Craftsmanship and Quality in Artisanal Cheesemaking

Heather Paxson

A few years ago, a wine shop opened in Cambridge, Massachusetts, featuring a cheese counter specializing in domestic artisanal wares. Walking into the shop one afternoon, I found the cheesemonger surrounded by co-workers seeking to learn whether, in his absence, they had properly labelled the cheeses in a new display case. One of the shop’s owners held up a wedge of cheese, in one hand, and a wheel, in the other, saying, ‘I don’t understand how this can be Weston Wheel, when this is Weston Wheel, and they don’t look the same to me!’

Artisanally made cheese resists standardization. Indeed, in the course of anthropological research into American artisanal cheesemaking (undertaken between 2004 and 2011), I heard repeatedly that the most difficult skill to master in making cheese is achieving consistency: the ability to work with ambient microorganisms, seasonal changes in milk chemistry and fluctuating climatic conditions to turn out a self-similar, if necessarily variable, product batch after batch, month after month. In grasping what makes cheese artisanal, I find helpful furniture designer David Pye’s insight that, in craftsmanship, the ‘quality of the result is not predetermined, but depends on the judgement, dexterity and care which the maker exercises as he works’.

Pye names this a ‘workmanship of risk’, in which product quality remains ‘continually at risk’ throughout the manufacturing process. Such risk may be introduced from human error or from flaws in the materials used. Whereas industrial manufacturing seeks to obviate both sets of errors by deskilling production and by standardizing materials (thereby ensuring what Pye names a ‘workmanship of certainty’), the craftsperson works to accommodate natural variations, though only so far as these may be harnessed to help realize an intended form. So, just as a
woodworker might incorporate a twisted knot of wood into the design of a hand-turned bowl, a cheesemaker works to incorporate natural variations—in concentrations of milk butterfat, in ambient microbial populations, in the seasonal composition of pasture flora or browse ingested by sheep, cows or goats—into what is nonetheless a safe, tasty and recognizable food.

To be sure, being made ‘by hand’ is no guarantee of product quality; indeed, Pye acknowledges that the workmanship of risk ‘can produce things of the worst imaginable quality’. Quality in craftsmanship begs the question of what qualities are valued as markers of especially ‘good’ quality in a given craft. Pye suggests that quality in workmanship can be judged by two criteria: ‘soundness’ of structure and ‘comeliness’ of aesthetic expression. A well-worked object, on Pye’s view, is both free of hidden structural flaws and true to the craftsperson’s aesthetic intent. But while Pye would judge both criteria ‘by reference to the designer’s intention’, the sociologist Howard Becker reminds us that the crafts have come to be distinguished from the fine arts by virtue of their utility to someone. For commercial crafts, that someone is frequently a consumer; not all aesthetic choices sell well. Therefore, as Becker suggests, market values—that is, saleability—must be added to soundness of structure and comeliness of form in assessing skilled craftsmanship.

In working to realize multiple material and aesthetic qualities simultaneously, cheesemakers have much in common with architects. The quality values I have just outlined resonate remarkably well with what John Tuomney identifies as the three ‘components of character’ in architecture: substance, form and ‘appropriation by use’. In this chapter, I outline how artisan cheesemakers work to bring into being, simultaneously, the material qualities of soundness or substance (e.g. the material integrity and ‘keeping quality’ of a foodstuff; although ultimately perishable, a soundly made cheese will not ‘go off’ sooner than anticipated) and the aesthetic qualities of form (i.e. organoleptic properties of flavour, texture and odour that should be not only palatable but also self-similarly recognizable from one batch to the next). The fundamental significance of both substance and form in constituting cheese is reflected in its very name: cheese and Käse come from the Latin casein, referring to the milk protein solids precipitated from coagulation that form the basis of cheese; fromage and formaggio refer to cheese forms—the moulds that give shape to cheeses as well as the forms that result when curd is moulded. Although I will not elaborate it here, market qualities of utility (i.e. what will sell as food to be eaten) are also at issue. These three types of qualities or components of character are all present in a ‘good’ cheese. It is no easy task to manage at once all three sets of qualities—each entailing a somewhat different set of risks and, therefore, skills. And that, in no small part, is because cheese is alive.

Teeming with the metabolic activity of bacteria and fungi feeding on the enzymes and carbohydrates in milk, cheese is continuously ripening (or, from another angle, decomposing). As encourage the surface formation of rinds—and whose handcraft leave surfaces—often personify their development, age and maturity. For example, cheese, after ripening for about a year, from repurposed concave or convex rinds, forms a powdery bloom of the yeast-like stage the cheesemaker, Vermont cheeses as ‘toddlers’; in a few weeks, to drier boards around the corner, anthropomorphized can be spoiled.

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In view of this, in speaking the feature of craftsmanship, I choose to reflect on the result (i.e. marketability and coheren value to the artisan of the product get from making cheese by hand), I return to reflect on what the anthropologist Tim ‘dwelling perspective’. Craftsman living-in-place, whether at a micro level or at a macro level of artisan cheesemaking, I suggest, dwelling that it constitutes the cheesemaking.

Echoing Pye on the workmanship writes of artisanal cheese making, ...
another angle, decomposing). Awake to cheese’s aliveness, artisans who encourage the surface formation of edible moulds to create so-called natural rinds – and whose handcraft leaves its mark in lopsided shapes and mottled surfaces – often personify their cheeses as if they were organisms: cheeses develop, age and mature. For example, fresh wheels of Vermont Shepherd cheese, after ripening for about a week in an aging ‘cave’ (fashioned, in this case, from repurposed concrete culverts sunk into a hillside), sprout a powdery bloom of the yeast-like fungus Geotrichum candidum. At this stage the cheesemaker, Vermont sheep farmer, David Major, speaks of the cheeses as ‘toddlers’; in a few weeks, they will ‘hit puberty’ and ‘graduate’ to drier boards around the corner, where they will ‘mature’. Cheeses when anthropomorphized can be spoiled or go rotten.

Such anthropomorphizing language – by no means restricted to this farm⁸ – reflects the artisan’s sense that cheese does stuff of its own accord. Under artisanal conditions (more so than industrial), cheese development cannot be fully predicted or controlled – it has a life of its own; this is precisely what many artisans love about their craft, and what safety regulators may fear. To impart a ‘life of its own’ to an individual or batch of cheese might seem to absolve a cheesemaker for less than scrupulous care. However, from interviews conducted with more than forty cheesemakers (owner-operators of small businesses as well as hired artisans) primarily in New England, Wisconsin and northern California, I found that such language generally expresses artisans’ sense of responsibility to make cheese well by exerting selective pressure on its microbial ecologies to direct fermentation and cheese development towards preconceived outcomes.

In view of this, in speaking here of how appropriation by use is a quality feature of craftsmanship, I choose to investigate not the utility of the end result (i.e. marketability and consumption) but rather the usefulness or value to the artisan of the production process itself. What do cheesemakers get from making cheese by hand within an industrialized food system? In conclusion, I return to reflect on the aliveness of cheese through the lens of what the anthropologist Tim Ingold, following Heidegger, has termed a ‘dwelling perspective’. Craftsmanship in cheesemaking, on this view, entails living-in-place, whether at a microscopic or a human scale. One of the ‘uses’ of artisanal cheesemaking, I suggest, is the life that it affords, the human dwelling that it constitutes and is constituted by it.

Substance

Echoing Pye on the workmanship of risk, the dairy scientist Paul Kindstedt writes of artisanal cheesemaking, ‘The goal should be to achieve the
appropriate level of control to ensure safety and consistently high quality while at the same time giving nature enough free rein to encourage the diversity and uniqueness of character that make artisanal cheeses special. To strike this balance, proficient cheesemakers develop an intimate understanding of their materials – not of milk chemistry in the abstract, but of their milk and curd. Diana Murphy, who makes goat cheese on her Wisconsin farm, said to me, ‘Part of the artisan feel of it is knowing your milk, knowing what cultures complement your milk, what rennet complements your milk, [and] how to manipulate that.’ By having ‘a feel’ for how their materials behave under fluctuating conditions, cheesemakers are able to adjust their recipe and tweak elements of practice – the temperature to which curd is heated, the duration of time curd is allowed to set before being cut, the size of the pieces into which curd is cut to release either more or less whey – so as to realize the end in view. ‘As in any craft’, writes Ingold, ‘the skilled maker who has a feel for what she is doing is one whose movement is continually and subtly responsive to the modulations of her relation with the material.’

Elsewhere, I have described ‘having a feel’ for one’s milk and curd – the ability to respond reflexively in light of one’s cross-sensory apprehension and experienced evaluation of numerical data – as an exercise in ‘synaesthetic reason’. Related to the concept of ‘flow’, or total absorption in a task, synaesthetic reason is exercised at the edges of consciousness. Caught up in the rhythm of practice, the proficient craftsperson makes reflexive self-adjustments that are nevertheless informed by experiential knowledge – habituated, rather than instinctual. Farrar and Torey similarly describe how, caught up in the ‘flow’ of dry stone walling, a skilled waller can immediately ‘see’ the right stone to pick up and where to place it without conscious deliberation; they quote a waller as saying, ‘How do you know it’s the right stone? It fits… you know, you put one down there and it just fits. You can feel it – that’s it, that’s what it’s going to be.’

I heard similar accounts from cheesemakers, although with cheesemaking one’s ‘flow’ has to keep pace with seasonal and environmental fluctuations.

Despite never having taken a formal cheesemaking class, Sue (let me call her, as she requested anonymity), a goat farmer in New England, had been making chèvre for ten years when I interviewed her. She learned to make cheese – this cheese – by working alongside a friend, who also sold her the goats. Even after ten years, Sue described cheesemaking to me as an experimental enterprise. She records meticulous data on what she does, taking note of what works well and what does not. Although she has followed the same recipe for a decade she continuously modifies her practice, mostly in response to fluctuating conditions. ‘Goats are seasonal’, she explained. Her kid in February and produce milk until December, when she dries them off in preparation for another round of kidding. ‘When you do that, the milk when they first give birth is di kind of the fun of it, that the as in the winter’, she told me challenges. Late summer milk ‘more fat and solids’ in it. Tryir artisanal practice responds to I do you use less rennet at the second and replied, ‘Yes. I wo When you use more rennet it her feel for it. ‘It’s because you actually want it to react a little f and the more it reacts, then ti little grainy or whatever. So, w less action. That may not be rigi

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when they first give birth is different than at the end of the season... That's kind of the fun of it, that the cheese in the spring doesn't taste the same as in the winter,' she told me. But such variability also introduces practical challenges. Late summer milk is more concentrated, she elaborated: it has 'more fat and solids' in it. Trying to get a handle on how, in concrete terms, artisanal practice responds to fluctuations in the materials used, I asked, 'So, do you use less rennet at the end of the season?' She thought about it for a second and replied, 'Yes. I would use less rennet at the end of the season. When you use more rennet it reacts more': this is how she tried to articulate her feel for it. 'It's because you have more of the solids, the proteins, you actually want it to react a little bit less, because you have more quantity there, and the more it reacts, then there's more structure happening and it gets a little grainy or whatever. So, when you're using less [rennet], there's kind of less action. That may not be right but that's how I see it,' she said with a smile.

In acknowledging 'that may not be right', Sue was suggesting not only that scientific knowledge of milk chemistry and fermentation could explain the phenomena that she observes and responds to yet struggled to articulate but also that science would properly explain it. Implicitly, she was privileging scientific knowledge as more 'correct' or complete than her own practical knowledge. But is that the case? Would scientific knowledge of (say) acidity levels and their effect on coagulation necessarily improve or importantly legitimate Sue's experiential knowledge? I think not. After all, inability to articulate the why behind the what and how of practical knowledge is a hallmark of what Polanyi called its 'tacit' dimension. Absence of critical self-awareness can aid in the fluent exercise of craftsmanship.

Scientific and practical knowledge need not be mutually exclusive or antithetical to one another. Not only do laboratory and field scientists rely on practical knowledge of instrumentation and the ability to tinker with equipment in order to get 'good' experimental results, scientific understandings of how biochemical properties of materials (acidity, microbial ecologies) are affected by environmental conditions (temperature, humidity) can add to the crafts-person's problem-solving toolkit without undermining their reflexive 'feel' or synaesthetic reason. Scientific knowledge, in other words, might aid in the mastery of a 'workmanship of risk' – in the ability to work with and respond to material and environmental variability – just as much as to a 'workmanship of certainty' driven by goals of efficiency and standardization. Such a view inspired the convening of a conference devoted to the 'Science of Artisan Cheese', which I attended in the United Kingdom in 2012 (I discuss about it further in the following section).

Sue's modest articulation of having an experiential 'feel' for a process that she concedes has a scientifically knowable basis might be viewed as a vernacular understanding of what enables her to engage in successful
cheesemaking. Sue's success is borne out commercially; she has made cheese for a decade, selling as much as she can produce through her farm store and at area farmers' markets. No one is challenging her legitimacy as a cheesemaker – certainly not in scientific terms. Her cheese is recognized, and appreciated, by others as vernacular; the fact that it is made without the intervention or approval of professionally trained food scientists can be part of what distinguishes artisanal from industrial food. If anything, Sue herself suggested that some might question her legitimacy as an artisan because she is not as artsy as others: she makes a simple cheese, 'kind of a boring cheese', as she put it – namely, fresh goat cheese. Sue seemed to be suggesting that her fresh cheese, compared to one aged to develop a natural rind, is more substance than form. But, as I detail below, I have come to view these as inextricable.

**Form**

In his essay, 'The Art of Cheesemaking', the artisan and consultant Peter Dixon writes as follows: 'In the same way that the set of six mugs our neighborhood potter made for us are slightly different in form and appearance, my wheels of cheese are different in size and coloring of the rinds. I believe that it is precisely this quality that distinguishes artisanal cheese from its industrial, mass-produced counterpart.' However, when I took a two-day workshop with Peter Dixon to better understand for myself how cheesemakers begin to acquire the practical knowledge requisite for proficiency in a workmanship of risk, I learned that not all variability of form is quality variability. Lecturing us each morning on chemistry and craft, Peter extolled the virtues of working with raw milk, pointing admiringly to the natural variation it generates in the quality characteristics of artisanal cheese. From one batch to the next, spring season to fall, the colour, texture, flavour and odour of a cheese varies – particularly when it begins with unpasteurized (raw) milk. 'That's what consumers value,' he said to us at the workshop. But one of my classmates, coming from a career in catering, interjected that she hears the opposite: that what consumers are looking for is consistency from one purchase to the next (recall the puzzlement over Weston Wheel with which I began this chapter). Peter explained that, thanks to industrialization, consistency is expected of most American cheese but 'not twenty-dollar cheese' – not the sort he was teaching us to make.

At this point, however, our host for the workshop, Mark – a cheesemaker in his own right – called out from the next room that variation owing to material flaws or environmental conditions is one thing, but not 'variation from poor skills, which is what most American variation is'. Humidity, temperature, what the milk-making animals Mark acknowledged – being hinted at some frustration or flaws as 'natural' mark elements of the place of agricultural product. In August 2012, I traveled 'The Science of Artisan' based retailer specializing in Manor Farm in Somerset, generations of the Montgomeri gave group which the cylindrical whey pod to the vernacular of all Cheddar maker has a diff My theory is that I want to encourage the moulds to store relatively low and give of lard. He told us of a note with something like thrice noted, 'tasted like a Keen unusual flavour profile' written by the Keen family on Keen's Cheddar in its have patronymics, signallir back and forward in time. drew on an organism m as organisms or beings – nurturing the development work begins in the vat, in milk, produce lactic acid process. Pint starters (w heated milk before being Cheesemakers' website, as follows: 'The culture produces a wide variation in before us in the cheese s rotate seven different star in order to prevent the uninfects and replicates withi
the milk-making animals are eating – all of that affects cheese development, Mark acknowledged – but so too does the *skill* of the artisan. Mark’s tone hinted at some frustration with those who might pass off genuine mistakes or flaws as ‘natural’ marks of seasonality or of *terroir*, the notion that material elements of the place of production can influence flavour development in an agricultural product.¹⁷ Form and substance help to realize one another.

In August 2012, I travelled to England to attend a two-day conference on ‘The Science of Artisan Cheese’, organized by Neal’s Yard Dairy (a London-based retailer specializing in domestic farmhouse cheeses) and hosted at Manor Farm in Somerset, where farmhouse Cheddar has been made by three generations of the Montgomery family. As an afternoon excursion, Jamie Montgomery gave group tours of ‘the store’, the warehouse-like building in which the cylindrical wheels, called truckles, of Cheddar are aged. With a nod to the vernacular of artisanal cheesemaking, he began, ‘Every traditional Cheddar maker has a different theory about what’s going on on their rinds. My theory is that I want the moulds to eat the lard by three-to-four weeks.’ To encourage the moulds to accomplish this task, he keeps the humidity in the store relatively low and gives the muslin-wrapped cheeses only a light coating of lard. He told us of a novice employee who once slathered a fresh batch with something like thrice their usual amount of lard; that batch, Montgomery noted, ‘tasted like a Keen’s’, likening what was for his farm and store an unusual flavour profile to the Cheddar made similarly but not identically (since 1899) by the Keen family at their Moorhayes Farm, also in Somerset.

Keen’s Cheddar and Montgomery’s Cheddar – these farmhouse cheeses have patronymics, signalling distinct lineages of familial resemblance reaching back and forward in time. In his narration as tour guide, Jamie Montgomery drew on an organismic model of cheese vitality – treating individual cheeses as organisms or beings – in describing the practical knowledge enacted in nurturing the development not of cheddar, but Montgomery’s Cheddar. That work begins in the vat, with the acidification of milk, well before individual cheeses are formed from curd. Montgomery’s Cheddar is inoculated with ‘traditional pint starters’, concentrations of bacteria that, in feeding on enzymes in milk, produce lactic acid as a by-product, thereby starting the fermentation process. Pint starters (while purchased commercially) are ‘bulked up’ in heated milk before being added to the vat. On the West Country Farmhouse Cheesemakers’ website, the page devoted to Montgomery’s elaborates as follows: ‘The cultures used to create acidity...are difficult to handle and produce a wide variation in flavours, but they have lots of character.’¹⁸ Standing before us in the cheese store (i.e. aging facility), Jamie explained that they rotate seven different starter culture cocktails, one for each day of the week, in order to prevent the unwanted development of bacteriophage, a virus that infects and replicates within bacterial hosts. While harmless to human health,
phage thwarts fermentation and interrupts the development of a cheese's desired substance and form.

Thinking of these seven different strain mixtures, someone on the tour asked, 'Do different starters make better cheese?' 'Different starters make different cheese. And I celebrate that', Jamie replied. Just as Montgomery's and Keen's Cheddar represent distinct variants of the classificatory form known as cheddar, Montgomery's Cheddar, I came to realize, embodies a variety of qualities that nonetheless share a characteristic form associated with Montgomery's Cheddar. Jamie Montgomery and his team 'grade' the cheeses at three, six and ten months of age. Cheese grading entails pulling a core sample from the interior of a truckle, or wheel, and subjecting the sample to sensory analysis: the grader looks at, feels, smells and tastes the sample before plugging the small borehole with the bit of rind that was removed (moulds and bacteria grow over the cut, resealing the rind). As implied by the name, grading entails empirical evaluation and classification. Cheeses exhibiting different flavour profiles will be slotted into different markets, including (for Montgomery's) international ones (the American market was said to be partial to sweeter flavour profiles). In addition, as with wine, some cheeses are assessed as having the capacity to be 'aged out' longer than others. Sensory analysis is an important skill employed in cheesemaking's workmanship of risk. Jamie Montgomery knows his cheese – or rather, cheeses – meaning that he knows what range of flavours and odours to expect as characteristic of 'Montgomery's Cheddar'. Divergences from this range signal that something has 'gone off' and suggest the possibility of phage infection, a problem with the silage fed to the cows, or a technical error in production. Each of Jamie Montgomery's seven starter cultures, he told us, generates a distinct flavour profile. 'The seven [starters] are like I've got seven children', he said. 'As long as they are behaving according to character, I know I'm okay.' Conversely, he knows he has a problem if a batch starts mimicking the behaviour of one of the other children.

A cheesemaker in California described this skilled and embodied practice to me as having a 'house palate'. It can lead to developing a taste – meaning not only capacity for discernment but also preference – for one's own product 'because you're so familiar with it'; a familiarity that is reinforced by the developmental metaphors personifying cheeses as organisms, even as children. Such language also reflects an artisanal understanding that cheeses have a 'life of their own', a life that must be carefully monitored and nurtured, but which is not – and, to Montgomery's mind, should not be – subjected to total human control. Montgomery celebrates the diversity of his cheese's character – such diversity of form is what David Pye named as the ongoing value of craftsmanship in an industrial age – but he also wants each of the seven strains to behave recognizably as 'itself', true to type. A Montgomery's Cheddar, after all, should mean to disparage a Keen's.

A principle challenge faced by cheesemakers is that what may vary, but is essential to producing a cheese's character, consistency and European classics, and that its very continuosdly to replicate cheeses, there is no absolute common name and not even that. I spoke about this with Cellars, which he runs, Greensboro, Vermont. W. a regional centre of afflue growth in American art shook his head at the thought of a cheese '...market. Not all practical as 'house palate', let alone as

Mateo located his cheese in what high up in the analogy to a 'Cheesemaking is not an art; it is a problem. In the context, it was explain away the short life of the industry'. In fact, industry in this country; it was serious about their business of Greensboro and beyond, with recognizable typicality in types: as forms that have (supposedly) independent world that will have a so Hill Farm. It is rather the Montgomery works to a typical as 'Montgomery...
Cheddar, after all, should not more closely resemble a Keen's (which is by no means to disparage a Keen’s!).

A principle challenge for the commercial artisan is to become sufficiently skilled in the workmanship of risk that she turns out batch after batch of cheese that may vary, but is nonetheless self-similar. Having a ‘house palate’ is essential to producing a recognizably consistent product. Typicity of form (colour, consistency and flavour) is well established by custom for British and European classics, and seasoned creameries such as Montgomery’s have developed their own vernacular takes on those classics, which they strive continuously to replicate. But when it comes to the new American artisanal cheeses, there is no à point. There is no collective knowledge of ideal type for a cheese named and made – and introduced relatively recently – by a single artisan.

I spoke about this with Mateo Kehler during a visit to Jasper Hill Farm and Cellars, which he runs with his brother, Andy, in the remote region of Greensboro, Vermont. While touring their vast aging facilities, designed to be a regional centre of affinage (cheese-aging), we talked about the extensive growth in American artisanal cheesemaking over the last decade. Mateo shook his head at the thought of newcomers selling product when they ‘don’t even know their own cheese’, as he said, meaning that they cannot define (or are uninterested in defining) typicity – a definitive aesthetic and flavour profile (typicality) for a cheese (type) they have created, named and launched on the market. Not all practicing cheesemakers, in other words, have developed a ‘house palate’, let alone learned how to use it as a tool in artisanal manufacture.

Mateo located his dissatisfaction with current trends in American artisanal cheesemaking in what he characterized as an overly ‘artistic’ approach. Drawing an analogy to a woodworker creating a table, Mateo argued that ‘Cheesemaking is not an art, it’s a craft’. If one leg of a table comes out shorter than the other three, he pointed out, that table is not celebrated as ‘unique’ – it is a problem. In the cheese world, Mateo sees ‘the ability to celebrate or explain away the short leg’ as indicative, in his words, of ‘the immaturity of the industry’. In fact, he continued, artisanal cheese is not yet really an industry in this country; it’s more of a social ‘movement’. The Kehler brothers, serious about their business and its potential to revitalize the rural economy of Greensboro and beyond, describe themselves as working to achieve recognizable typicality in form towards establishing their cheeses as distinct types: as forms that have a recognized place in an established taxonomy – (supposedly) independent of context. Their goal is to establish cheeses in the world that will have a social life beyond the Kehler brothers and even Jasper Hill Farm. It is rather the inverse of Jamie Montgomery’s project. Whereas Montgomery works to distinguish a range of qualities that are recognizably typical as ‘Montgomery’s’ rather than a more generic ‘cheddar’ type, the
Building, dwelling, aging

In 2013, Anne Topham retired from commercial cheesemaking (but not goatkeeping) at age seventy-three. She had been milking goats and making cheese for twenty-five years when I visited her Wisconsin homestead in 2007 and she told me the following story. A few years previous, when her ailing parents required her attention, Anne boarded her goats with a neighbour. Each morning she would drive over to say "hi" and collect some milk, but the cheese she made that summer was atypical; to Anne's "house palate", it suffered. It was not simply that her goats' milk was being mixed with the milk of her neighbours' goats (their flocks were already interbred and familiar to one another); what mattered was that Anne's goats were away from home. When she brought the animals home, the cheese improved — it became more itself. Anne explained:

I always have thought it was because of having that close-tied relationship to the animals. I remember one Sunday afternoon, it was just really, really quiet, it was a beautiful day, and I was hand-ladling the cheese and I was feeling all of the goats in the room. It's like they're there every time I do the cheese. And I need that. I need that relationship. I make lots better cheese when I have that. I don't think you could measure the difference in the milk [as with seasonal changes between early and late-lactation milk; or as the composition of pasture flora change]. It's another kind of difference, it's about their [i.e., the goats'] life here.

The quality of Anne's life and the quality of her cheese are, in her estimation, mutually constitutive.

In 'Building, Dwelling, Living: How Animals and People Make Themselves at Home in the World', which is Tim Ingold's meditation on Heidegger’s 'Building Dwelling Thinking', Ingold advances a "new way of thinking about organisms and about their relations with their environments; in short, a new ecology" that he calls a 'dwelling perspective'. To conclude this chapter, I would like to explore connections between Ingold and what I have called etcetera.
connections between Ingold's dwelling perspective, Pye's workmanship of risk and what I have called elsewhere an 'ecology of production'.

Building on Heidegger, Ingold bases the dwelling perspective on the understanding 'that the forms people build, whether in the imagination or on the ground, arise within the current of their involved activity, in the specific relational contexts of their practical engagement with their surroundings'. It is not so much that we as humans live in a built environment, but that the built environment lives in and through our ongoing activities – with 'us' encompassing not only human dwellers but also animal and plant denizens. Ingold takes inspiration from Jakob von Uexküll, who upheld the figure of an oak tree to exemplify his theory that species can have different Umwelten – perceptions of their surroundings – even as these share ostensibly the same environment. While the fox seeks shelter beneath it, the tree provides 'support for the owl, ... hunting-grounds for the ant', a resource of raw material for the logger and so on. Ingold invites us to imagine a house as Uexküll imagined the oak tree. The house, too, offers habitation for many organisms, some provided for (e.g. the litter box), while others, uninvited, 'find shelter and sustenance in its nooks and crannies, or even build there'. Regardless of welcome, all the inhabitants (mammals, rodents, insects), 'in their various ways, contribute to its evolving form, as do the house's human inhabitants in keeping it under repair, decorating it, or making structural alterations in response to their changing domestic circumstances'. Houses, like trees, 'have life-histories, which consist in the unfolding of their relations with both human and non-human components of their environments'.

So, too, do cheeses have life histories. If you order a wheel of Vermont Shepherd directly from Major Farm, your cheese will arrive packed in fresh straw with a card announcing notable conditions characterizing the farm on the date your cheese was 'born' in the vat. Perhaps it was a fine spring day when three lambs were also born, or on that day a late-summer thunderstorm darkened the sky. The 'birth' announcement speaks to how the particular life history of an individual cheese, a cheese spoken of by its maker in personified, developmental terms, unfolds through formative relations with humans, pastures, ruminant livestock and microorganisms, both ambient and introduced. Not unlike Uexküll's tree and Ingold's house, Major's cheese materializes organic, social and symbolic forces that he and his collaborators nudge into productive assemblage to generate not only an agricultural product but also a form of life, for himself, his family and his few employees, 'that seeks to work with the agencies of the natural world in a way that revitalizes rather than depletes those forces'.

Artisanal cheeses both embody and propagate 'ecologies of production'. The word ecology, derived by Ernst Haeckel in 1869 from the ancient Greek oikos, meaning 'house' or 'home', may be viewed as the study of the 'home life' of
living organisms. If we view cheese as a dwelling place for microorganisms, as a landscape 'constituted as an enduring record of -- and testimony to -- the lives and works of past generations who have dwelt within it, and in so doing, have left there something of themselves',\textsuperscript{26} that microbial dwelling unfolds within a set of broader and more diverse ecologies. There is first the cheese house and aging facility (whether cave, store, or basement room) in which humans dwell alongside collaborating microorganisms and, often as not, uninvited residents: cheese mites and the stray fly. It is here that the cheesemakers, no less than the microorganisms, work and live and build. Far from being rural isolates, working farms are connected to urban markets and are embedded in county, state and national polities. In suggesting that farmstead cheese -- cheese made artisanally on a dairy farm -- emerges from an ecology of production, I mean to call attention both to the multispecies activities and agencies that contribute to the substance and form of a cheese and also to how that generative ecology is made possible, organized and constrained by broader forces of market capitalism and government regulation.\textsuperscript{27}

Ingold writes, 'it is in the very process of dwelling that we build'.\textsuperscript{28} On farms such as David Major's, Jamie Montgomery's or Anne Topham's, the substance and the form of cheese emerge through the dwelling of microorganisms but also within and through the cheesemaker's process of dwelling, of making a life and a living from making cheese. How do cheesemakers decide what types of cheese to make and what forms to aim for? They follow a recipe given by a friend, they adapt favourite European recipes to fit the equipment at hand and local regulatory limitations and they investigate market niches to fill. If they sell much of their cheese at local farmers' markets, they will work to diversify their offerings (customers buy more when they have options from which to choose) and they may produce a fresh cheese (e.g. chèvre or ricotta) to provide a quick source of cash flow while they await aged cheeses to become ready to take to market. If they do not care for the task of spending hours on their feet chatting with potential or repeat customers, or would prefer to spend their Saturday mornings in the company of livestock or at their kids' soccer matches, then a cheesemaker might instead work to sell cheese through a distributor or directly to a retail chain. If this is the case, then consistency rather than variety will be a primary guide. Form and substance are not simply technical criteria, but take shape in and through the dwelling of the cheesemaker that constitutes his or her own home life.

Ingold's 'dwelling perspective' adds a new dimension to Pye's characterization of craftsmanship in terms of a 'workmanship of risk'. For Pye, what is at stake in the workmanship of risk is the quality of the result -- the substance and form of an artisanal product as evaluated within particular markets and (in the case of a food product) regulatory guidelines for safety. But if we think of craftsmanship as unfolding within ecologies of production, as an element of generative dwell risk, too, is the quality and c

By bringing a dwelling perspective can recognize that one of the threats to the craftsperson's livelihood is the risk of getting too big. Big to do what jobs can be taught as a Vermont cheesemaker itself -- the hands-on, sense in the first place -- and because farm-based businesses can also do distance or borders between or husband', another cheeseworker working towards achieving craft for a living remains in this labour is made manifest not only the quality and character of

element of generative dwelling, then we can recognize how, for producers, at risk, too, is the quality and character of their lives as artisans.

By bringing a dwelling perspective to bear on the workmanship of risk, we can recognize that one of the qualities at stake in craftsmanship is quality of life for the craftsperson. The question of scale, of how big is big enough to grow a business to make artisan enterprise financially viable, carries this risk: the risk of getting too big. Getting ‘too big’ can mean having to hire employees to do what jobs can be taught and delegated, but ‘once you start hiring people’, as a Vermont cheesemaker said to me, ‘you move away from the actual work itself’ – the hands-on, sensory work that draws many into artisan enterprise in the first place – ‘and become more of an administer’. Getting ‘too big’ in a farm-based business can also mean disrupting one’s dwelling place: ‘if it puts distance or borders between you and your children and your partner, your wife or husband’, another cheesemaker commented, ‘then what’s the point?’ In working towards achieving consistently desired forms, artisans – those who craft for a living – remain mindful that the productive outcome of their craft labour is made manifest not only in the craft objects they produce but also in the quality and character of their daily lives and relationships, their dwelling.

Notes

4  Ibid., 13.


23. Ibid., 187.

24. Ibid.


28. Ibid., 188.

**Bibliography**


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