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Soulful and Precarious: The Working Experiences of Surfboard Makers

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Abstract

Surfboard manufacturing is an essential part of the multibillion-dollar global surf industry. Not only do surfboard manufacturers supply consumers with the material means necessary for surfing, they provide subcultural capital to retailers and multinational surf brands that generate profit from surf-styled garments and apparel. Initially drawing from centuries-old Hawaiian precedents, surfboard manufacturing only developed as a capitalist industry in the late 1950s. Following convergence with Hollywood-inspired popular culture (film, television, and music) surfing became a fashionable leisure activity. A newfound popularity among Westerners produced a mass market for surfboard producers. Surfboard making, previously a do-it-yourself (DIY) hobbyist activity concentrated in backyard toolsheds, moved into factories and became full-time waged employment. Surfers found a way to sustain a living around pleasure.

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Soulful and Precarious: The Working Experiences of Surfboard Makers

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Introduction

This essay contributes to the collection through a focus on the working experiences of surfers who craft a living making surfboards. Surfboard manufacturing is an essential part of the multi-billion dollar global surf industry.¹ Not only do surfboard manufacturers supply consumers with the material means necessary for surfing, they provide subcultural capital to retailers and multinational surf brands that generate profit from surf-styled garments and apparel.² Drawing from centuries old Hawaiian precedents surfboard manufacturing only developed as a capitalist industry in the late 1950s.³ Following convergence with Hollywood-inspired popular culture (film, television and music) surfing became a fashionable leisure activity. A newfound popularity among Westerners produced a mass-market for surfboard producers. Surfboard making, previously a do-it-yourself (DIY) hobbyist activity concentrated in backyard tool sheds, moved into factories and became full-time waged employment. Surfers found a way to sustain a living around pleasure.

In the early 1960s surfers scrounged enough financial investment, usually via social networks rather than banks, to fit-out new commercial factories. A considerable number of ostensibly localized surfboard workshops established in places where surfing was popular and increasingly a “way of life.”⁴ The production “hotbeds” were not the inner urban spaces of global cities, rather prosaic suburban

areas and coastal towns such as San Clemente and Santa Cruz, California; the North Shore of O‘ahu and Sydney’s Northern Beaches and the Gold Coast, Australia.

From new workshops board makers provided local surfers with customized, hand-crafted products, tailored to prevailing marine environments. Shapers and glassers – the two primary labor tasks – utilized skills and techniques developed from a DIY scene. Close personal relationships were formed with surfing customers who frequently returned to workshops for new orders.

Against the backdrop of industrial development we explore the working conditions and wider social lives of surfboards makers. Rather than isolating the contemporary situation the essay takes a historical approach. We draw out the significant features of the surfboard industry, tracing how these have been shaped, experienced and contested by workers into the present. Writing as two human geographers, the essay is conceptually animated by arguments emerging from two areas of our discipline, and social sciences more broadly: labor geography and the cultural turn. The former has its roots in Marxist political economy, but pivots against its perceived capital-centrism. The latter is a reaction to orthodox approaches that studied economic phenomena in isolation from wider socio-cultural forces.⁵ Labor geography aims to scrutinize the changing nature of work, examining the capacity of working people to (re)shape economic landscapes and improve their material circumstances.⁶ Meanwhile, cultural economy theory mobilizes ontological and epistemological questions about how to understand and conceptualize the relationship between culture and economy.⁷ At a time when flexible labor markets and the terms and conditions of employment are fundamentally changing, our writing is thus part of a political maneuver to focus on the perspectives, values and actions

of *workers* rather than firms, institutions or the state. Of course, this does not preclude such important actors from analysis; it merely re-positions them. The aim of the essay is to contribute insights into how surfboard makers, a group of passionate craftsmen, balance work alongside lifestyle.

In the following section we elaborate our labor geography approach, situating its objectives against the realities of a growth in insecure, informal and precarious work. A focus on surfboard makers as paid labor is then placed into dialogue with cultural economy theory. We conceptualize surfboard manufacturing as economic activity that is socially situated and culturally inflected. In the surfboard industry meanings and motivations of work, spaces of production and relations with customers are mediated by values, customs and meanings attached to surfing culture. After a brief overview of methodology we present empirical results of research with surfboard makers, organized in two overarching sections.

First we outline the craft-based systems of surfboard production around which an industry coalesced and examine the working conditions engendered. Wages in surfboard manufacturing have always been paid by unit of production (“piece work”), not the unit of time.⁸ For many surfboard makers this mattered little because work was plentiful and valued as a “soulful pursuit.” After describing transformation in the surfboard industry we analyze the pervasive systems of automated production. Representing a shift towards capital intensive manufacturing we discuss how working conditions have changed. In highlighting themes of subcontracting, dwindling working hours, rates of pay and benefits we argue that work in the surfboard industry increasingly constitutes precarious labor.⁹ We also note countercurrents to the rise of standardized machine production with a strong

consumer movement returning to customized production and hand-shaping.

Concluding the article we consider several ongoing barriers facing surfboard makers. Traced to the “culture of the industry” such barriers include the absence of a centralized industry association to lobby retailers, suppliers and governments on behalf of board makers; little provision of formal skills training; and a lack of succession planning.

Labor Geographies and Precarious Employment

A growing proportion of paid employment in advanced economies is demarcated by part-time or temporary contracts; weakened paid leave entitlements, health and pension benefits, and declining levels of union coverage.¹⁰ In Australia, an estimated 40 percent of the national workforce is now employed in insecure forms of casual, contracted, or project-based work; rising from just 15% in 1984.¹¹ The figures are closely echoed in the United States and European Union. Precarious work has been trafficked by the evolvement of economic globalization and neoliberal economic policies. Heightened working flexibility (hours, labor tasks, pay structures, mobility and relations with employers), according to Jane Wills, is having “stark consequences for traditional models of trade union organization.”¹² Collective bargaining is hampered by the spatial, emotional and legal disconnection of employees from employers. The target for workers to challenge and contest the erosion of basic working entitlements has become multiple and shifting. In this essay we are interested in the experiences of a group of workers would do not exhibit solidarity or collective action via any trade union.

With cognizance of employment in other craft-based industries—from clothing and clocks to furniture and fashion—surfboard manufacturing is set against a backdrop of automation, standardization and “global” geographies of (mass)production. Transformation to production has occurred in concert with moves to temporary, casual and contract work. Precariousness denotes both the amplification of unstable, insecure employment, and new struggles and solidarities reaching beyond traditional models of trade unionism. According to Andrew Ross the precarious nature of much paid work under contemporary capitalism offers a possible source of solidarity between disparate groups of workers.¹³ Despite increases in precarious work the lived experiences dealing with, and contesting against, short-term contracts, fluctuating wages and uncertainty remain loosely implicated within labor studies.

Surfboard makers provide relevant insights into the experiences of workers as conditions of employment change and become less secure. Up until the 1950s the labor of surfboard makers functioned outside the formal capitalist economy, highlighting the importance of feminist arguments that advance ontological understandings of labor as a dynamic social category, enrolling individuals, family, and communities in spaces of production/reproduction and paid/unpaid human effort.¹⁴ Surfboards were made in backyard sheds, DIY style, to enable surfing participation and enjoyment. Laboring in the contemporary industry for a wage remains an activity strongly influenced by cultural values and legacies established in a context of informal networks, backyard operations and work structured around paid jobs. Culture powerfully shapes workplace relations in the surfboard industry.

Cultural Economy: Conceptualizing Work in the Surfboard Industry

Surfboard making has been strongly motivated by personal desires to create more functional products for surfing, rather than financial incentives. Surfboard makers illustrate the relevance of engaging with workers beyond narrow identity categories such as wage laborer.¹⁵ In this essay labor geography is placed in conversation with cultural economy to theorize the way cultural orientations of surfing feed into and shape surfboard manufacturing; labor processes, business practices and industrial relations. The use of cultural economy connects with developments from feminist economic geography that stress the centrality of social constructions (of race, class, age and gender) in configuring working relations.

Because “the” cultural economy is most evident in certain sectors such as the arts, entertainment and tourism it has become a general signifier of the cultural and creative industries.¹⁶ However, deploying cultural economy as a narrow descriptor for the cultural and creative industries positions “culture” as merely an economized component of post-industrial societies. In reality, culture actively influences all economic activities, from decision-making about work tasks to our consumption choices.¹⁷ As traded products, surfboards entangle regional identities, physical geography, leisure, creative design and material production. Surfboard makers elucidate the synergies between so-called cultural industries and manufacturing.¹⁸ Indeed manufacturing is an *essential*, often ignored, element of cultural industries production and surfboard makers explicitly identify their work as being about “manufacturing things.”

Our analysis in this essay thus connects to the original theoretical thrust of

cultural economy: the understanding that economies are “neither separate nor hermetically sealed away” from social, political and cultural spheres.¹⁹ Culture is not a passive reflection of material circumstances.²⁰ Shifts in economic relations and making of new economic spaces never so much inculcates culture anew as signals changing dynamics under a constellation of forces. Rather than occupying abstract space somewhere “out there,” economic activities, such as surfboard manufacturing, are placed in their relevant contexts. Culture (like history and politics) is acknowledged as a profound “shaper” of economic behavior, relations and actions in the spaces of work.²¹ We draw from cultural economic thinking to trace the particular values, meanings, beliefs and ethics informing relations in commercial workshops and between surfboard makers.

In California and Australia, commercial surfboard manufacturing surfaced within subcultural groups of surfers who, seeking legitimacy and a monetary wage, began making and selling boards in local areas. Surfboard production in Hawai’i has a much longer historical connection to traditional Polynesian forms of crafting, dating back 1000 years.²² In Hawai’i, too, capitalist production only coalesced in the late 1950s in a cultural setting where keen surfers, often *haole* (foreign) immigrants, turned to making boards for others, for cash.²³ Profit-driven production catalyzed as surfing converged with popular culture and a sufficient population took-up the activity to create a viable commercial market for surfboards. By this time, however, the approach, methods and techniques related to surfboard manufacture were already in-place, instituted by surfers who long made their own boards to enable personal surfing participation. Personal passions, relationships, sporting competitiveness and local waves define the profit-based capitalist version of

surfboard making as much as prices, wages and rents. Surfers pursued jobs in the industry as a way to maintain a particular lifestyle. Workers could down tools when waves were good and go surfing because the culture of the industry made it acceptable to structure production around the rhythms of the ocean.

Economic matters such as profitability, rents, market share and labor markets remain significant factors influencing working conditions in the surfboard industry. As Doreen Massey has urged, culturally-informed analysis must not “float free of the [political] economic.”²⁴ Rather, the argument is that the economic is socially situated and culturally inflected. The spheres of economy and culture maintain “specificities” but also intertwine.²⁵ Bringing labor geography and cultural economy into dialogue is an attempt to acknowledge the multiple identities of surfboard makers. Cultural economy encourages deeper thinking about the subjective positions of this group of workers, important in this essay for conceptualizing worker’s motivations and explaining why some self-exploit, do not see a need to collectivize and endure precariously.

Research Methodology

Empirics for this essay were taken from a broader research project examining the industrial development and contemporary conditions of the surfboard manufacturing industry. Between 2008 and 2015, 38 commercial factories and 139 workers participated in the project. Research concentrated on the three main production hubs: Southern California (Los Angeles and San Diego), O’ahu, Hawai’i and Australia’s east coast. In each of these locations surfing is highly popular and

constitutes a substantial industry. Surfboard workshops across the three regions shared similarities in terms of commercial size, production levels, employees and market geographies. The largest firms employed up to 20 workers; the smallest only two. A total of 16 workshops (39%) exported internationally with 14 (37%) selling across national markets. Eight workshops (21%) serviced consumers within immediate regions. Workshops manufactured between 200 and 5000 boards annually, with revenue ranging from approximately US\$3 million to US\$145000.

Research with individual workers commenced with guided “workshop tours.” Designed as a form of participant observation, workshop tours were delivered by board makers and began with a walking tour through their workplace. Board makers explained production processes; use of tools and equipment; organization of space; divisions of labor and personal aspects of work. Each workshop tour allowed us to meet individual workers, learn about their jobs and establish a level of trust. Tours were initially led by a single worker, involving colleagues along the way. Depending on the physical size of factories, tours lasted between two and eight hours. Workshop tours were then supplemented with participation in surfboard making. Here the research adapted Michael Burawoy’s extended case method, deploying participant observation alongside workers within and beyond the workplace.²⁶ Basic jobs (cleaning, sanding, unloading, carrying, storing etc.) were completed collaboratively with workers with technical tasks (designing, shaping and glassing surfboards) closely observed so that workers could discuss the labor process *in situ*. Participant observation in workshops lasted more than a month in each region. Fieldwork diaries were used to document observations and preliminary findings. Contact was maintained with workers through return visits to factories and regular phone/e-mail

communication. Semi-structured interviews with all thirty-eight-workshop owners were also undertaken to provide additional information on workshop history, workforce, business challenges and planning. While largely qualitative, the semi-structured interviews posed questions that allowed quantitative sketching of a firm's production levels, marketing budgets, sales, turnover and profitability. Interviews were recorded using a small hand-held device with more than 650 hours of interview material captured.

An important final point: workers featured in the essay are all men. While sharing diverse cultural and ethnic backgrounds, including *kānaka maoli* (native Hawaiians), the dominant male focus reflected the fact that not a single worker making surfboards across the workshops was female. Where women worked in factories was in administration and front office positions, reflecting: 1) wider gendered discourses about the types of jobs suited to men and women, and 2) the gendered nature of Western surfing subculture more broadly.²⁷ Consequently, our empirical analysis relates to male workers, most from working class backgrounds. Pseudonyms are used throughout to maintain the privacy of workers, their families and workshop owners/managers.

D) A system of Craft-Based Customized Production

The labor process for hand-making surfboards has changed little since pre-contact Hawaiian times. In late Hawaiian society specialized wood crafters (*kālai papa he'e nalu*) produced surfboards for *ali'i* on a full-time basis. In a more contemporary context *shapers* designed and planed surfboards from molded casts of

foam, referred to as “blanks.” Foam began to widely replace timber in surfboard construction from 1957 and dramatically reduced labor intensiveness.²⁸ *Glassers* (usually called *laminators* in California) covered finished foam shapes with fiberglass cloth (in sheets of varying density), coating in liquefied resin to achieve a water-tight finish. Shaping and glassing were manual forms of labor involving highly attuned haptic skills: sense of feel and touch over foam and fiberglass, expert use of hand-held tools (planers, sanders, surface form tools and squeegees) and sensitive eye for detail.²⁹

In factories with higher production runs, additional jobs had devolved from shaping and glassing. *Sanders* performed the final stages of finishing work on shaped boards before they were glassed. *Polishers* cleaned glassed boards to ensure they were ready for collection. Sanders and polishers commonly explained how they were “biding their time” performing more remedial jobs in anticipation of opportunities to shape or glass (Tony, O’ahu). Nonetheless sanding and polishing were valued forms of labor in factories. Several busy workshops also employed full-time shop managers to ensure good customer service and organized business operations.

Occupational skills in surfboard making accrue gradually. No formal training environment or professional qualifications exist in the surfboard industry. New workers have traditionally been sourced from surfing communities, learning “the ropes with sanding or polishing duties” (Steve, glasser, Southern California). Workplace hierarchies are based on experience, similar to a commercial kitchen. While not formally certified, board makers recognize different career stages: apprentices (0-4 years), early careers (5-9

years), mid-careers (10-15 years) and 'journeyman' makers (15+ years). After some thirty years in the industry, personally making and supervising around 30000 surfboards (shapers often number boards – meaning it is possible to quantify 'expertise') workers are recognized as 'master craftsmen.' In 2000 the International Surfboard Builders Hall of Fame was launched as a more formal approach to recognizing master craftsmen in the industry.

Hand-crafted surfboards are labor intensive products, usually personalized to individual customers. Customization is a ritualistic process tracing back to surfboard making's commercial beginnings. A journeyman shaper in Australia explained: "Customers come in... [we] talk with them about the style of board they're riding and what they are after. You develop an understanding of what sort of surfer they are. That's important. From this I design a board using all the different elements that make it function: width, length, thickness, tail, fins, rocker. From those design features, when I get my hands on the blank I've got the board pictured in my mind. ... Custom surfboards are the heart and soul of the surfboard industry because it's how you develop such great relationships with your customers" (Mark). Shapers, in particular, complete several different labor tasks simultaneously, meeting with customers; designing new boards and shaping them into material form. The same workers often exchange finished products with customers too.

The wider surfing identity of surfboard makers has commercial importance for workshops in two main ways. First, in craft-based production board makers become intimately connected to final markets. Social interaction with customers in and out of the surf ensures regular feedback is provided on the performance of boards that need to match consumer expectations. Second, the personal surfing of

makers helps in-grain and shape embodied knowledge on how various design elements compliment certain waves. Physical geography seeps into custom surfboard making and makers need an understanding of local surfing conditions. For instance, on O'ahu's North Shore, where six participating factories were located, typical waves are large, hollow and powerful. Hawaiian surfers require a unique design and style of board—longer, wider and more streamlined—compared to surfers riding smaller beach breaks in Australia or California.

For board builders, time invested in speaking with customers and personal surfing is important for both knowledge generation and the economic viability of factories aiming to produce high-quality cultural products. The subcultural credibility of 'expert' shapers is attained over time. Overall the subcultural credibility of board makers often translates into loyal commercial following. Local shapers become the symbolic craftsmen of the industry and custodians of surfing folklore. Board makers become deeply attached to their local surfing communities: members of board riding clubs, judges at surfing contests and sources of information on new products and innovations.

Commercial viability of craft production was further supported by the high turnover of surfboards. In each region avid surfers who are in the water several times each week, commonly order two or three new custom boards a year. Surfboards cost between US\$500 and US\$1200 depending on the design, size and artwork. Custom board makers incentivize consumption by providing discounts for regular, return customers, often 10% to 20% over first-time customers.

In terms of output, experienced hand-shapers can complete four or five boards in an eight-hour working day. Such production numbers are rarely reached,

however, due to significant time investments required to talk over new orders with customers. Glassers can finish sealing a surfboard in under an hour with preparation of materials and equipment adding additional time to the production process. Close relationships between workers and customers is what defines craft-based surfboard manufacturing as a distinctive form of commodity production.³⁰ In surfboard making close, personal relations are a customary part of the industry.

Work and Craft-Based Production

Workers in craft-based workshops contested for (and maintained) suitable employment conditions by leveraging subcultural capital: attachments to customers, craft skills, surfing credibility and expert knowledge. A shaper at a popular Australian label described the agency created and maintained by workers in ostensibly small, endogenous firms: “No surfboard label has been able to monopolize the market. Waves break differently wherever you are in the world. It means you need a different design of board and different skills depending on where you are. For us [workers]; we have the knowledge about waves, styles of boards and what our customers want. We come from that culture. It’s a soulful process, hand shaping, and the surfers who buy our boards absolutely get that. It’s an art” (Wade, shaper). Localized labor markets, slowly-accrued haptic skills and consumer preferences for “soulfully-made” customized boards were important features of craft-based systems of surfboard production.

In surfboard workshops wages were calculated based on the unit of production. The amount paid for each board shaped, glassed, sanded or

polished varied across the case study regions. Generally, hand shapers received US\$100-US\$150 for a short board design (five to eight feet long); US\$150-US\$200 for longboards. Glassers made around 75% of these amounts (on a per-board basis), but finished work in less time. Glassers then derived added income by completing colored resin tints, artworks and decal work. Board makers had accurate information on the wages paid to fellow workers, including those employed in competing workshops. Historically, under craft-based systems of production, surfboard makers displayed an ability to directly and materially improve working conditions.³¹ Specific tactics to affect change hinged on the size of the workshop, seniority and expertise of individual workers. In most surfboard factories workers could bargain directly with workshop owners. Actions were intended to achieve better terms of employment (permanency, longer contracts or more hours) and/or working conditions (wage raises, health and safety improvements or reconfigured divisions of labor).

A common strategy used in efforts to improve employment for surfboard makers was job hopping (or threat of) between workshops. In popular surfing towns such as Australia's Gold Coast, San Clemente Southern California and O'ahu's North Shore clusters of surfboard workshops were located in light industrial estates and beachside retail precincts.³² Without use of signed contracts or agreements, workers had relative freedom to move workshops, particularly having gained a following for their designs and workmanship. Job hopping in small workshops was an individual strategy for achieving personal aims. In larger workshops a measure of informal collective bargaining was embraced by workers. Overall more than two-

thirds of shapers and three-quarters of glassers had changed workshops during the last five years, signifying a relatively high level of job mobility.

The most significant reasons for job hopping were the chance to create working times more suitable to personal lifestyles; opportunity for a more senior role within a workshop (sanding to shaping for example), and also ability to expand creativity, skills and knowledge. Access to a pay increase ranked only fourth, indicating the diverse motivations and high importance assigned to creative freedom that underpins surfboard maker's actions. A shaper in Southern California outlined the range of motivations informing their job mobility: "The first time [I moved] was about how I was valued. I was a junior shaper and the two older guys got all the creative freedom. I was doing stock boards. So I moved down the block and was second senior. But the factory was messy and disorganized. So this year [2012] I moved again. I'm going to be the lead shaper here when Bobby retires next year. Pay is really the same but I'm doing all different designs, which sparks the creative juices" (Mitch, 40s). In Australia, shapers also spoke about changing factories because they "wanted more creative freedom and time to surf" (Robert, 60s). Board makers described job hopping as a healthy practice because it stimulated creativity and helped to maintain a 'passion and enjoyment' for the work (Joe, Hawai'i). Most strongly associated with younger workers under 40, cross-firm mobility declined as workers aged and became more established.

Individual board makers from craft-based workshops also constructed working hours amenable to their personal lifestyles. For example, Chad in Australia and Dean in Southern California began work at 4:30am, allowing them to finish early and surf in the early afternoon when crowds were thinner. Jeremy and Pete in Hawai'i

started work later, usually after 10:00am because it allowed time to surf in the morning before taking children to school. Such working times would be considered unusual for many occupations, but were standard in the surfboard industry.

The unique nature of the working day in the industry is a cultural legacy of surfboard making stretching back to the DIY-era. When surfboard manufacturing became a profit-making enterprise those employed in the industry continued to pursue time for personal surfing away from the workshop; often in the early morning or afternoon. But factory owners and managers never considered this surfing activity by employees as part of the “real” job. In reality the research and development performed innovating new designs, maintaining interpersonal relationships with customers and refining embodied knowledge underscores the financial viability of craft-based surfboard workshops. Such work is mostly performed outside the factory (e.g. meeting with customers in the surf or trialing new designs) and is not incorporated into the sphere of waged labor.

Despite flexibility and freedom being “benefits” of the job seasonality was a further test to stable, consistent wages. Quiet times for custom orders in California and Australia were during respective winter periods. In Hawai’i summer was slowest because waves were inconsistent. During quiet periods work declined to 20-25 hours per week. For six or so months of the year weekly working hours could exceed 45 hours. Shaping or glassing 12-15 boards per week in busy times, workers earned more than US\$2000. To counter seasonal fluctuations some shapers also used their control over the custom labor process. Workers, particularly shapers, interacted with customers directly and provided the timeframes for the completion of boards. Customers were given standard delivery times of four to six weeks for hand-crafted

custom surfboards. To “smooth” out fluctuations in custom orders—that corresponded to large wage variations—shapers adjusted the intensity of their labor. During a busy month in a large workshop in Southern California, lead shaper Dion had sixty custom boards on order. But he only shaped forty-eight of the sixty orders to leave himself a dozen as a “stockpile.” The following month when thirty-five new custom orders were received, Dion used boards he had stockpiled to maintain a consistent income. The cycle was often repeated to smooth out quieter periods of the year.

While shapers and glassers could regulate their labor, sanders and polishers had much less capacity to shift the speed of their work. They operated around the rhythms of the more prestigious shapers and glassers. Such workplace hierarchies illustrate the importance of intra-worker relations as “senior” or high-ranking staff impact on the employment conditions of the lower ranked. Sanders and polishers illustrated how the performance of certain labor tasks positioned lower down a workplace hierarchy can constrain the agency of others.

Theorizing more broadly beyond the surfboard industry, scholars in labor studies and labor geography have consistently argued that one of the central benefits for union-represented workers is the ability to access information on employers.³³ Strategies for affecting change can then be tailored to combat management plans such as proposed cut backs, redundancies, restructures, wage freezes and so on. Yet, in craft-based custom surfboard workshops the link between unionization and an informed labor force was compensated for by the nature of business operations. Employees had direct access to owners and shared respectful relationships. Individual workers had access to detailed information on sales volumes, income streams and underlying profitability, which could be

used to support individual claims for better conditions, working arrangements or higher wages. In one example from a large factory in Southern California three workers were able to use sales records over a three-year period to support a successful case for increased income.

The employment experiences and agency of surfboard makers was tied into the competitive dynamics of workshops. Under systems of craft-based production, commercial viability was maintained by producing high quality, personalized products tuned to local waves, surfing styles and consumer tastes. Workshops predominantly competed on the basis of specialized knowledge, customization and quality, not over price and trying to achieve economies of scale.³⁴ In hand-made, custom factories, workers' demands (for wage increases or unusual work times) weren't necessarily antithetical to the financial interests of the workshop. Board makers shared close relations with final consumers, helped attain customer loyalty and became responsible and accountable for maintaining the profitability of the workshop. Generally craft workers secured favorable flexibility, matched to decent wages. Incomes were relatively stable and sufficient to support a family, "pay the mortgage and maintain the [surfer's] lifestyle" (Tim, shaper, Southern California). Nevertheless in the last fifteen years significant transformation has occurred in surfboard manufacturing.

II) A System of Automated, Standardized Surfboard Production

By the late 1990s an increasing number of "new" surfers mapped onto globalized surf retail networks. Encouraged by the economic success of the "big three" surf brands (Quiksilver, Billabong and Rip Curl) surfboard manufacturers also

pursued new growth opportunities beyond regional bases. By the early 2000s computer aided design (CAD) and computer numerical control (CNC) machines were being introduced to automate shaping. Under automated systems of production designs were generated on CAD programs, which coordinated the movement of CNC cutting instruments. Widespread shifts to capital intensive production boosted productivity and enabled precise design replication. The surfboard industry was transformed.

In total, 32 of the 38 workshops across the three regions had switched to computerized shaping within the last fifteen years. In 23 factories CAD/CNC technologies accounted for more than 90% of all shaping work. An owner in Australia described the logic behind workshop automation: “It became a business decision to expand my market. Customization is all very time consuming and with the average surfer I don’t want all that time spent talking about a board. Things can be done more efficiently. Most surfers just need a standard design that will work in a variety of conditions. Automation and the computer open a lot more business opportunities” (Jim, workshop owner). The motivations for shifting to capital intensive, automated production were often financial. Workshop owners outlined ambitions to achieve international status for their firms, improving market share and profitability. The prevalence of automated production has seen the surfboard industry become less like an artisanal craft-based industry and more like other mass producing forms of capital-intensive manufacturing. Workshop owners seeking to access burgeoning beginner and tourist markets initially embraced automated technologies to up-scale volume and deliver boards to retail stores in high rent locations proximal to popular surfing beaches.

Comparative economic analysis between craft-based and automated production revealed only a slight 5% to 6% increase in profit margins. Real benefits of automation were in the potential to capture greater market share and increase sales volumes via surf retail dealings. To improve retail exposure, workshop owners used loans to finance costly machinery. Marketing budgets expanded and workshops were re-fitted. Supply deals were also reached with corporate surf brands that aggressively expanded retail ownership in the mid-2000s. The place association of California, Hawai'i and Australia in global surfing culture became helpful for selling surfboards into emerging markets such as France, Portugal, Spain, Brazil, Chile, Japan and South Africa, among others.

Integration of automated systems of production in the form of CAD/CNC technologies allowed production to be streamlined, opening opportunities for accessing general mass markets: "People that just want to get in touch with the culture, how are they going to get a surfboard for little Johnny? They don't necessarily need to take my time asking for measurements and designs. It's all very time-consuming. I've tried cutting that out and struck up a relationship with a local retail chain, which sells my boards in their shops off the shelf. I increase my market and generate more sales" (Owner, Australia). Alteration to the labor process was predicated on changing relations between makers, customers and local surfing breaks. Close interaction between shapers and customers directly at workshops was being replaced with online ordering and trade from retail outlets. Added to this was a select group of export-oriented factories in each of the three case-study regions that had begun subcontracting CNC operators in final markets. Rather than globally shipping finished surfboards to retailers at high cost, workshops emailed CAD files with

generic designs manufactured on a CNC machine (in an agreed quantity) by the subcontractor. A wholesaler then delivered labeled boards to a network of local surf retail stores. While the technical, creative labor designing surfboards was retained in Australian and American factories, the manufacturing was performed elsewhere, offering a financial saving on labor and transport.

While glassing could not yet be automated, these jobs were also transforming. In the last decade twenty-five of the thirty-eight workshops examined (66%) had outsourced their glassing to contracting firms – in a classic example of flexible specialization.³⁵ Specialized glassing factories had become enrolled in competitive bids for work as shaping workshops no longer had to directly or continually support the wages and entitlements of glassers. A degree of financial risk was spread by disintegrating and subcontracting production tasks. Significantly for this essay, transformation to surfboard manufacturing was altering employment conditions.

Precarious Employment: Working in Automated Surfboard Workshops

In workshops where automated systems of production had become dominant new workers in the industry began careers learning CAD programming, machine shaping and online ordering systems. In these cases manual tools and development of embodied, haptic knowledge were not a priority. Shapers, in particular, had experienced the most acute changes to their employment conditions. Downsizing and re-organization of shaping labor was widespread. A shaper in Southern California described the emerging situation: “The technology is quite advanced so they want workers who know how to program and operate it all.

My job now is to make the odd custom board with my best designs handed over for replication. ... They [owners] love it because it's a standard, generic thing coming out; 90% of our boards are computer shaped. It's really changed the job. I can see a time when shapers will be out of work" (Craig, shaper). Turning shaping into a research and development (R&D) role was arguably one constructive adaptation to computerized production. While hand-shaping could be tiring, physical and messy work, with long production cycles and high labor costs, for those who were not laid off, computerized shaping appeared to offer a more favorable experience for workers and workshops alike.

Indeed several workers explained how they had assumed CAD/CNC would be used to meet the demands of entry level and intermediate surfers for easy-to-ride designs. Hand-shaping would continue meeting the needs of the 'core' surfing market for customized products. In reality, workers employed in factories utilizing automated production quickly began experiencing undesirable changes to the tenure and conditions of their employment. At the forefront of concerns was the advance of subcontracted, casualized, irregular and discontinuous work. Precarity was a consistent experience across automated workshops: "Summer [June to August] and a month or so before Christmas are still busy. You'll work forty-five or fifty hours a week. ... The rest of the year is slow now. I scrape together what I've saved. But employed casually I wait to get a call for work. I pick up a few weeks straight. Then it's a week without much work. ... I do get worried. The shaping machine seems to mean less work for hand shapers. It's changed the work for everyone else too" (Peter, shaper, Southern California). Workers explicitly connected their precarious employment to the pervasiveness of automated systems of mass-production. Precarity

left board makers uncertain about when they were working, what their incomes would be and how their lifestyles could be maintained.

Dean, working on O'ahu's North Shore, had twenty-four years' shaping experience and summarized his employment experiences through the recent era of automation: "You're permanently casual and have to subcontract yourself around. I have to get work from other factories and I don't have a good idea what my pay check will be this month or next. I wait for a call. ... Last week I worked forty hours. This week it's Thursday afternoon and I'm at twelve hours. ... Shaping machines get lots of work but we are running out of it. ... I wouldn't suggest this [job] to anyone."

While the intensity and hours of work in the surfboard industry had always been seasonal, the casualized, contract and irregular terms of employment—even within the busiest times of the year—were "new" experiences. Contrasting the cross-firm mobility uncovered in craft-based workshops, for shapers employed in automated firms job hopping did not lead to a discernible improvement to working lives. For example, in "contracting around" Dean had accepted casual work in two other workshops where hourly pay was lower than his primary job. The work was several steps down in seniority and Dean considered it incommensurate with his levels of experience and skill.

In living with precarious jobs, shapers and glassers consistently expressed anxieties about meeting costs of living and planning lifestyles around fluctuating incomes. There were other noticeable conditions of precarity too: fears of losing jobs altogether and an absence of healthcare (especially for workers in California and Hawai'i). After many years in the industry, aging workers commonly suffered muscular and skeletal pain, and chronic respiratory illnesses.³⁶ In many workshops

employees were paid in cash, which had made it very difficult to apply for credit or a loan. Darren, a glasser in Australia, explained: “I was told I’m now going to be employed as a subcontractor... so it’s my responsibility to pay taxes and my super [pension]” (Darren, shaper, Australia). Precariousness was now part of the surfboard industry’s employment terrain.

Incomes for workers in automated workshops had been stagnant for some time. As Michael, a shaper in Southern California, explained, “we’ve been paid about the same amount for the last decade. No increase.” The sense of frustration arising from the casual, discontinuous nature of work was further described by an Australian shaper: “We call it fluffy talk. Hear it all the time now: ‘ah no work the next couple of days, might be Wednesday. Go surfing, or take the girlfriend for a trip.’ It’s bullshit, because that costs money. ... I subcontract around now to pick up enough work. Honestly, I don’t feel like my skills are valued much anymore” (Justin). As workers increasingly contracted between factories, further complications arose when they committed to blocks of work with one workshop only to be offered a longer stretch or better pay by another. Not wanting to “pack up and burn bridges,” workers often met original obligations, only to miss out on longer stretches of work and a stable period of income (Cameron, shaper, Southern California).

For their part, sanders gained the most continuous work under automated systems of production. After CNC shaping foam blanks required additional fine hand sanding before boards were ready for glassing. Sanders completing this work were frequently discussed in derogatory terms, called “scrapers” and “production shapers” by conventional hand-shapers. Most sanders had begun careers in the industry after CNC/CAD production became common and their labor was thus

considered by older, more experienced shapers as being less skillful, uncreative and lower-value. Production shapers usually could not perform the full range of tasks involved in surfboard making – from design through to shaping a finished board. Nonetheless their work was important to the automated manufacturing process because the CNC cutting blades left irregular patterns, indentations and imperfections on the foam that would adversely impact performance and appearance.

The widespread roll-out of automated systems of production had left shapers most fearful for the future of their jobs. In popular coastal towns—Byron Bay in Australia, O’ahu’s North Shore, San Clemente in Southern California—board makers were being priced out of local communities, unable to purchase a home or afford rent in suburbs proximal to work because property prices had become excessive while their income stagnated. The roll-out of automated production systems influenced worker’s personal lives in other unforeseen ways too. Several workers in the industry spoke of relationship break-ups and financial hardships, which they blamed on the growing irregularity of work and future employment uncertainty. In several cases, anxieties were smoothed over by support from higher earning partners. Most workers, however, were from working class backgrounds and the major “bread-winners” in household. Overall, CAD/CNC production was interpreted by workers as having negatively affected their livelihoods, limiting their power and ability to affect positive change.

Work, automated production and future prospects in the surfboard industry

Between the 1960s and early 1990s an industrial context of highly endogenous, customized production provided a level of job security for surfboard makers. A laid-back, antithetical attitude towards workplace relations was not a significant problem. However, when automation arrived during the 1990s, informal working cultures exacerbated the insecurity of employment. The lack of workplace organization, legally binding agreements on job conditions or formally recognized qualifications constrained the agency of craft-based surfboard makers. A path was smoothed to heightened precarity.

Despite the challenges facing workers under automated systems of production there were attempts to affect affirmative change to employment conditions in the industry. In a large factory with twenty workers, which machine-shaped 5,000 boards annually, two shapers and a glasser had secretly established a spin-off label as their work had become irregular. The three workers maintained casual employment while sourcing custom work “on the side” for their fledgling business (Mike, shaper). The spin-off label helped successfully supplement the men’s incomes for fourteen months. However, when the workshop owner uncovered its existence the three lost their primary jobs. In another example a shaper sabotaged a CNC machine. The factory owner had to rely on three shapers for a month while a cutting instrument was replaced. A rare period of continuous work ensued. Such direct strategies by surfboard makers to contest the erosion of working conditions did have some success but represented more temporary, fleeting victories.

Another strategy encountered among experienced shapers and glassers involved accessing high paying, short-term contract work in emerging international surfing markets. During the slower Australian winter, Stu and Mike spent three months

shaping and glassing in Indonesia, Japan, France and the southwest of England. Several other workers based in California and Hawai'i also travelled from their home bases to work in Portugal, Spain, Japan, Peru, Chile and South Africa. As commissioned, fly-in "experts," workers were paid to design and craft boards to local specifications, also training-up inexperienced local makers. Guest shapers are often revered because of perceptions around superior design and workmanship.

On the one hand, the emergence of international contract labor provided board makers with unique travel opportunities and a temporary income boost. On the other hand, short term work overseas required turning over creative designs to foreign labels for standardized, mass production. More worryingly, work is often illegally organized without appropriate working visas.³⁷ Subcontracting continues to be arranged using verbal, hand-shake agreements. Yet again the inherent informality of surfing subculture made it difficult for workers to legally challenge contracting workshops that frequently paid late or only a portion of amounts originally agreed. Rather than alleviating their problems, international contract work added new contours to the already precarious labor conditions of board makers: precarity was exacerbated along new lines.

Ultimately, the surfboard industry is full of contradictions. Several owners spoke about the importance of hand shaping and artistry in surfboard manufacturing, but were blasé when asked about worker's deteriorating employment conditions. Workshop owners praised hand shaping as a soulful and creative form of work with important social and cultural value to surfing. Even so, during the research eleven workshops had automated all of their shaping.

When workshop owners talked about employees, there was a sense of expectation that workers accept the tenuous nature of making surfboards for a living:

“You know, you can’t have too many expectations financially when you’re coming into this. It has to start out as something you just want to do. It’s a lifestyle. You should appreciate doing something you love. For me, there are a lot of people that come into the industry and need to be willing to take the vow of poverty [laughs], as we call it. Unless you get real lucky, you know, you should just follow your passion and enjoy the lifestyle” (Owner). Interviews with workshop owners uncovered an unsympathetic view of worker’s complaints about the nature of the work. Business owners circulated a discourse of board making as a “lifestyle choice” and “passion,” consistently downplaying the legitimacy of workers’ claims for improving job security and rates of pay.

A parallel exists between the experiences of work in surfboard manufacturing and other cultural industries such as tourism, media, entertainment, journalism and academia.³⁸ Working in the surfboard industry was considered socially rewarding, but job insecurity and poor wages had become its darker side. Surfboard makers highlighted how technological change and cognizance of emerging global geographies of production generate different relations between workers, firms, tools, materials, products and consumers.³⁹ Under automated systems of production worker agency in the surfboard industry was disciplined, despite efforts to improve and reform employment conditions remaining visible.

There is, however, a bright spot for surfboard makers. Significantly, those six workshops resisting CAD/CNC automation and committing to hand shaping custom products for more serious, local surfing enthusiasts were financially out-performing most of the firms automating for general retail consumption. Craft-based workshops and workers differentiated themselves from standardized competitors. Reputations

among core surfing consumers for producing well made, customized products strengthened. Many local customers continued to value personalized products and close relationships shared with makers. Commercially, customized surfboards retain subcultural cachet and this in turn relies on reputations associated with particular workshops, their skilled workers and iconic surfing places (Snapper Rocks, Burleigh Heads, Trestles, Huntington Beach, O'ahu's North Shore, etc.).

Whether a return to customized production and re-valuing of hand-shaping is substantial enough to provide workers with improved employment prospects is uncertain. Nevertheless the trend shows the capacity for skilled, craft-based workers to help sustain market share and distinguish themselves and their wares from standardized, automated competitors. Surfboard makers emphasize the value of considering how cultural values, meanings, customs and beliefs shape worker's experiences and capacities to achieve improved livelihoods.

Conclusions

This essay has paired labor geography with cultural economy theory to examine the employment experiences of surfboard makers amidst industry transformation. Not blankly affected by the dynamics of industrial change, surfboard makers contest the reworking of employment conditions. Even so, workers' actions are not universally effective or lastingly transformative. Agency fluctuates over time and space. Surfboard makers have both agency to reshape certain conditions of their work but are also constrained in small workshop settings where production is increasingly automated and offshored, more work tasks are subcontracted and close relations with customers eroded. In considering the impacts of CAD/CNC automation

on surfboard makers we have advocated for a focus on understanding how such technologies alter relationships through the labor process not just firm efficiency and profitability.

We have sought to go beyond narrow economic visions of labor to analyze the experiences of workers in an industry continuing to undergo transformation. Changes in surfboard making are manifested in relations between makers and customers; to the skills imparted through the labor process; in the integration of new technologies, and in the emergent global divisions of labor associated with offshoring.⁴⁰ Workers who participated in the research animate the conspicuous role surfing's subcultural legacies play in shaping industrial and workplace relations. In the surfboard industry verbal, handshake agreements remain the norm. The agency of board makers has been negatively impacted by their own laid-back, antithetical attitude towards industry associations, formalization of skills training and creation of a collective workers' union. Consequently, the working futures of surfboard makers are now perched precariously.

As more waged work in contemporary capitalist economies becomes casualized, contracted and precarious, the job of labor studies and geography is to go beyond agency expressed in relations between unionized labor and management. Craft-based workers in the surfboard industry customizing products for primarily local markets demonstrate agency in relations with employers, fellow workers, tools, customers and place. Subcultural capital, job hopping, work slow-downs and connections to consumers help leverage rewarding jobs anchored in iconic surfing locations. But equally, workers in the surfboard industry also face significant new obstacles to achieving materially rewarding employment now and into the future.

Ultimately we argue that analyzing the way culture shapes workplace relations provides valuable insights into the challenges and opportunities facing workers seeking to achieve positive change to livelihoods and lifestyles alike.

¹ Jarratt, *Salts and Suits*.

² Warren and Gibson, *Surfing Places, Surfboard Makers*.

³ Surfboard makers explicitly identified their jobs as part of a manufacturing industry.

⁴ Waitt and Warren, “Talking Shit over a Brew.”

⁵ Barnes, “Rethorizing Economic Geography.”

⁶ See, for example, Herod, “From a Geography of Labor”; Castree, “Labour Geography.”

⁷ Lash and Urry, *Economies of Signs and Space*; Peet “Culture, Imaginary, and Rationality.”

⁸ Warren and Gibson, *Surfing Places, Surfboard Makers*.

⁹ Gill and Pratt, “In the Social Factory”; Kalleberg, “Precarious Work”; Warren, “Working Culture.”

¹⁰ Ettlinger, “Precarity Unbound”; Wills, “Subcontracted Employment”; Peck and Theodore, “Labour Markets.”

¹¹ Wilson, “Precarious Work.”

¹² Wills, “Subcontracted Employment,” 441.

¹³ Ross, “Life and Labour in Precarious Times.”

¹⁴ McDowell, *Capital Culture*.

¹⁵ A similar argument is made by Rogaly, “Spaces of Work.”

¹⁶ Scott, *The Cultural Economy of Cities*.

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- ¹⁷ Gibson, “Cultural Economy”; Warren, “Working Culture.”
- ¹⁸ Pratt and Jefcutt, *Creativity, Innovation and the Cultural Economy*.
- ¹⁹ Barnes, “Rethorizing, Economic Geography,” 558
- ²⁰ Amin and Thrift, “Cultural Economy.”
- ²¹ Gibson, “Cultures at Work.”
- ²² Finney and Houston, *Surfing: A History*.
- ²³ Warren and Gibson, *Surfing Places, Surfboard Makers*.
- ²⁴ Massey, “The Kilburn Manifesto,” 2037
- ²⁵ Sayer, “Critical Cultural Political Economy,” 699.
- ²⁶ Burawoy, “The Extended Case Method.”
- ²⁷ Warren, “Crafting Masculinities.”
- ²⁸ Warren and Gibson, *Surfing Places, Surfboard Makers*.
- ²⁹ Paterson, “Haptic Geographies.”
- ³⁰ Fine and Leopold, *World of Consumption*.
- ³¹ Coe and Jordhus-Lier, “Constrained Agency.”
- ³² Warren and Gibson, *Surfing Places, Surfboard Makers*.
- ³³ Silver, *Forces of Labor*; Wills, “Subcontracted Employment.”
- ³⁴ Bryson, et al, “Competing by Design.”
- ³⁵ Scott, “US Recorded Music Industry.”
- ³⁶ Warren and Gibson, *Surfing Places, Surfboard Makers*.
- ³⁷ For Australian and US surfboard makers securing temporary work visas in foreign countries is a lengthy, complex process. Eligibility varies between countries depending on a range of factors, including: age, qualifications, location; type of

intended work; length of stay and a sponsoring employer. For US board makers travelling to Japan the common approach was to apply for a work visa under the “Artist” category that includes “craftspeople.” For the European Union (EU), board makers need a written job offer by a registered firm, which is problematic in an informal industry. The company must prove it conducted a search of the EU labor market and been unable to fill the vacant role. The EU Work permit is also attached to the sponsoring firm and is not transferable to another employer. Thus the majority of workers interviewed entered a foreign country on a tourist visa (staying less than three months) and did not indicate intentions to engage in paid work nor declare income generated.

³⁸ Kalleberg, “Precarious Work.”

³⁹ Kraft, *Stage to Studio*; Noble, *Forces of Production*.

⁴⁰ Rogaly, “Spaces of Work”; Warren, “Working Culture.”