instructed him what to do on behalf of the union club. He never dared to oppose me, because in reality I represented the co-owners. And it was me and Kjell (Høibraaten—authors) who recruited the CEO.

Older skilled workers identified more strongly with the company than their younger counterparts, as a survey we conducted in October 1986 demonstrated. 416 questionnaires were distributed to workers in the cooperative, with a 34 per cent response rate, an acceptable rate in line with classical work on response rates (Baruch 1999). There were no systematic biases; for example, there were 7.1% women in the sample although less educated and lower graded workers were slightly underrepresented. Organizational identification was measured by four items from the 15-item Organizational Identification Questionnaire (Mowday, Porter and

Steers 1979)⁵⁹. The construct has a fair degree of uni-dimensionality with a Cronbach's alpha coefficient at .79 for the following four items:

- I talk to my friends about this company as a great place to work.
- I find that my values and those of the company are very similar.
- I really care about the fate of this company.
- I'm proud to tell others that I'm working for this company.

Means and standard deviations for the variables are provided at the end of the paper in Table 1. The results show that organisational identification was closely associated with seniority. Workers with higher seniority identified significantly more strongly with the yard than those with shorter employment histories.

However, workers were governing an increasingly ailing firm. In common with much West European heavy shipbuilding, the company's competitive position worsened throughout the late 1980s. From the early 1980s through to 1987, the yard focused on building oil rig modules, bringing very considerable changes to the yard as both a physical and associative entity. By December 1987, there was no money available to repair broken machinery and the yard completely changed its appearance. One of the slipways was torn down. Parts of the yard were rented out and used for other activities. Alveng and Müller, working in the yard at this time, remarked:

When you enter the yard in the morning something has disappeared. The solid ties between the person and the area are torn up.....every day the workers noticed how their old shipbuilder identity was being smashed to pieces. They realized that times were different, «the fun was gone», as they expressed it. Whole

59. Mowday, Porter and Steers, "The measurement of organizational."

communication areas among workers were disappearing (Alveng and Müller (1990: 82-83)⁶⁰.

Crucially, the booths were dismantled to make space for renting out. Although at one level a simple recognition of change, it also meant the disappearance of industrial democracy's basic unit.

Reorganisations eroded work groups, the basis of democracy. The shift from producing ships to oil modules, a process which had been under way well before the cooperative's foundation, was accompanied by the re-organization of the yard from being fully functionally-based to being a project-based organization (Fauske and Høyem, 1987)⁶¹. Most workers changed work groups and physically moved to new locations in the yard. Managers from outside the yard acquired considerable control. Managers and key personnel in the project organization were approved by the contracting company Statoil. Planning was mainly executed by external consultants due to a lack of appropriate competencies among the staff. Finally, and further reducing workers' autonomy, Statoil established their own organization at the yard to quality assure work processes and products.

Soon after the cooperative's foundation, the quality of democratic involvement declined. Roger Ingvaldsen explained, providing a rather different perspective to that of Egesund above:

In the old days problem solving and how to do our job was up to me and my colleagues.

But that is history. Nowadays we are being treated as if we have no brain to think with.

There is no discussion and nothing to discuss. We are just being told what to do and how to do it. The groups in the booths terminated as we were moved to work on the oil

modules. The only discussions nowadays take place in the canteen with some of my good

60. Alveng and Müller, *Verftet i Solheimsviken*, 82-83.

61. Fauske and Høyem, *Styring og Organisering*.

old colleagues from the booths. And due to the financially strained situation here at the yard now, there are no discussions at the open meetings anymore as opposed to 1984-85 when the workers became owners and long before that. Those open meetings are less frequent, and most of the time the CEO and the union leaders inform everyone about the financial situation and the yard's prospects.

Workers at the yard had experienced a vigorous democracy until 1985 at the latest. Paradoxically, soon after the cooperative's formation, workers had little say in its operation.

The cooperative sought a partner and in April 29, 1988 the French firm Bouygues bought 50 per cent of the equity while the other 50 per cent remained in employee hands. The French were enticed by the location in relation to the North Sea and by CEO Kjell Høibraaten's vision for the company to make specialized ships (*Dagens Naeringsliv* February 6, 1989)⁶². Nevertheless, the poor financial position meant that the cooperative had to continue a practice which had begun earlier. Workers were hired out to other workplaces where their skills could be sold: to other yards, to the Aker Stord oil platform-producing yard outside Bergen, North Sea Oil platforms, and elsewhere. They therefore worked in different, more international or at least less local environments. The previous custom had been for workers to work at Solheimsviken for their entire working life. Thus, we find a local newspaper reporting (*Aftenposten* October 5, 1985)⁶³ that not more than half of the yard's employees were currently employed; that those who were worked on a series of short assignments and that the company hoped that number to be laid off would not exceed the current 240.

As Kjell Høibraaten elaborated:

The mobility of the work force grew from 1984. This was not due to the start-up of the worker co-operative.....The last ship was built at Solheimsviken in 1983. In order to

62. *Dagens Naeringsliv*, 12.

63. *Aftenposten*, 5.

keep the staff busy, many workers needed to work for other companies at other sites. A Viken-worker was very competent, and we had a good training department at the yard. It was easy to hire the workers for jobs outside the yard. From 1984 a major part of the staff worked for hire in the North Sea and at other yards in Norway...maybe we are talking about 30-50 per cent of the staff working outside the yard.

A simultaneous shift in skills requirements also threatened older workers' status within the workforce. The issue was partly physical and partly technical. Older workers were physically and psychologically reluctant to embrace the new type of work, which could involve new skills and working at heights with oil modules. Equipment, work procedures and quality control procedures all became more demanding. Workers in their 30s were optimally suited to manipulating heavy oil platform components and equipment. After the age of forty, the certificates welders required to work on more difficult work became harder to maintain and they then had to be moved to simpler jobs. On these tasks, their earnings fell below those of the younger workers. The value and status of a young highly-skilled welder on the other hand was now considerable. Senior workers' old shipbuilding skills were becoming increasingly outmoded. The old feelings of community, equality and companionship in a fixed and well-recognised craft and of a common language and identity were dissipated. A gap emerged between the actual nature of the workforce and union leaders' recognition that although shipbuilding work could still be sought, it was important to prioritise seeking oil module work since this was both available and suitable at least for younger workers (interview with Ole Egesund).

Nevertheless, and despite the erosion of the senior skilled workers' capacity to exercise direct pressure, the limitations to their actual capacities and preparedness to adapt were also abundantly evident. The company's management was therefore caught in a difficult situation if not a dilemma: how to represent the interests of different sections of the workforce. Could it

present itself as both a shipbuilding and an oil module producing firm? This was important background to Kjell Høibraaten holding out the prospect of new shipbuilding work being acquired in early 1989 (*Dagens Naeringsliv* January 31, 1989)⁶⁴ while complaining of the subsidies enjoyed by competitors from other nations, notably Japan. Simultaneously, Solheimsviken invested heavily to secure the contract for constructing modules for the Sleipner field, but in March it became clear that this had been awarded outside of Norway. Increasing debt meant that the Norwegian Bank eventually lost patience and required repayment (*Dagens Naeringsliv*, May 30, 1990)⁶⁵. As Bouygues were also unwilling to commit further finance, the yard went into bankruptcy and closed. *Bergens Tidende*, the local newspaper, reported on 7 August 1991⁶⁶ that the yard was being stripped of its physical assets. Kjell Sorensen reported that many of the skilled workers had found alternative work and that the mass unemployment that had been feared had not in fact materialized. Nevertheless, a particular workers' culture had disappeared.

It may be argued that the workers' culture and associated democratic institutions had contributed in some ways to the cooperative's failure by limiting the range of strategies that appeared plausible to its leaders. Unlike its previous partner yard Laksevaag, the cooperative adopted a strategy of only partial adaptation to the requirements of North Sea Oil, which meant it retained essentially redundant shipbuilding capacities. The culture of work was based on the exercise of shipbuilding crafts at a time when these were becoming increasingly dysfunctional to the yard's survival. Yet while the culture encouraged the cooperative's leaders to present the yard as a shipbuilding concern, it did not prevent them seeking and obtaining work on oil rigs. Moreover, both the scale of the investment required (for example to move the yard) and the history of West European shipbuilding's decline suggest that the scope for the cooperative to

64. *Dagens Naeringsliv*, 15.

65. *Dagens Naeringsliv*, 25.

66. *Bergens Tidende*.

devise a meaningful survival strategy was in any case extremely limited. Global forces had intervened.

Conclusion

Our central strand of argument was that the skilled workers' culture was linked to industrial democratic impulses. This contributed to a broader national labour movement which was one of the strongest in Europe throughout the post-1945 period. Corelli Barnett's assertions about British shipbuilding unions (*inter alia*) exerting excessive industrial power, thereby hampering modernisation should be seen in these wider democratic and international contexts. We have shown how skilled Norwegian workers shared many of the same impulses as their British counterparts and have argued that workers' culture had democratic and not simply 'restrictive' components.

The Solheimsviken cooperative may be understood as a final manifestation of a culture which fostered a powerful wish among the skilled men to exercise significant democratic control at work. The culture was based on respect for craft skills and had a range of behavioural and symbolic aspects supporting its institutional manifestations. Collective identity was manifested in a complex of signifiers: the ways that individuals conducted themselves at work, the domestication of the industrial environment, assertion of workers' realm within it and a web of rituals and symbols. These were the basis for a well-developed set of institutions that reached their apogee at the point of the cooperative's formation. The skilled workers' cultural tradition was in certain respects extensive in that it was buttressed by its links to the local community and enjoyed a wider set of associations characteristic of the industry as

a whole. These associations played a significant role in the cooperative's foundation but ultimately could not sustain it in the face of the material reality of intense global competition. The culture was at best ambiguous in its limited propensity to involve those considered as out-groups, notably women and young workers who either could not or had not yet 'achieved' acceptability to the older male skilled workers. At worst, it was diminishing and negative to those who were excluded. At its core, the skilled workers' culture was founded on their identity as part of an exclusive group of skilled men and its limitations were its obverse.

The culture of skilled work at Solheimsviken was deeply embedded but was ultimately swamped by processes that began before the cooperative was founded, by industrial changes that would have been recognised by the craft workers of a century before. They had long feared rapid and fundamental technological upheaval for its potential to undermine and ultimately destroy their crafts. Ironically, the beneficiaries of this cataclysmic change when it arrived were the younger workers who had previously only been admitted to the 'fellowship' after apprenticeship and who, even as young journeymen, were simply tolerated. For them, the old solidarities soon constituted little more than a memory of the past.

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Table 1

Worker seniority and identification with the company:
means, standard deviations, and correlations^a

Variable	Mean	s.d.	1	2
1. Identification	4,81	0,885	-	
2. Seniority	18,27	11,750	.208*	-

Notes:

^a n = 141

*p < 0,05