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Exploring migrants' knowledge and skill in seasonal farm work: more than labouring bodies

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Abstract

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Abstract

Migrant farmworkers dominate the horticultural workforce in many parts of the Minority (developed) World. The 'manual' work that they do – picking and packing fruits and vegetables, and pruning vines and trees – is widely designated unskilled. In policy, media, academic, activist and everyday discourses, hired farm work is framed as something anybody can do. We interrogate this notion with empirical evidence from the Sunraysia horticultural region of Australia. The region's grape and almond farms depend heavily on migrant workers. By-and-large, the farmers and farmworkers we spoke to pushed back against the unskilled tag. They asserted that farmworkers acquire knowledge and skills over time and that experienced farmworkers are valuable – their value being brought into sharp relief against accounts of inexperienced farmworkers' errors. Our interviewees provided rich insights into farmworkers' engagements with crops and the intricacies of picking and pruning *well*. Far from being bereft of knowledge and skills, they recognised that experienced farmworkers bring benefits. They improve productivity, product quality and ultimately profits. This is especially so when open communication channels exist across the farm hierarchy, when experienced farmworkers' insights are taken seriously by their employers. Our research is informed by organisational studies literature and scholarship on craft/making. Like factory floor workers and artisans, experienced farmworkers bring accumulated knowledge and skills to their work, gained through repeat performance. They reflect on and adjust their activities in dialogue with their materials and the environment. Experienced farmworkers demonstrate care, dexterity and judgement. They are not unskilled, and they are more than labouring bodies.

Keywords: horticulture, skill, seasonal farm work, migrant farmworkers

Abbreviations

ABS: Australian Bureau of Statistics

JFADT: Joint Standing Committee on Foreign Affairs, Defence and Trade

NFF: National Farmers' Federation

PNG: Papua New Guinea

RSE Scheme: Recognised Seasonal Employer Scheme

SAWP: Seasonal Agricultural Worker Program

SWP: Seasonal Worker Programme

TMWP: Temporary Migrant Worker Programmes

UK: United Kingdom

USA: United States of America

WHM: Working Holiday Maker

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Introduction

Horticultural work is labour intensive. Notwithstanding the mechanisation and computerisation of many aspects of farm life, horticultural crops continue to demand humans' attention – and touch. Unable to withstand machinery, delicate crops like table grapes, berries and stone fruits are hand-picked and hand-packed. Fruits that mature unevenly, like oranges, are selectively harvested by hand. Grapevine canes are pruned and rolled by people; and grape bunches are trimmed manually to optimise growth. Nut trees are also pruned by people, albeit wielding chainsaws. On Australian farms – as in the USA, Canada, New Zealand, UK and Europe – this hands-on horticultural work is primarily performed by hired farmworkers, many of whom are migrants (Hernández and Gabbard 2018; Valle et al. 2017).

Existing scholarship on hired farmworkers has consistently – and with good reason – emphasised their vulnerability and exploitation. Researchers have revealed the poor and often dangerous living and working conditions of hired farmworkers (Harrison 2008), particularly undocumented migrant workers (Holmes 2013; Underhill and Rimmer 2016) and 'backpackers' (Howe et al. 2018). Temporary Migrant Worker Programmes (TMWPs) – including New Zealand's Recognised Seasonal Employer (RSE) scheme, Australia's Seasonal Worker Programme (SWP), Canada's Seasonal Agricultural Worker Program (SAWP), and the H-2A Temporary Agricultural Workers program in the USA – have also come under scrutiny. Workers are typically tied to an employer/sponsor upon whom they depend for (substandard/expensive) accommodation and transport. Additional problems include poor pay, dangerous working conditions, unreasonable hours and inadequate healthcare (Basok 2002; Binford 2009; Preibisch 2010; Hennebry and Preibisch 2012; Scott 2015; Weiler et al. 2016). TMWPs have been condemned for embedding a two-tier labour market, for depressing wages (Lenard and Straehle 2012), and for undermining workers' agency and access to recourse (Petrrou and Connell 2018).

Our concern in this paper is with a related but distinctive issue, the *framing* of tasks commonly positioned on the lower rungs of horticultural production: weeding, picking, packing and pruning. These tasks, and the people who do them, are regularly labelled 'unskilled' and 'low-skilled' in policy documents, media reports, academic literature and everyday discourse alike (e.g. Preibisch 2010; Collins et al. 2016; Bedford et al. 2017; Porter 2017; Department of Jobs

and Small Business 2018; Munro 2018; Petrou and Connell 2018). We contend that these labels set a foundation for exploitation; they position hired farmworkers as a disposable workforce that performs a job anyone could do (Hernández Romero 2012). Migrant farmworkers are additionally subject to ethno-racial stereotypes that aggravate their exploitation and deny their personhood (Preibisch and Binford 2006; Preibisch 2010; Holmes 2013; Brahinsky et al. 2014). Work ethic, reliability, endurance, stoicism, nimble fingers or strong arms are identified as “natural ‘racial’ traits” rather than artefacts of problematic employment conditions (Weiler et al. 2016, p.1153) or simply individual attributes. Crucially, these discourses and stereotypes function to obscure hired farmworkers’ horticultural experience, which is – oftentimes – vast. Documenting this horticultural expertise, and its implications, is our objective in this paper. We ask: is it accurate to attach the label ‘unskilled’ to hired farmworkers? What evidence of skill exists in farmers and farmworkers’ descriptions of ‘routine’ horticultural tasks? Asking these questions is important because it enables us to scratch beneath the surface to document the intricacies of farm work, and the knowledge and expertise of those who do it. This, in turn, has political implications – because the notion that literally anybody can do hired farm work underpins farmworkers’ exploitation. This notion also shapes the workforce available to farmers, potentially undermining product quality and profits.

Hired farmworkers: a diverse workforce

The horticultural workforce arrives on Minority World¹ farms via varied pathways. Some workers come from the Majority World via the aforementioned TMWPs, for example, Pacific Islanders in New Zealand and Australia (Department of Jobs and Small Business 2018; Immigration New Zealand 2018); workers from Mexico and the Caribbean in Canada (Government of Canada 2018) and Mexicans in the USA (U.S. Citizenship and Immigration Services 2019). Many other farmworkers are employed outside structured programmes: Eastern Europeans in the UK and Europe (International Labour Office 2016; Doward and Baldassari

¹We use the terms ‘Minority World’ and ‘Majority World’ (instead of North/South, developed/developing world, First World/Third World). These terms do not contain embedded geographical inaccuracies and serve as a reminder that wealthy lifestyles are experienced by a minority of the world’s population (Punch 2000).

2018); domestic retirees who follow the harvest trail in Australia (Underhill and Rimmer 2016); and diaspora communities of permanent migrants and former refugees (Collins et al. 2016; Nishitani and Lee 2017). Some farmworkers lack valid visas, including visa ‘over-stayers’ and victims of bonded servitude (Underhill and Rimmer 2016; Haspel 2017). Another key source of farm labour, especially in Australia, comes from the Minority World (Collins et al. 2016). Known colloquially as ‘backpackers’ (and formally as Working Holiday Makers (WHMs)), these young people are from Japan, the USA, the UK, Germany and Italy, among others. Backpackers’ initial 12-month visa permits work anywhere in Australia – but since 2005 they can qualify for a second 12-month visa after spending more than 88 days working in a regional/rural area. Consequently, backpackers now constitute the bulk of Australia’s harvest workforce (Underhill and Rimmer 2016; Valle et al. 2017). Indeed, around 40,000 backpackers work on Australian farms each year (Collins et al. 2016), a number that far outweighs the 8,457 SWP visas issued in 2017-18 (Howes 2018).

No matter their geographical origins, overseas workers underpin Australian agriculture due to chronic domestic workforce shortages. According to the National Farmers’ Federation (NFF 2016, p.8), Australian agriculture would “grind to a halt” without them. During three years of fieldwork in a major horticultural region of south-eastern Australia, we sought to dig beneath the unskilled tag, asking what hired farmworkers *know* and what *skills* they possess. We invited farmers, farm managers and migrant farmworkers to reflect on the knowledge and skills involved in horticultural labour. Before turning to our empirical study, we outline the conceptual underpinnings of our article, drawn from research on migration and knowledge transfers; and from explorations of the knowledge and skills possessed by other types of hands-on workers – those on the factory floor and in the artisan’s workshop.

Searching for knowledge and skill in studies of migrant farmworkers

Scholars of migration and development have asserted that migrant workers transfer valuable knowledge and skills between source and destination countries (Levitt and Lamba-Nieves 2011; Clemens et al., 2014). These arguments have chiefly been made vis-à-vis formally educated professionals – so-called ‘skilled migrants’ (Faist 2008; Docquier and Rapoport 2012; Newland and Riester 2018). Bucking this trend, Williams and Baláz (2008) contended that all migrants

carry knowledge. Hagan et al.'s (2015) research with Mexican 'blue collar' workers in the USA further challenged the skilled/unskilled dichotomy. Drawing on conceptualisations of tacit knowledge² they concluded,

All forms of work involve some form of skill, even when those skills have been internalized and routinized and cannot be demonstrated or measured in explicit terms...while there are jobs that require distinct and varied skills, there are no unskilled jobs (Hagan et al. 2015, p.22).

Challenges to the label 'unskilled' are scarce apropos hired farmworkers³, with notable exceptions. Discussing Canada's alternative food networks, Weiler et al. (2016, p.1141,1153) briefly mentioned migrant farmworkers' "specialized but devalued manual skills" and "critical farming expertise". Hagan et al. (2015) noted that Mexican farmworkers' pre-migration agricultural experience is beneficial on US farms, and Bedford et al. (2017) identified productivity gains in New Zealand's RSE scheme based (in part) on seasonal farmworkers' agricultural experience in countries of origin. With repeat RSE scheme participation some workers became "highly skilled at specialist tasks on the orchard/vineyard" (Bedford et al. 2017, p.49). Relatedly, Australian farmers have reported that SWP migrants improve farm productivity by around 20 per cent compared to backpackers⁴ (Zhao et al. 2018). Farmers who participated in Zhao et al.'s (2018, p.18) study attributed SWP migrants' productivity to diverse factors,

²Tacit knowledge "denotes all intellectual or corporeal capabilities and skills that the individual cannot fully articulate, represent or codify...[it] is developed from direct experience, observation or interaction in which one largely learns by doing" (Williams and Baláz 2008, pp.55-57).

³Some authors have acknowledged the farming expertise of "agriculturally experienced immigrants" (Imbruce 2007, p.41), but these discussions have focused on migrants who become farm owners post-migration, or who grow food in community gardens or backyards – not migrant *farmworkers* (e.g. Frost 2002; Minkoff-Zern 2012; Cabannes and Raposo 2013; Taylor and Taylor-Lovell 2014).

⁴The report's authors urged some caution in interpreting their productivity findings, which were based on analysing data from 150 SWP participants and 109 WHMs on three farms over three financial years, and focused on fruit picking tasks only (Zhao et al. 2018)

including their “physical capabilities and motivation level” and their experience working “in hot and humid conditions”. However, they also noted that the design of the SWP – which facilitates repeat participation – is important. Returned workers were “more experienced and skilled, better understood expectations...were familiar with the farm layout and operations” and could be trained over time to complete more specialised tasks (Zhao et al. 2018, p.18). Previously, adopting Williams and Baláž’s (2008, p.16) terminology, we identified SWP participants as “knowledgeable migrants”, arguing that those who are engaged in horticulture in countries of origin and Australia engage in beneficial knowledge and skills transfers (Dun et al. 2018).

A rare descriptive account contesting the ‘unskilled’ classification of hired farmworkers comes from Hernández Romero’s (2012) ethnographic fieldwork alongside Mexican migrants on California’s orange and grape farms. Hernández Romero (2012, p.77) argued that dominant framings have obscured what it takes to do harvest work, and offered a contrasting portrait,

As with other jobs commonly referred to as ‘unskilled’, there is perceived to be no learning process behind the execution of orange harvest...There are in fact a number of abilities needed to do this job...like recognizing the fruit that meets the required conditions and cutting it without damaging the trees, all at a pace fast enough for good productivity. Other abilities are related to becoming adapted to the job and doing it in a less exhausting way: knowing how to handle the sack, how to place and move the body over the ladder, and how to empty the sack in the box...helping to avoid the risks of accident or injury.

In Australia, Kilpatrick and Bound (2005) underscored the skill involved in ‘manual’ farm work by explaining how secateurs need to be handled correctly during the grape harvest to avoid injury and strain. They argued that “what appears straightforward is anything but” (Kilpatrick and Bound 2005, p.11).

Given the paucity of research exploring hired farmworkers’ knowledge and skills, we draw theoretical inspiration from overlapping themes in two bodies of literature: i) on innovation and knowledge flows within and between organisations, and ii) on of artisans’ skilful material engagements. These have mostly existed separately (exceptions include Carr and Gibson 2016;

Fisher and Botticello 2018), yet they tread similar terrain pertaining to knowledge, skills and hands-on work. Though neither area of study has turned sustained attention to agriculture, they offer important perspectives on how farmworkers' activities might be reconceived.

Insights from the factory floor and artisan's workshop

In *The Productive Body*, Guéry and Deleule (2014 [1972]) explained that capitalism has both entrenched and benefited from a mind/body binary. Those who do hands-on tasks (in a factory or workshop, or, in our case, on a farm) are neither seen as holders of knowledge nor a source of surplus-value. Value is vested in 'knowledge' workers (e.g. managers, engineers, architects, scientists), while 'manual' workers are diminished and rendered exploitable – maximising company profits.

The logic underpinning this binary has been challenged by scholars of organisational and management studies (Brown and Duguid 1991; Riege and Zulpo 2007) and human geographers (Carr and Gibson 2016; Fisher and Botticello 2018). Focusing on factory floor workers, service technicians and maintenance and repair staff, they have shown that 'manual' labour is neither unskilled nor bereft of knowledge. They have heralded the non-canonical, embodied and tacit knowledge evident in the activities of people who work by hand and with materials, tools and machines of various sorts. These oft-maligned workers improvise and respond to unfurling conditions. They exercise insight and judgement based on "accumulated wisdom", moving beyond instruction manuals or plans (Brown and Duguid 1991, p.45). Their knowing deepens with repetition, trial and error, thinking and doing (Riege and Zulpo 2007; Fisher and Botticello 2018). This body of work unsettles the mind/body binary, asserting that knowledge and skill overlap. For Fisher and Botticello (2018, p.60), skill is the "practice-based articulation" of embodied or tacit knowledge. And so hands-on work involves "muscle memory" *and* thinking (Fisher and Botticello 2018, p.56). From this standpoint, the factory worker is reconceived as a reflective practitioner (Schon 1984), not an unthinking drudge.

Discussions of the dialogue between "concrete practice and thinking" (Sennett 2008, p.9) *through* repeated contact with materials (Ingold 2000), are also found in studies of craft, making and artisanship. Working through observations of mud masons, minaret builders and wood

workers, Marchand (2008, p.257, 266) argued that the “knowing mind” cannot be conceived of separately from the “useful body” – and that the limits of knowledge need to be made more inclusive because skilled practice “is a hard-earned cognitive achievement”. Akin to the organisational studies literature, scholars of craft/making have identified skill as a coming together of knowledge and practice (Ingold 2000); noting that skilled activity exceeds design or plan, and that knowledge is made “*in the activity*” (Marchand 2008, p.257). Makers attentively and responsively follow “the lead of the material” with which they are working (Carr and Gibson 2016, p.303; Ingold 2000). The literature on craft/making extends further, though, in its recognition of non-human agencies. Thinking and doing are not attributes of the individual artisan, but exist in relation to materials and the environment (Ingold 2000). Looking beyond the artisan’s workshop and the factory floor, the “negotiations and concessions” that skilled makers must make, with their materials (Carr and Gibson 2016, p.303), are pertinent to farmers, farmworkers and gardeners – all of whom grapple with planty agencies (Head et al. 2012; Brice 2014).

Recognition of the “learning-in-working” (Brown and Duguid 1991, p.41) that occurs through repetitive, hands-on engagement with agentic materials has important implications. Scholars of management and organisational studies have found that organisations lose out if they snub the embodied/tacit/non-canonical knowledge of factory floor workers. Organisations often overlook the insights generated by workers “who are in contact with the environment and involved in interpretive sense making, congruence finding, and adapting” (Brown and Duguid 1991, p.53) due to blocked communication channels, poor relationships between workers across different levels of the organisation, the inherent difficulties of communicating tacit knowledge, or elitist organisational cultures. In so doing, they risk blocking a major source of innovation (Szulanski 1996; Amin and Cohendet 2000; Gertler 2003; Riege and Zulpo 2007). To foster innovation, organisations must attend to “the rich, full-blooded activities themselves” (Brown and Duiguid 1991, p.53) and establish recursive loops so that this practice-based knowledge can inform engineers, designers and managers (Gertler 2003).

The above literatures highlight several crucial insights relevant to our research on hired farmworkers. These bodies of work make a case that hands-on workers: are neither unskilled nor

bereft of knowledge; should be identified as reflective practitioners given that knowing deepens with repetition, trial and error, thinking and doing; have their skills shaped in relation to the materials they work with and their environments; and are valuable sources of insight and innovation if managers give due attention to their expertise. We now take these insights to the heavily mechanised and increasingly corporatised Australian farm, an important but neglected locale from which to question dominant framings of knowledge and skill.

Study location and methods

Our research took place in the Sunraysia region of Australia's Murray-Darling Basin, in and around the rural city of Mildura and a smaller nearby town, Robinvale. This irrigated horticultural region produces significant proportions of Australia's dried vine fruits (98%), table grapes (75%), almonds (68%), pistachios (48%), olive oil (45%) and citrus (24%) (Mildura Development Corporation 2014). Due in no small part to the labour demands of its crops, the region is ethnically diverse. Robinvale has sizeable Tongan and Vietnamese diaspora communities (many of whom are/were farmworkers); and a large Italian community (many of whom are/were farm owners) (Australian Bureau of Statistics (ABS) 2017). When we conducted our research (August 2014 – December 2017), Mildura had emerging refugee populations from Afghanistan and Burundi. Additionally, the region's almond plantations draw heavily upon SWP workers. For several months each year, the population swells to include these circular migrants from the Pacific. Notably, official statistics only reveal part of the area's migration story: a large, undocumented workforce also labours on the region's farms, which are subject to sporadic immigration raids.

This article focuses on a sub-set of interviews and focus group discussions undertaken within a broader study exploring the environmental and agricultural knowledges of diverse migrants. We draw on conversations with 63 current and former farmers (i.e. farm owners/managers), primarily of Anglo-Australian and Italian backgrounds; and 41 current and former migrant farmworkers. The latter group was comprised of 21 local residents (primarily from Vietnamese, Tongan and Burundian backgrounds); and 20 SWP migrants (from Tonga, Kiribati and Papua New Guinea (PNG)). We also draw on a key stakeholder interview with the Director of Tree Minders, a family owned sub-contractor that supplies SWP migrants to almond plantations. We

did not interview backpackers because our research focused on Majority World migrants. However, backpackers comprise a significant portion of the region's farm workforce and were mentioned regularly during interviews. We note that the distinction between farmers and farmworkers, while analytically useful, is fraught; many of the farmworkers we interviewed are (or were) farmers in their countries of origin.

Our interviewees were recruited via diverse pathways. Farmworkers were contacted through local organisations that work with migrants, refugees and/or seasonal workers (e.g. Sunraysia Mallee Ethnic Communities Council, Robinvale Network House and Tree Minders). We employed bilingual community co-researchers, of Tongan, Vietnamese, Hazara and Burundian ancestry, who assisted with recruitment from within those communities. Farmers were approached at the farmers' market, by directly contacting farms, or via the networks of our bilingual community co-researchers and Food Next Door (a local food cooperative). Our research proceeded with ethics approval from the University of Wollongong.

Semi-structured interviews with farmers were primarily conducted in their homes. When possible, we asked to be taken on farm tours to gather further insights. Farmworkers were generally also interviewed in their homes. Most interviews were audio-recorded and transcribed verbatim. A few farmworkers declined to be recorded and we made written notes. When interpretation was necessary, it was provided by the bilingual community co-researchers. Participants were given the option of being referred to by their real first name or a pseudonym in research publications.

The interview schedule covered diverse terrain: family migration stories; experiences of farming in the Sunraysia region and in countries of origin; reflections on agricultural practices brought from countries of origin; examples of cross-cultural learning or collaboration on the region's farms and the contributions made by migrants. Farmers and farmworkers were also asked to reflect on communication channels on the farm. Farmworkers in the Sunraysia region are engaged in several tasks, primarily on grape and almond farms: picking and packing table grapes, pruning grapevines, rolling grapevine canes onto trellises and trimming grape bunches; planting and pruning almond trees, and mechanical harvesting of almonds. We asked our

interviewees to provide descriptive accounts of these processes and (when possible) to demonstrate them. We did not work alongside farmworkers to observe their practices. However, many interviewees provided textured descriptions, sketches and demonstrations of their work. While the tacit dimensions of knowledge can be difficult to communicate (Gertler 2003; Marchand 2008), our participants spoke in vivid and revealing ways about their actions (Hitchings 2012).

Our transcripts were analysed using NVivo Pro v.11. Coding followed an inductive, thematic approach that focused on participants' framings of farm work and farmworkers. In the following two sections we explore how farmworkers' knowledge and skills were dismissed and/or recognised in interviews. While we have evidence of both, recognition was more common. Informed by the organisational studies literature, we then turn to a discussion of communication channels across the farm hierarchy. We show how communication blockages can negatively impact the farm business, precisely because farmworkers' insights are prevented from reaching farmers. The corollary is that farmers who prioritise open communication channels reported positive outcomes. Our findings complicate dominant characterisations of farm labour as unskilled or low-skilled.

Dismissing hired farmworkers' knowledge and skills

When we asked our participants whether migrant farmworkers bring any useful knowledge or skills from their countries of origin, some reacted with surprise or turned to deep-seated stereotypes. Hierarchies that elevate Minority World farming knowledge above so-called 'traditional' knowledge are well-entrenched, as shown in Table 1. However, outright disavowals of farmworkers' knowledge and skills were rare. Farmers who held this view separated the manual from the mental. Referring to migrant workers on his walnut farm, Ian reflected,

do they bring innovation or anything? Not particularly. They're very good at what I imagine you'd called unskilled labour but they also bring a number of other qualities; they're a lot younger than I am, and a lot fitter. (Ian)

Dom, a dried fruit and table grape farmer, commented, "you can't just click your fingers and say, "You've got skills"... Sorry, I'm not going to pull any punches there...it's physical...Farming is

all about physicality.” And Sam, an olive farmer, foregrounded the repetitiveness of the work, “if you can teach someone a repetitive process...to me there’s no skill in that.”

Yet, as shown in Table 1, many participants adopted a more nuanced position while dismissing hired farmworkers’ knowledge and skill. Some recognised that farmworkers from the Majority World have ‘traditional’ or subsistence farming knowledge, but considered this irrelevant on Australian farms. Or, they noted that such farmworkers have expertise, but with different crops to those grown in the Sunraysia region. Others characterised farmworkers as an ‘empty slate’ upon arrival (dismissing, in some cases, a lifetime of pre-migration horticultural experience), but noted that they *become* knowledgeable and skilful post-migration with training and experience. A clear distinction was drawn between different types of farmworkers based on their transience. Diaspora communities and SWP migrants have time to accrue knowledge and skill, we were told, but backpackers spend mere weeks on a farm.

Table 1. Exemplar quotes: dismissing knowledge and skill in seasonal farm work

Majority/Minority World knowledge hierarchies
<ul style="list-style-type: none"> Olivia (<i>interviewer</i>): What about something that you know from [your farm in] PNG, could you apply that here [in Australia]?... Thomas (<i>SWP migrant from PNG</i>): That would be traditional knowledge...They don’t need traditional knowledge here. Barry (<i>avocado farmer</i>): Ah, the South African [farmworker] brought a lot of ideas...but...a lot of things that...they did in South Africa and a lot of products they used...didn't work here or...they were like 10 light years behind us. Tom (<i>almond farm manager</i>): some of them [farmworkers] have got a little five acre...farm or something [in Tonga]...Some have got a little veggie patch...I wouldn't really say they were <i>farming</i>...they don't have a tractor, stuff like that...I wouldn't say they bring any farming skills, put it that way.
Migrant farmworkers have knowledge and skills, but with different crops
<ul style="list-style-type: none"> Olivia (<i>interviewer</i>): what kind of potential do you see for...farmers in the Sunraysia region to learn...from recent migrants? Ben (<i>dried fruit farm manager</i>): Bugger all...Say this was my farm and I said to Heleni [<i>labour contractor, grape farmworker and migrant from Tonga</i>], “Right, I’m going to pull out five acres

and we're going to...grow five acres of sweet potato, show me how to do it.” Yeah, no worries, there he is. Bang! He [Heleni] could teach me that...[However,] I'm in a different situation cause this [dried fruit farming] is one thing, and I've been in it for years. So that person [farmworker] can't really show me much. But you get all these people together [referring to Tongan diaspora in Sunraysia region] and get 'em growing their specific little things [such as sweet potato] that they've...grown up learning. They've got years of knowledge that I wouldn't know...But out here [on a dried fruit farm] it's no good to me. It's a different thing...

Heleni (*labour contractor, grape farmworker and migrant from Tonga*): if we are at a sweet potato farm...I would say...Tongan people will have exactly the same skill...they do it back at home. But to come here to a vinery farm, no, they do not have a skill...

- **Natascha** (*interviewer*): Did you ever get a chance to advise them [Australian farmers] about things to do with farming...?

Joel (*former farmworker, and migrant from Burundi*): No...it wasn't easy to advise them...because their crops...have been planted scientifically and they are different to those we did there at home [in Burundi].

Migrant farmworkers start off as an empty slate, but develop knowledge and skills

- **Tom** (*almond farm manager*): they [SWP workers] come with the right work ethic...but the only skills they'll pick up really is...the ones we've got here, they don't come with any skill...
- **Maria** (*avocado and mango farmer*): They [migrant farmworkers] actually learn from you, I don't think they've brought it over from there [countries of origin] at all. Well I can't see it.
- **Mary** (*table grape farmer*): They [Vietnamese farmworkers] wouldn't even know what a grape looked like...when they [first] come here...we teach 'em...they...haven't got much farming skills, but...they catch on really fast.

Backpackers versus longer-term seasonal workers

- **Ashley** (*melon farmer*): we hire a lot of backpackers...mainly for the picking, but throughout the year we use backpackers when we need them, for various jobs, but you're limited in what you can get a backpacker to do, because of their skill level and a lot of them don't have any prior experience in doing manual labour...
- **Nick** (*former dried fruit, wine grape and table grape farmer*): backpackers...were not as efficient as the Vietnamese...I think the locals [residents] were much better than backpackers. Backpackers are all about...more of a good time than actual work.
- **Ben** (*dried fruit farm manager*): Two years ago, we had backpackers here whinging in the cutting out [grapevine canes]: “Oh, you know, we're making no money, rah, rah, rah.” “Well...you're only

cutting 200 vines a day...the Tongans are cutting 800 a day”. And this [backpacker] bloke said, “Bullshit”...“No, no bullshit mate”. [...] the Pacific Islanders...they'll just go the same speed all day, happy to do it, and...the quality of the job is going to be a hell of a lot better...their work ethic's different [to the backpackers]. They've been brought up in an environment where you've got to work. Where[as] backpackers...50% don't want to be here but...they've got to do their 88 days...So they're shit labour...they've got no interest and no intention of doing a good job for you....

The knowledge and skill required for farm work were often laid bare when participants described situations where they had been lacking. Inexperienced farmworkers, we were told, can undermine a farm's profitability. Ben manages a dried fruit property, supported by Heleni, a labour contractor and Tongan migrant who manages the farm workforce. Ben recalled how an inexperienced worker had cut the fruiting canes off eleven grapevines due to a lack of knowledge. He also explained that when farmworkers do not know how to prune and roll canes onto trellises properly, the quality of the harvest drops,

if they [the workers] cross 'em [the canes], they miss-cut them, all of a sudden when you go to pick the fruit, there's green berries in your dried grapes. You get [price] deductions...First year Heleni started here...there was another contractor, and they done a terrible job. We got \$27,000 [in] deductions 'cause it wasn't done properly. Too much green fruit. (Ben)

Ben also explained how grapevine canes should (and should not) be rolled on – and the implications of this,

my favourite saying to everyone is every action has a reaction...if you don't do it right...that can reflect on your crop for next year...You get a backpacker here that's got no idea. They want to roll them [the canes] on and leave a big loop, because it's easy. But we want 'em to...get it tight to the wire, so...that shoots a nice big beautiful cane there, that's your fruit for next year...if they don't do that properly...we're a 100-acre block, that could cost us 20 tonne, which is 50 grand [\$50,000]. (Ben)

Ashley, a watermelon farmer, reflected that farm labouring has “a fairly high skill level” but is “often underrated.” “If the job's not done properly”, he explained, it can cause “a failure of the

whole enterprise.” Reflecting on ‘basic jobs’, like weeding, Ashley explained that inexperienced workers damage the plants, or “mistake them [weeds] for the melon plant” and pull the wrong thing out. At 18 cents per seed, he continued, “you want every seed to count.”

Farmworkers’ inexperience also impacts farm profits in other ways. During a recent parliamentary inquiry into establishing a Modern Slavery Act in Australia (Joint Standing Committee on Foreign Affairs, Defence and Trade (JFADT) 2017), a public hearing was held in Mildura – focusing on farmworker exploitation. In the published transcript, Emma Germano (vegetable farmer and President, Horticulture Group, Victorian Farmers’ Federation) stated that the cost of picking cauliflowers on her farm had near-doubled after transitioning from an experienced group of Asian farmworkers – who she described as “star players” – to backpackers (JFADT 2017, p.3). (The shift was made upon realising that the contractor providing the Asian workers was exploitative). Moreover, backpackers’ transience meant that constant training became necessary. Emma concluded, “The numbers on my farm don't lie, with regard to the lack of productivity that we ended up with” (JFADT 2017, p.9).

The very fact that inexperienced farmworkers often perform poorly signals that knowledge and skill do exist in the fields, and accrue over time. “It's the same as anything”, Ben explained, “it's practice...that's the way it should be looked at, not that it's unskilled labour.” Below, we unpack these ideas with detailed descriptions of ‘mundane’ farming activities. We also discuss the benefits that arise when farmers have access to experienced (skilled and knowledgeable) workers. While quotes from a small number of interviewees dominate – because of their particularly evocative accounts – these sentiments, regarding the knowledge and skill involved in hands-on farm work, were shared by other participants (see Table 2).

Uncovering knowledge and skill in seasonal farm work

During the summer and winter pruning seasons, Heleni sources farmworkers for Ben. Outside these peak seasons, Heleni works on Ben’s farm – and other grape farms – as a hired farmworker. Olivia interviewed Heleni and Ben in winter, in-and-amongst the dried fruit vines. At that time of year, the process of pulling out grapevine canes, pruning and rolling them onto trellises was front-of-mind. Ben and Heleni took Olivia to see two sets of vines. The first showed

poor execution by inexperienced backpackers. The second showed good quality work, completed by experienced migrant farmworkers of Malaysian background,

They [backpackers] did 15 acres in three-and-a-half weeks, roughly... We had seven Malaysians...they done 15 acres in six days...And the Malaysians...they've come from a table grape industry background [working on other Australian farms], they're skilled labour...They've come here and just gone, bam!...just pumped that out, absolutely fantastic job...that's the difference between getting someone who's raw and someone who's had training and experience. (Ben)

Ben and Heleni showed Olivia correctly rolled on canes that were tight, consistent and neat. “What you call skill”, Heleni said, “There's nothing against backpackers...But everything needs skill...You can see the difference...” Whether grapevine canes are rolled on tightly or not matters. Having a kink in the right place determines the point at which sap flow becomes restricted, and so where new canes shoot out. How grapevine canes are rolled on ultimately determines vine productivity several months later. Looking at a section of canes rolled on by the backpackers Ben surmised, “That person didn't have the right skill to do that.” The backpacker’s error meant that the new canes would shoot out far from the trellis fixture, and so would be cut off during summer pruning (resulting in lost vine productivity).

The dried fruit farm that Ben manages is not able to offer sufficient work to qualify as an approved employer under the SWP⁵. But Ben and Heleni would value the opportunity to access such ‘skilled labour’ and a repeat workforce. “[I]f you could get them people...taught, and they keep coming back every year...the confidence you'd have, it'd be unbelievable”, Ben explained. As Ben spoke, Heleni worked to fix the backpacker’s errors – rolling on the errant grapevine canes anew. Finished, Heleni declared, “You can tell [by looking]...skilled worker, and then

⁵Approved employers are responsible for “organising flights, transport and accommodation for workers, pastoral care, ensuring seasonal workers have access to a minimum average of 30 hours of work per week and monitoring the seasonal workers’ wellbeing” (Department of Employment, Skills, Small and Family Business 2019, no page).

unskilled worker”. Because grapevines are long-lived, maintenance is key. Carr and Gibson (2016) discussed the ingenuity with materials that underpins maintenance in a factory context, and we see parallels in Heleni’s handling of the grapevines.

The intricacies of pruning were also discussed by Trang (our Vietnamese bilingual community co-researcher and former table grape farmworker) and Long (a table grape farmworker of more than 20 years). Long demonstrated how to select which grapevine canes to remove and which to keep. With two cane clippings laid side-by-side he pointed out that, despite being similar in length, one had two nodes while the other had four. Having more nodes, he told Olivia, is a form of insurance – those canes will likely produce more grape bunches. If some bunches are damaged by hail or birds, there will still be others. Long lamented that some farmworkers do not prune correctly, because they want to work fast and so remove the wrong canes. Trang added, “and some people...don’t understand...new people...don’t have much experience so they don’t know that they have to leave this cane [pointing to the cane with more nodes] and cut that cane off [pointing to the cane with fewer nodes].” In this example, we see farmworkers’ knowledge of the inconsistency of their material: the grapevine. Experienced workers are attuned to grapevines’ planty agencies (Brice 2014). Understanding farm labour as entangled with more-than-human processes – which do not adhere to a plan or template (Ingold 2000) – underscores workers’ expertise. They adjust their activities in conversation with their materials, whose properties shape how their actions proceed (Carr and Gibson 2016). Experienced farmworkers are akin to Orr (1990) and Brown and Duguid’s (1991) service technicians: they have the requisite accumulated wisdom to respond, act and adjust according to the circumstances. Long, Trang and Heleni do not react haphazardly. As experienced farmworkers, their actions are not guesswork, they prune and roll canes based on many years of insight and repetition.

Our interviewees typically positioned pruning higher up in the skill hierarchy than fruit picking. But there was also evidence of skill in the latter. Long-term experience has helped Dong, a Vietnamese migrant, develop an intuitive understanding of table grape quality,

I learn like...so many years I do, you know? Like day-by-day. Then I got a feeling. I look and I know straight away: this one we can eat, this one we can’t, throw it away, no good anymore. Some with...sunburn, rotten, some spider inside. (Dong)

Picking and packing the right fruit is not a mindless task, it implies an ability to distinguish by appearance (Hernández Romero 2012). We turn now to Nick – a former dried fruit, wine grape and table grape farmer. When Natascha asked Nick what training is needed for grape picking, he explained,

how to handle the grapes is the most important one...Not to over handle it. So if there was a bunch of grapes...on a vine...you'd teach them to...not handle it too much from one hand to the other...learn to pick it up and...look at it without moving your hand around because grapes have got what's called a bloom on them...that dusty look...and that's what protects the skin from drying out. (Nick)

Minimising disturbance to table grapes' bloom requires careful execution because “the more you handle it the worse it's going to come out the other end” (Nick). According to Nick, each bunch should only be touched once – and with that single touch, the worker needs to pick, clean, trim and place the bunch in the box, without shifting their fingers.

Nick's portrayal of table grape picking and packing revealed an artistry rarely considered in relation to farm work – especially when he described a “brilliant” Thai migrant worker, Prija, who was on his farm for eight years. Not only could Prija pick and pack 300 boxes of table grapes per day, but she produced a consistent – *quality* – product; a critical skill in light of supermarkets' demands for uniformity.

Nick: Before she cut the bunch she knew whether it needed anything on this side...Whether there's any rotten berries...to cut off...she'd grab it [the bunch], cut it and then look at the other side...Before she even got to the box she had it clean...She was unbelievable...if she knew she was getting close to the top of the box...she wouldn't just cut *any* bunch...you know that instantaneous knowledge of where that bunch was going to go? She had it. She cut it and put it there...

Natascha (interviewer): So she'd pick the right size bunch to fit in the little gap [in the box]?

Nick: Sure...If it was a small gap she wouldn't go for the biggest bunch and then have to cut it in half...The coordination between her brain, the box and...what was on the vine...was just there all the time.

Discussing carpentry, Ingold (2000, p.356) described the key to fluent performance as “the ability to co-ordinate perception and action” amidst an evolving relation with the material at hand. In Prija’s case, this ability was the difference between having to handle a grape bunch multiple times – or once, with dexterity. There are resonances, too, with Malfouris’ (2004) description of stone masons,

In building a Cyclopean wall, the choice of the appropriate block of stone was determined by the gap left by the previous one in the sequence of action rather than, or at least as much by, any preconceived mental plan (Malfouris 2004, p.60).

Stone masons and grape pickers skilfully execute tasks that cannot be fully pre-planned. The shape of each stone, or grape bunch, alters the next action.

Table 2. Exemplar quotes: uncovering knowledge and skill in seasonal farm work

The intricacies of picking, packing and pruning
<ul style="list-style-type: none"> • Olivia (<i>interviewer</i>): So would you call it [picking table grapes] skilled work? • Sima (<i>farmworker, migrant from Tonga</i>): Yeah...because we’re packing for [overseas] markets...the agents that come around and [the farmer] he’s really fussy...our way of packing...has to be immaculate...it has to look fresh...when they bring it out of the cooler room the next morning...if you see the berries [grapes] aren’t the same size, well you’re not going to mix it because it just looks odd...you’re going to try and...keep the berries the same size. So if you have berries that are a bit thicker...you...keep them to the side...until you get some berries that are near to the same size and pack them together... [otherwise]...it looks like a sore thumb sticking up. • Anthony (<i>former table grape farmer</i>): you’d just have...a bucket on the ground and you pick them [table grapes]...and you’d have the bucket nice and level and that’s an art in its own...out of the blue you used to get someone who could do 100 [buckets per day]...they were really good at it • Jean Paul (<i>former farmworker, migrant from Burundi</i>): for that pruning work there is a certain expertise...if you haven’t been trained, it’s difficult to do that job...there are jobs [on the farm]

where we might say that this is easy, but...the ones who say that it is an easy job are the ones who aren't doing the job.

- **Evance** (*SWP migrant from PNG*): you're going to use a...chainsaw to do the pruning [of almond trees], so you must know which branch to cut and allow enough sunlight so that [when] the next season comes you've got lots of fruit...you don't cut [just] any branches, that way...there's not going to be enough production.
- **Nick** (*former dried fruit, wine grape and table grape farmer*): you look for the most fruitful canes which...have got a lot of buds on them...well positioned canes...and you always keep in mind...to train your vine...you always keep the crown of the vine below the wires...so it's always got a nice shape, a vase type shape at the crown and you'd...tell them [the workers]...you never cross a cane over to block the crown off because that's where it shoots for next year. So you have to think about next year when you're pruning and not just this year.
- **Maamaloa** (*former farmworker, migrant from Tonga*): the hardest thing with the almonds...is pruning...that is the worst time...you get a chainsaw in one hand and have to cut and pull. Some [branches] are as big as my hand and it's really, really, really hard...You have to open up and see the whole trees, they have to be cut in the middle to open up, it's like a vase so the sun can shine in the middle and they can bear fruits...

Valuing experienced farmworkers

- **Donny** (*dried fruit and table grape farmer*): we've had some brilliant pickers – they can make up to two, three hundred dollars a day...If you don't know how to do it, you make very little...We had a girl that worked for us...she picked about eight boxes for the day...the other one...picked about 80 or 90...it's a skill developed over time and [farm owners] don't have that now [because of the transient workforce].
- **Jess** (*avocado farmer, and former table grape farmer*): we very quickly went into hiring Asian girls. And it became really obvious...that some of these girls were bloody switched on, very, very smart girls...I saw the systems...become really efficient...we were putting through large volumes of fruit with the efficiency with which they worked and how good they were...at their jobs...the quality of presentation of the trays...they were really spot on...they [table grapes] looked amazing...And I think that's testament to how they graded the fruit, the quality of what they were doing...and experience...they knew what they were doing and...they worked really well together...they were integral...to helping build that system.
- **Tom** (*almond farm manager*): I think people underestimate the skill level of any farm work. Any worker going out...usually won't make a dollar, it comes with experience...that comes back to our

training, supervision, support, to get them to where they need to be...[we] use a contractor in town Tree Minders...they have the Pacific Island program, so we bring people over for six months at a time...they'll do the harvest and pruning and then go back...some of them people have been coming to this farm for eight or nine years. Yeah, it's good...that would be our ideal if we could get the same people we put the effort into, back again.

- **Alf (Director, Tree Minders labour hire firm):** our supervisors are the guys...that have been working with us virtually since the start. The [Tongans] that had migrated out here that we'd started working with, everyone was just a labourer... But as the business grew, we needed someone to take on...[supervision]...no formal qualifications but their knowledge of what we do...they've been doing it for that long...Last year we had about 400 staff on harvest in a three month period...which you wouldn't get from locals because we were already using all the locals that we can...the bonus with the...Pacific Program was the return worker, so our intake for next year...we'll have I think five guys that have been on since 2009...so they have six years' worth of experience...We can send 'em out to the block, "You know what you're doing. Go for it."...That's the biggest difference between the program and using backpackers.

Ben and Heleni's, and Long and Trang's accounts of pruning, and Nick's of picking and packing, stand out for their descriptive detail. But numerous other participants also identified the knowledge and skill required to perform these tasks well (see Table 2). Our participants also provided abundant evidence that experience leads to embodied familiarity with farm work, to fluency. When it comes to rolling grapevine canes onto trellises, Ben explained, "you've got to find your rhythm, become...slower, smooth. Smooth is fast." We are reminded of Ingold's (2006, p.74) discussion of skilled basket-makers, "distinguished by a steady working rhythm, intense concentration, and a regular appearance of the product." Inexperienced basket-makers produce irregular outputs. Olivia witnessed this distinction when Ben and Heleni compared the wayward canes rolled onto trellises by backpackers, to the evenness of Heleni's own work – and to that of the Malaysian farmworkers whose skills they lauded. Ingold (2006, p.74) has sought to "correct the widespread misapprehension" that repetition equates to a loss of conscious awareness of a task. Rhythmic performance is not mindless. It requires responsiveness to materials, and to changing conditions. Constant fine-tuning of movements is necessary, in "an intimate coupling of perception and action" (Ingold 2006, p.74). This perspective sheds new light on experienced farmworkers' actions. When people like Heleni, Long or Prija work on a

grapevine, their actions may appear instinctive – but there is a “constant interplay between tacit knowledge and self-conscious awareness” (Sennett 2008, p.50).

Occasionally, our participants acknowledged that a farmworker’s mastery could surpass the employer’s. Chris, a pistachio and citrus farmer, employs Ebrar – originally from Afghanistan. With training and practice, Ebrar showed a talent for budding⁶. He now does all of the budding because “he’s actually better at it than me...his actually come to fruition”, Chris surmised. Ebrar is also better at identifying branches for pruning,

when you prune...a citrus tree, the current theory is that you...want say five or six main limbs, and try and grow a canopy around those limbs...to allow light...right throughout the tree...so you tend to cut...those inner branches out and try and find branches where you can grow younger wood...that will produce fruit, and that fruit will be protected because it’s inside...Sometimes it’s hard to pick the branch that should disappear. You look at it, and you cut it off and it wasn’t the one you thought it was...he’s [Ebrar’s] better at spotting now, because he’s done more trees than me. (Chris)

Earlier, we presented evidence that inexperienced farmworkers’ lack of knowledge and skill can diminish a farm’s productivity. The corollary is that experienced farmworkers benefit the farm business. That Heleni can roll on the canes of 200 vines per day, while an inexperienced worker might manage ten, is a case in point. And so experienced farmworkers are valued on the Sunraysia region’s farms (see Table 2). Digging deeper, it becomes obvious that there is more than speed to gain from experienced workers – *especially* when communication channels are open and farmers acknowledge farmworkers’ insights.

Communication, across the farm hierarchy

Experimentation occurs through hands-on engagement with materials, in sites of learning-in-working (Brown and Duguid 1991). As Brown and Duguid (1991, p.53) contended, “[t]o foster working, learning, and innovating, an organization...must see beyond its canonical abstractions

⁶Budding, like grafting, involves attaching a piece of plant material to the rootstock of another tree.

of practice to the rich, full-blooded activities themselves.” Organisations that are blind to the activities and insights of factory floor workers, or that block these from flowing through to management, lose important opportunities for innovation.

Communication channels on the farm, we found, are regularly blocked by knowledge hierarchies whereby one source of knowledge is valued or dominates over another (Minority World/Majority World, farmer/farmworker, agronomist/farmworker). Dong has worked on the Sunraysia region’s table grape farms for more than 20 years. When asked if farmers ever seek his opinion, he replied, “They’ve got an expert for that...They don’t listen to us...[the expert] got the certificate or something...They not listen for the worker.” (Dong)

Szulanski (1996, p.32) explained that “internal stickiness” prevents the uptake of best practice within organisations, and is often attributable to “arduous” relationships between information sources and recipients. Internal stickiness arises when decision-makers do not perceive the knowledge-source (e.g. the grape picker) as knowledgeable. Our participants also identified other sources of internal stickiness on the region’s farms, including language barriers and the perceived hesitance of some cultural groups to address those higher up the organisational chain. That many large farms now depend on contractors for workforce recruitment and management is also significant, limiting direct contact between farmers and farmworkers. As Ben explained, “if you’ve got a contractor in the middle...the farmer doesn’t even talk to their migrants.”

Blocked communication channels have consequences. We asked Joselyne (a former farmworker, from Burundi) whether she would have told her former employer if she noticed s/he had made a mistake on the farm. She laughed, “No. It’s the owner....they give us a job [so] we won’t tell them.” Others shared her reluctance. Hoang (a table grape farmworker, from Vietnam) explained that he would not tell his boss if he noticed a problem on the farm because he might lose his job. Paea (an almond farmworker and SWP migrant from PNG) explained that supervisors sometimes give workers incorrect instructions, “We want to correct them but they say...“No, shut your mouth.””

Mai (a table grape farmworker and migrant from Vietnam) has observed diverse techniques across multiple farms. When she tried to advise ‘her farmer’ to adjust his technique her advice was dismissed. The result, according to Mai, was that his grapes were prone to rot.

When I go to work in other farms and I see what they do well there, I...tell him to follow it, but he does not listen to me...In his farm he has only 8 canes [per vine], whereas in other farms they have up to 12 canes, which help produce more flowers. Also, they put more labour in separating the bunches equally [so they do not stick together]...he just leaves them as they are... Therefore, he does not have many grapes and in most cases his grapes are not as good as in other farms...if you prune [thin] the bunches...the grapes [on the remaining bunches] will get bigger and they will not get rotten...he refused to do like that and left the bunches stuck to each other here and there and everywhere. So when it rains the grapes get rotten and they are small in size as well. (Mai)

Over 20 years of working on table and wine grape farms, Thu (a Vietnamese migrant) has had some success advising farmers. Her employer listened when she suggested he raise the height of the grapevines’ plastic covers (used to protect grapes from pre-harvest rain). They had been sitting too low, trapping humidity and causing the grapes to rot. Thu’s boss valued her perspective, also consulting her about when the picking season should start. When we asked Thu if farmers respect workers’ knowledge she replied, “Some smart farmers listen, but others not” (Thu).

Some of the farmers we interviewed were ‘smart farmers’. They listened when experienced workers alerted them to issues on the farm. Ashley explained,

there might be a problem with the irrigation system and they'll notice...“You've got to go fix it”...[or] if there's a problem with the quality of melons...in a particular patch, the pickers will see it first...they will identify things...once they know what they're doing. (Ashley)

Farmworkers’ observations have helped Ashley improve safety on his melon farm. Moreover, experienced farmworkers – who have worked on multiple farms – have given him “lots of little tips and tricks” and have even introduced significant innovations, as shown in this exchange.

Tess (interviewer): [W]hat kind of potential is there for a two-way transfer of knowledge between farmers and farmworkers?...

Ashley: Not so much with backpackers, but with...workers that have worked on other melon farms...they've seen and worked with different systems...there's more potential there...

Tess: Can you think of any examples?...

Ashley: We use black plastic mulch film...to plant the melons into...[and] at the end of the season it has to be retrieved. And in the early days...we'd go along in the tractor and knife underneath it to bring it [the film] to the surface and then...pick it up by hand. And it's a very dirty job and nobody wants to do it. Other farms, in Queensland...have machines to do it...the workers that had worked on those farms said, "You need one of these machines." So we went and had a look and we built one and it's made life so much easier...

Transfers of knowledge – by mobile workers – have also been observed in other contexts. Fisher and Botticello (2018, p.50) found that workers from different lace factories brought “habits, standards and assumptions...distinctive work practices and outputs” with them when they moved. Returning to our study, Nick explained that a farmworker had introduced a time-saving innovation to his table grape packing shed, based on observations made on another farm. The innovation involved bolting two staplers together so that one action could staple two lids. Nick had also adopted new cincturing⁷ techniques to regularise the productivity of a typically biennial variety of grapes based on an experienced and mobile farmworker’s observations.

The organisational studies literature urges firms to reduce the alienation of factory floor workers from management, and to actively foster bottom-up information flows to maximise efficiency (Riege and Zulpo 2007). Some of the farmers we interviewed purposefully cultivated open communication channels to facilitate productive conversations. Barry (an avocado farmer and former dried fruit and table grape farmer) encouraged his workers to invent better ways of doing

⁷Also known as girdling, this involves “removing a 3-6 mm ring of bark (down to the cambium) in a complete circle around the trunk or arms” (Agriculture Victoria 2017, no page).

the “shitty jobs no-one liked to do.” Tom (the manager of a very large almond farm) described holding regular “toolbox meetings” involving every farmworker because he wanted to know what they had noticed on the farm. “[T]hey're the ones in a tractor going up and down every row”, he said. This means they often notice yellowing trees or excessive leaf fall before he does. When asked about the potential for knowledge-exchange between farmers and farmworkers, Tom replied,

There's heaps of potential, because they both learn from each other...we're forever [asking]...“Where've you been today? What are you looking at? What are you fixing?” because I can't be everywhere...But, they see things, they'll come up with little ideas how to fix or do [things]...that's continuous. (Tom)

With these information flows in mind, Tom described taking care not to dismiss workers' ideas, we make an effort to listen to everybody' he said, ‘that's one part of keeping that happy crew and that respect both ways, because when they're coming to you with ideas...*they're thinking*...The last thing I want to do is shoot them down. (Tom)

Marchand (2008) observed – through ethnographic research with minaret builders in Yemen, mud masons in Mali and fine-woodwork trainees in London – that stable communities of craftspeople foster improvisation and innovation. Stable communities have become harder to build in the Sunraysia region, with a highly transient, backpacker workforce. Yet having a long-term or repeat workforce creates opportunities for farmworkers to gather experience, and to feel secure in conveying their ideas⁸. Jess (an avocado farmer) explained,

sometimes we're getting workers in where it might just be...for a couple of weeks...so you don't get that transfer of information...or that feedback...on the old [grape] farm where we had the...repeat [workers]...you had a safer environment...that was cultivated for transfer of information, there was no fear of...if I say something I might lose my

⁸Although we have shown that mobility between farms is also valuable – so stability perhaps needs to be conceptualised at both the individual farm level, and at the crop level (i.e. working with the same crop over time on multiple farms).

job...it was a safe environment to be able to feedback and discuss problems or troubleshoot. (Jess)

What we found on Barry and Jess, Tom, Nick, Ashley and Ben's farms, in particular, was an understanding that learning and innovation occur through "shared expertise, talk [and] sociability" (Amin and Cohendet 2000, p.111). We found open communication channels, respect, scope for bi-directional learning, improved troubleshooting capabilities, and farmworker-led innovations.

Cracks in the unskilled labour façade

What happens when hired farmworkers are asked what they know? And when employers are asked what farmworkers contribute *beyond* their labouring bodies? Beyond nimble fingers or strong arms? The first thing that happened in our study was that ethnicity, or race, were decentred – despite the fact that most hired farmworkers in the Sunraysia region are migrants, of various sorts. When we asked interviewees to describe the intricacies of farm work, workers' *experience* on-the-farm became more significant than their country of origin. Second, farmworkers and farmers alike pushed back against the unskilled tag so often attached to hired farmworkers. Farmers were fed-up with the substandard labour they could access through short-term backpacker employment. Given this dissatisfaction, it is perhaps surprising that Australian farmers continue to employ backpackers. However, this can be explained by the serious labour shortages with which they contend. The National Farmers' Federation (NFF 2019, no page) has described a "workforce crisis with farmers routinely forced to leave produce on the vine to rot because they cannot find the people power they need to get the job done". As Emma Germano, of the Victorian Farmers' Federation commented, "[a] grower is not choosing a backpacker as the person they want to have there; it's just that they are the only person they will probably get there" (JFADT 2017, p.9). The number of workers available through the SWP is currently insufficient to meet demand, and many farms are unable to meet the programme's eligibility requirements or bureaucratic demands. Backpackers offer a large and flexible workforce, that can be hired at short notice. Yet peak industry bodies' desire to find a more reliable and higher-

quality source of labour is clear in the NFF's persistent (but currently unsuccessful) lobbying for a dedicated Agricultural Visa⁹.

The farmers we interviewed had employed experienced workers and inexperienced ones. And they could see the difference. The importance of skill was often most evident in accounts of times when it had been absent. Ben and Heleni were the most impassioned of our interviewees. Heleni described the complexity of working across diverse farms, with multiple grape varieties and techniques and resolutely rejected the label 'unskilled'. Ben agreed, surmising,

people can just say "Oh, that's just block work, that's shit, that's unskilled labour...they don't need any brains to do that...anyone can do that." Nah...you've got probably 15 root stocks that you can use. There's 25, 30 different varieties of grape that you can grow. There's probably 10, 11, 12 different varieties of trellis that you can use. So depending on which root stock to which variety of grape to which trellis [impacts]...how you roll it down, everything...from my perspective, growing the grape, [there] is a hell of a lot more in it than you realise...whoever come up with the idea that it's unskilled labour is kidding themselves...they've never done it. (Ben)

Towards the end of our interview, Ben emphasised the volatility of horticulture: losses are regularly incurred through inopportune weather – so the quality of the work itself should not be left to chance,

this so called unskilled labour has to be spot on!...you've got everything else up against you...you've got Mother Nature, you've got the firm...So you've got to make sure that what you're actually in control of – which is the pruning and the picking and everything like that – you're spot on...So this theory that it's unskilled labour is crap. (Ben)

⁹ The NFF is seeking a visa that would differ fundamentally from the SWP by not tying each worker to one employer. Their proposed visa would, however, allow workers to return for three to five years to address farmers' concerns "around having to train people every year – from scratch – during their busy harvest season" (Jasper et al. 2018, no page; NFF 2019).

Our interviewees regularly used the term ‘unskilled’ in relation to inexperienced workers, but they did not consider farm work itself to be unskilled. Experienced farmworkers were valued. They were not viewed as interchangeable cogs in an industrial agricultural complex. Their knowledge and skills were considered instrumental to producing good quality produce. John, a former farmer and now soil salinity consultant, grappled with the unskilled tag, before concluding,

It’s semi-skilled labour, probably even skilled labour is a better term...the quality of the product at the supermarket will relate to the quality of the [grape bunch] trimming that’s gone on, and the packaging, and the processing. (John)

The aforementioned Parliamentary Inquiry into establishing a Modern Slavery Act in Australia occurred just as our fieldwork was winding up. At the hearing held in Mildura, the Executive Officer of the Sunraysia Mallee Ethnic Communities Council, Dean Wickham, clearly expressed the value that quality workers bring to the region,

the people who are out there picking our fruit to export-quality standard are skilled workers. They are not low skilled; they are skilled. In this particular economy, Robinvale and Mildura, these guys are the engine room of our community, and our big farmers appreciate it...they value that skill level when they're packing a box of grapes or picking oranges to export standards. (JFADT 2017, p.48)

The empirical evidence that we have corralled in this paper unsettles the notion that hired farmworkers are unskilled. This matters because the idea that literally anyone can do hired farm work has come to shape the workforce available to farmers – in terms of the types of workers that dominate the sector (backpackers in Australia), the expected duration of workers’ employment, and the training they receive (or not) (on this latter point, see Kilpatrick and Bound’s (2005, p. 6) discussion of how seasonal workers tend to “fall through the formal training net” due to the “temporary nature of their work and the traditional understanding that seasonal work is unskilled”). If a system assumes that no skill is required, it overlooks the accumulation of skill over time. It also fails to recognise that an experienced workforce improves the quality of the work performed. Crucially, the notion that hired farmworkers are unskilled also underpins exploitation in the horticultural sector, as has been thoroughly documented elsewhere.

The term unskilled is problematic, then, not only because it is inaccurate but because it is “part of a lexicon that justifies lower wages, bad working conditions, and marginal labor rights” (Hagan et al. 2015, p.191). Our focus on knowledge and skill in this paper does not make us agnostic on the matter of exploitation. Rather, we argue that recognising people’s skills can revalorise the work that they do (Hagan et al. 2015).

Conclusion

In this paper, we have drawn on four key insights from the factory floor and artisan’s workshop to conceptualise knowledge and skill in seasonal farm work. First, that ‘manual’ work is not unskilled, even when (or perhaps especially when) it seems to be occurring instinctively or unconsciously. Second, that skilled work with hands, materials, tools and machines is not just ‘manual’, it is also knowledge-work – because skill is more than “the mere application of mechanical force” it involves “care, judgement and dexterity” (Ingold 2000, p.291). Third, that hands-on work occurs through ongoing dialogue with materials and environment, in ways that always exceed instructions, plans or designs. And so workers are constantly reasoning and adapting their practice. Fourth, that narrow definitions of knowledge demean certain workers, setting a framework for their exploitation. Resisting them does important political work.

On the latter point, Marchand (2008) contended that the limits of knowledge require reconfiguration to include skilled practice. While his focus was on artisans of various sorts, our politics align. Marchand (2008, p.254) argued that “the validation and promotion of skilled practice as ‘intelligent’ is necessary for raising the status and credibility of apprentice-style learning within our Western systems of education.” And we contend that such validation and promotion is equally necessary in regard to farm work. We share with Hernández Romero (2012) a concern that the unskilled label has obscured the skills and knowledge required to do this work well. Interpreting our findings through the lens of literature from the factory floor and artisan’s workshop, we suggest that farmworkers are not just labouring bodies, they are also thinkers (Sennett 2008). And, moreover, experienced farmworkers are reflective practitioners (Schon 1984). This so-called unskilled work is not that at all. It involves instructions, skills, repeat performance, increasing expertise and knowledge. And, for some farmworkers, eventual mastery.

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