



# Generating knowhow in later life

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**Brotherhood  
of St Laurence**

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The Brotherhood of St Laurence is a non-government, community-based organisation concerned with social justice. Based in Melbourne, but with programs and services throughout Australia, the Brotherhood is working for a better deal for disadvantaged people. It undertakes research, service development and delivery, and advocacy, with the objective of addressing unmet needs and translating learning into new policies, programs and practices for implementation by government and others. For more information visit <[www.bsl.org.au](http://www.bsl.org.au)>.

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## Summary

We live in a complex world in which we are increasingly required to take responsibility as individuals for the choices we make and their contingent risks. In this environment, how do older adults know how to live healthy and fulfilling lives in the face of a tsunami of complex information and a plethora of choices? This study set out to explore the knowhow Australians value in later life and how they acquire it.

For the purposes of this study we conceived of knowhow as some dynamic coalescence of the knowledge, information and skills that enable us to adapt and respond to the changing world in which we live. We asked 32 older adults no longer in the workforce in a variety of locations across Melbourne:

What is 'knowhow'?

What knowhow is most highly valued in later life?

How do older adults acquire knowhow?

Knowhow is difficult to define. Largely tacit, it is the intuitive ability of 'knowing what's the right thing to do with the right kind of thing' (Harnad 2007, p. 1). Research participants found the concept of knowhow 'nebulous' and difficult to articulate *per se*. They associated it with having a store of useful capabilities accumulated through life experience that enabled them to manage their lives competently.

The knowhow most highly valued constellated around four main aspects of life:

- Basic life skills included literacy and household management.
- Functional knowhow for managing everyday life included financial matters and government entitlements, information and communication technologies, housing and property maintenance, and accessing services.
- Knowhow about health and wellbeing for self and others included ways of maintaining and managing good health such as nutrition, fitness and medication, and managing disability or serious illness.
- Knowhow about later life events and transitions included gathering insights into possible future scenarios such as cognitive impairment, bereavement, living alone, caring or being cared for. This led to knowhow to plan for the later years of life, especially maintaining independence, maximising control of their lives, and understanding the late ageing process, their options for care and death and dying.

By contrast, the meaning or purpose of life received little mention as a type of knowhow.

In the lives of the older adults in this study, knowhow is accumulated and shared incidentally and serendipitously through life experience. It depends heavily on living in an environment conducive to opportunities for social contact with family, friends and wider social networks where observations and conversations, both incidental and

purposive, take place. Accumulation of a dynamic store of knowhow depends on five main factors:

### Personal attributes and skills

Personal attributes are important enablers of knowhow. Research participants nominated such attributes as interest, curiosity, initiative, effort, self-direction, self-discipline, responsibility and self-confidence.

### Access to information

Much information is acquired by word of mouth. As would be expected, the internet, the various media, local government and service agencies are also important sources of information. Not all information that presents itself in the course of daily life is reliable: its validity needs to be tested in dialogue with trusted others.

### Accumulation through life experience

Later life brings with it a store of accumulated knowhow on which older adults constantly draw, remembering, interpreting and re-interpreting it in different situations and combining it with knowhow born of new experiences as they unfold.

### Intentional pursuit of knowhow

While most participants believed they developed knowhow through learning from experience, a few spoke of intentional strategies to build knowhow for particular interests or hobbies. However, formal learning, in the sense of being taught, was seldom mentioned. It was evident that educational courses played only a small part in contributing to what participants regarded as knowhow.

### Social engagement

Knowhow is propagated in a social context. Of all modes of acquiring knowhow, social interaction was implicitly and explicitly by far the most prevalent and valued means of acquiring knowhow for the 32 study participants. Observation and 'eavesdropping', day-to-day conversation, clarifying and verifying information with others, and group activities are all important to the generation of knowhow.

Knowhow evolves in the company of others. Together older adults not only acquire knowhow, they create it in a dialogic process and propagate it through their social networks. The generation of knowhow is a social and complementary process. It is akin to Bandura's theory of reciprocal determinism, where people's behaviour, environment and personal qualities all reciprocally influence each other.

Social isolation is the enemy of knowhow. As adults age, they can continue to enhance their capabilities, providing they live in an enabling environment. For the generation of knowhow this means having ample opportunities to be in the company of others so as to develop and exercise their knowhow individually and communally. This is essential if older adults are to live well in a complex and dynamic society.

# 1 Introduction

In Australia in the 21st century, constant social, economic and technological change have created a world in which a plethora of choices is accompanied by contingent risk and, in the prevailing market economy, individuals are expected to take responsibility for threading their own increasingly complex paths through later life. In the face of this complexity, if they are to protect their wellbeing, older adults need the capacity to respond competently to the turbulence of change. Self-evidently the constant renewal of knowledge and skills is essential. But what are their sources? And what is the organising principle that enables older adults to adapt to change and find their pathways through their later lives?

This organising principle we are calling 'knowhow', even as we have a rather inchoate understanding of what this is. As a departure point for this research we adopted the notion that knowhow includes some dynamic coalescence of the knowledge, information and skills that enable us to adapt and respond to the changing world in which we live. To investigate what knowhow is, what knowhow is most valuable in later life and how knowhow is acquired, we examined the research literature and listened to the views of a sample of older adults in and around Melbourne.

## 2 Literature review

### What is knowhow?

Our search for research literature about knowhow produced scanty returns, indicating that the term 'knowhow' has not been widely adopted. The literature that did emerge crosses diverse fields.

In the field of management and organisation we found that Garud (1997), in his discussion, *On the distinction between know-how, know-why, and know-what*, argues that, while knowhow is widely used to represent knowledge, it is actually one of three components of knowledge, along with know-why and know-what. He defines know-why as an understanding of the principles underlying phenomena (Garud 1997, p. 1), know-what as the kinds of phenomena worth pursuing and know-how as the ability to configure phenomena for a particular purpose.

Harnad, working in the field of cognitive science, defines knowhow as 'knowing what's the right thing to do with the right *kind* of thing' (Harnad 2007, p. 1). He argues that what we know consists of two kinds of things: '*Knowing-How* which is the things we know how to do, and *Knowing-That* which is the things we believe to be true'. He contends that 'knowing-that is just a special case of knowing-how in the sense that we are able to state verbally the propositions that we take to be true and we can also state that they are true' (Harnad 2007, p. 1).

Similarly, Dreyfus and Dreyfus in *Mind over machine* (1986) explain knowhow as 'the tacit knowledge of how to perform a task or function' which 'cannot be reduced to a specific set of rules' and which 'only becomes visible through its absence when the person encounters a new situation' (cited by Burns 2012).

So while know-that and know-why constitute conscious, reflexive knowledge, knowhow, as Garud points out, is often tacit (p. 85) in Polanyi's sense of tacit (unreflected) knowledge (Polanyi 1966) and has invisible aspects not readily able to be articulated by its holder, who is conceptually unaware of its existence. These ideas helped us to clarify our initial, tentative understanding of knowhow as the things we know how to do without knowing how we know. This may include knowing what, that and why in a tacit or intuitive sense which may become more conscious when we encounter and respond to a new situation.

### What knowhow is likely to be valued?

Research by Kimberley et al. found that among 17 capabilities those ranked highest by 220 Brotherhood of St Laurence aged care clients were their health, the place where they live, their family and friends, making their own decisions and being well informed (Kimberley, Gruhn & Huggins 2012, p. 26). In the United Kingdom, Field found that adults 'value their health, their social connections (including family) and their ability to

contribute to the wider community' (Field 2009, p. 5), as well as their freedom and ability to shape their own destinies (agency).

It is also argued that what people most value is linked to their current life stage. For example, Schuller and Watson (2009) suggest that during each of three different stages of life (young people, adults, older adults), people's interests are differently focused; and that older adults are more concerned with overcoming the risk of social isolation, staying healthy and remaining independent. Exploring what older people with high support needs value, Katz et al. (2011) found that the most frequently cited topics were personal relationships, support or good relationships with carers, self-determination (involvement in decision making), social interaction, a good environment (home), getting out and about, information and financial resources.

Life is not only about doing; it is also about 'being', which encompasses consideration of existential matters including meaning, agency and choice. Existentially, later life tends to be qualitatively different from the preceding stages and this is reflected in a shift in core concerns. Biggs and Lowenstein (2011) have argued that matters like personal coherence and completeness (such as time, health, death, impermanence, contingency, finitude) tend to come to the fore, while the quest for social achievement and acceptance may recede in importance. This is consistent with Jung's distinction between the existential projects of the first and second halves of life (O'Connor 1990) as well as the structural models of human development theorists such as Erikson (1959), Maslow (1954), Kohlberg (1981) and Loevinger (1976), each of whom postulates a form of self-realisation or transcendence in the later stages of life. In these respects, we wondered whether the knowhow valued by older adults might be concerned with finding purpose and meaning in life.

### How do people 'get' knowhow?

Knowing how includes the tacit dimension of knowing what—that is, having information that is implicit (Harnad 2007, p. 2). However, in keeping with the tacit aspects of knowhow, information may not be explicitly held or intentionally pursued. Investigating information acquisition by older Australians, Williamson (1997) found that, in relation to everyday life information, some older adults resonate more strongly with the notion of 'being informed' than with 'seeking information'. Similarly, being well informed was a capability highly valued by the older adults participating in the Valuing Capabilities study of Brotherhood of St Laurence aged services clients (Kimberley, Gruhn & Huggins 2012).

Williamson used the concept of 'incidental information acquisition' or accidental information discovery, as opposed to 'purposeful information seeking'. Her Australian study was based on the premise that not all needs for information are perceived as specific 'gaps' or 'uncertainties', but that people frequently 'discover information' while monitoring their world to keep their 'internal modes up to date' (Williamson 1997, p. 339). This discovery process may include listening to the radio, watching television, and reading magazines, newspapers or other printed materials such as pamphlets and

flyers, without the intention of locating specific information but still picking up information, including some that people do not even know they need until it is heard or read. It also involves talking to family, friends, colleagues and neighbours, also without the intention of seeking information; yet, in the course of conversations, information is exchanged and tested, and some of it used later (Williamson 1997). In these circumstances, knowing what (information) and knowing how (the ability to utilise that information) are likely to be tacit.

Garud postulates that knowhow is created by a process of 'learning by doing' (Garud 1997, p. 84) which tends to be tacit because 'learning-by-doing is a process whereby knowledge about how to perform a task accumulates with experience over time'. Of course, learning is usually associated with cognitive knowledge (knowing that and knowing why) that can be stated as propositions and intentionally acquired through structured learning activities; however, Schugurensky's taxonomy of informal learning (Schugurensky 2000, p. 4) illuminates other ways of learning consistent with a less conscious acquisition of knowhow. Schugurensky's thesis is that learning comprises a spectrum from the intentional to the serendipitous. Self-directed learning, he argues, is intentional, while incidental learning is unintentional but conscious and occurs when the learner had no previous plan to learn something out of an experience, but afterwards becomes aware that some learning has taken place. He also posits a second kind of incidental learning, perhaps more akin to knowhow: that is, experiences in which learning takes place but without the learner being aware of learning. Not only might we have no prior intention of learning, but we are not even aware that we have done so until we find ourselves tacitly drawing on the experience in response to a presenting circumstance—that is, applying knowhow.

## Research questions

The ideas generated by this brief literature review indicated the following questions as fruitful to explore further:

- What is 'knowhow'?
- What knowhow is most highly valued in later life?
- How do older adults acquire knowhow?

These, then, were the starting point for our conversations with participants.

### 3 Methodology

The research took the form of a small qualitative study involving older adults in Melbourne.

#### Gathering information

Seven semi-structured interviews and four focus groups were conducted with older adults in venues of their choice—homes, workplaces, community meeting spaces and cafes—to discuss three main questions:

- What is knowhow?
- What knowhow do you think is valuable in later life?
- How do you acquire knowhow?

Focus groups and interviews were recorded, transcribed and analysed thematically using a coding scheme developed from the data, consistent with the grounded theory research approach (Glaser & Strauss 1967). Grounded theory is often favoured by social, health and organisational researchers to develop constructs inductively. Since knowhow in later life is a subject largely missing from the literature, the benefit of grounded theory to this research is to generate theory without a predefined hypothesis. Important too is its focus on human behaviour, enabling us to ground our findings in participants' lived experiences and to develop theories to explain what is happening in a given situation (Savin-Baden & Major 2013).

#### The sample

A recruitment flyer was distributed through seniors' organisations and community groups, and professional and personal networks, inviting older adults to contact the researchers. The target was 30 participants. In the event, 32 older adults aged 57 to 90 years from a variety of sociocultural backgrounds and locations across Melbourne were accepted. They included Brotherhood of St Laurence aged services clients and members of the wider community. Of these, 10 were men and 22 were women; and 11 lived alone.

In this study we were more interested in understanding the concept of knowhow and how it is valued and generated than in analysing similarities or differences between particular cohorts. While the participants had diverse socioeconomic backgrounds, none was socially isolated or in insecure housing.

#### Ethics approval

Ethics approval was obtained from the Brotherhood of St Laurence Human Research Ethics Committee. All participants were provided with a plain language statement about the research and completed a consent form to indicate that they understood the research and agreed to take part.

## 4 Findings

### Knowhow is a slippery concept

Interview and focus group participants found it difficult to articulate the notion of knowhow. As one participant said, knowhow is 'nebulous'. Others understood knowhow as somehow being embedded in a person:

[Knowhow] comes from somewhere within you, that little piece of information is somehow buried in there and comes out and you just do it.

Just bringing out what you've got.

Most frequently the idea of knowhow was equated with experience of life: it 'gives you a life, teaches you a life I think'. As one participant said:

... you could look at it [knowhow] as sort of layers. You don't need to know everything but you quite often need to know where to go find out at the time you need to know ...

As participants tried to articulate knowhow, their efforts often constellated around ideas of application, as in 'how to look after yourself'. Many considered knowhow to be functional, what is required to perform competently in society. It is pragmatic and often instrumental, a combination of knowing what and knowing how. As two people said:

What you need to get by, to function properly and safely.

You just know how to live and how to sort of get through the day and what to do and when to do it, know what's going on in the world by the news and all that.

Knowhow was also described by one person as useful knowledge for 'pursuing interests, keeping an active mind and a broad interest'.

Another likened knowhow to a bowerbird collection that becomes over time a repository for the future:

I think in practice people are much more like sort of bower birds, they just pick up bits and pieces ... And you might have picked up from a friend, or you might have read it in a paper. Sometimes you can't even remember exactly where you picked it up.

Participants rarely associated knowhow with any conscious reflection on life's journey to understand the meaning and purpose of life. Although these were sometimes implied in their descriptions of their life experience, only one participant associated knowhow with interest in knowing why life is as it is.

## Knowhow is essential for managing later life

While participants had some difficulty articulating what knowhow is, they were much clearer about what kinds of knowhow are valuable in later life. Analysis of transcripts revealed four main themes: basic life skills, functional knowhow for managing everyday life, health and wellbeing knowhow, and knowhow for managing later life events and transitions.

### Basic life skills

Literacy was mentioned by some as essential knowhow:

Well it would obviously be hard to acquire information if you can't read well.

[In]ability to understand and process the information is another impediment.

Also essential was knowhow about the day-to-day running of a household:

... just how to run a house, how to do a bit of cooking and feed the family when they want to come, and try and keep the floor clean and ... how to do your finances and pay your bills on time and economise where you can.

### Functional knowhow for managing everyday later life

Participants identified many sorts of knowhow that they considered essential to managing more complex aspects of everyday life. These included financial matters and government income support entitlements, information and communication technology, housing and property maintenance, transport options and support services.

#### Financial matters and government entitlements

Financial planning and management were identified as valued knowhow by some participants, although they applied these in different ways. One participant explained:

I've been working on my financial wellbeing for maybe 20 years and I wasn't in that cohort of people who found themselves having to sort out superannuation in the last two years of their life. I will be active in the management of my financial affairs on into older life because I wouldn't sit and forget it.

This contrasted with another participant's explanation:

Well, in a way financial matters are set depending on how you can organise yourself. Financial matters are 'set and forget' to an extent. I mean I've settled mine nearly 10 years ago when I fiddled with it a bit, but not much.

#### Information and communication technology

There was a spectrum of opinion about the value of technological knowhow. Generally it had come to be regarded as basic to managing everyday living.

I think too with technology the way it is, we have to learn more about technology. It's even topping up your Myki card and things like that.

Some participants felt they had to build their computer skills quickly 'while we can' because they were concerned it would be more difficult as they aged and they would find themselves excluded from a form of communication that is increasingly the norm.

But for some, mastering technology has not been easy. They had first to overcome their fear when they realised how important technology was becoming to everyday life. As a result, they had a high sense of achievement and excitement when they mastered it.

It's astonishing the number of the people my age, I know personally, who still do not have any access to technology, and say, 'I don't want it'. They won't even text me on a mobile phone ... I'm a bit of a Luddite myself, and I was absolutely terrified ... but I forced myself, I was thrown into that, and it's—knowledge is power of course, and it was the fear that was holding me back, not the lack of ability to learn. And I think that's something that a lot of older people need to realise, that they can all do it. I've offered to teach people and they won't have a bar of it.

### Housing and property management

All the participants in this study were securely housed because of earlier life decisions. As a result the knowhow they valued about housing related mainly to downsizing, property maintenance and appropriate design for their later years rather than insecurity of tenure.

So we're going through that at the moment, because we're in a three/four bedroom townhouse, and we're wondering shall we sell it and buy something smaller. Should we get something all on one level, you know, all that sort of stuff. How near public transport and things like that.

Some participants referred to the importance of knowing how best to deal with home maintenance, especially when their capacity and confidence to carry out such tasks had dwindled:

You know, I live in an old, crumbling Californian bungalow house, and people have been at me for 20 years to shift from there ... And people have been hassling me because—I call it Havisham Hall because it's a crumbling ruin, with Miss Havisham in the middle of it ... and I have done very little about fixing it up, and so I have to look at that.

Another explained:

You get to a stage where once upon a time you might have tackled something [home repairs], you know that you can't or you shouldn't and so it's then working out how to go about doing that. There comes a lack of confidence that arises because you're not dealing with all those challenges that you used to be dealing with earlier on in your life.

In the case of 'Miss Havisham', her dilemma about whether or not she remained in her run-down property evolved into a body of knowhow about moving house.

### Accessing services

For those reliant on government services and programs, knowhow about financial and health services was very important. One participant, an age pensioner, valued the financial knowhow that she could acquire by finding out about her government entitlements:

I'm learning how Centrelink works, it's really important to me.

Another spoke of the importance of understanding how her home care package works. Home care packages were reported to be 'one of the most discussed subjects when people meet each other' at social events.

One participant apologised for struggling with knowhow that he felt should be basic, saying:

Well, I don't want to trivialise the question [What is knowhow?], but I struggle with public transport. Being in the CBD, we sold our car and we use a car share scheme.

### Health and wellbeing knowhow

Almost all participants identified health and wellbeing as supremely important, many believing that 'if you haven't got your health you haven't got much'. They described the knowhow they need to stay physically healthy, such as knowhow about nutrition, physical fitness and medication, and how they managed disability or serious illness, their own or that of close others. As one participant said:

I think my health is very important, that's why I go to the gym, that's why—part of the reason, it's only a small part of the reason—I became a vegetarian several years ago. I stopped eating meat. My diet is very important to me—not dieting, but what I eat is important. So those kind of—that knowhow ... my health, my finances, they're important to me most of all.

In some instances, living through the experience of another can be a source of new information and understanding about health and illness:

I think experience of life gives you a life, teaches you a life, I think. So we became drawn into that experience you know, so it was just the experience of that we learned about cancer, we learned about doctors, we learned about nursing care, we learned so many things from that experience and that then makes you, gives you a different outlook on life as well.

Knowhow relating to social and emotional wellbeing included caring for someone and adapting to new environments, developing new interests and making new friends especially when relocating.

## Managing later life events and transitions

### Transitions

One participant valued the knowhow she had gained about very old age from her frequent contact with a neighbour, which led her to speculate on the implications for her own life:

It's interesting, because it has caused a shift in my thinking. She has lived ... in a very large, beautiful old Californian brick house, which she has maintained, and she turned 94 last month, and it's only recently that I've seen quite significant changes in her thinking, as she's in the early stages of dementia. And I've thought I don't want the anguish that she went through—I'm one of her powers of attorney with her daughter ... And it has made me really think about this much more, because where do I move if I move from my house here? Do I move into a widow's cottage so to speak, a modest little home on a single level?

Another reflected on what the future might hold and how new knowhow needed would become important. He explained:

And for example, it can quite often be that one of a pair, your spouse, dies and I mean for example, if I die, I've got most of the financial planning in my head. I've taken my wife through it, but I'm not quite sure how well across it is. I've written most of the things down so she should be able to follow it, but she'll need daughter number one to help her. So care and accommodation is of that sort, one of us has a serious health issue, and we simply can't walk up a stair anymore, or if we need daily care for example, or if one of us has dementia—you know, Alzheimer's—we've had a couple of friends who have gone that way, and it gradually accumulates and you need more and more care, so that would shoot up the priority list.

### Forward planning

Speculation about the future led some participants to emphasise the importance of knowhow to plan for their later years, especially in terms of maintaining independence and maximising control over the last years of their lives. This included understanding the late ageing process, options for community or residential care, and death and dying:

The whole caring and addressing the issues around that serious illness or the old age decline to my mind are ones that exercise my concern. Therefore in terms of strategies or knowledge or knowhow that concerns me in those years, it's more about all of that rather than when I'm pretty active and able.

Many participants valued knowhow about what might lie ahead and its role in helping them be prepared:

I go back to the point it's the things like dementia and illness and old age and (a) how you manage; and (b) how you set yourself up in that space, that is the information that's most interesting to me and how best to access that is a factor.

In this respect, timeliness emerged as an important element of knowhow:

Care and accommodation, yeah, well that's connected with health and wellbeing, and housing. At a certain point something will happen I think, and you need to work out how you're going to deal with it. I think the difficulty there is ... that when it becomes important, it quite often becomes important at a rush, and just at that time you don't actually have all the knowledge you need to deal with it.

As did retaining autonomy:

Yes. So make arrangements so nobody is going to step in and take control.

And making arrangements for death and dying:

You know that's the basic thing is how you might die, especially if you're single. What would I do? How do I keep contact with people [to let them know I'm on my deathbed]? What might it be like?

### Outside the scope of knowhow

While the literature suggests that older adults may often be interested in reflecting on the purpose and meaning of life, with one exception our participants did not associate this with knowhow. They regarded knowhow as relating to the more practical and functional aspects of life.

### Social contact is the key to generating knowhow

Analysis of the transcripts of interviews and focus groups revealed five main themes in how knowhow is acquired: personal attributes and basic skills, access to information, life experience, intentional pursuit of knowhow and social interaction. As will become evident, the richest mode of acquiring knowhow is through social interaction, followed closely by life experience which is also most often socially generated.

### Personal attributes and basic skills

Pivotal to acquiring knowhow are a person's attributes. Research participants tended to the view that the first requirement for acquiring knowhow is having positive personal attributes such as interest, curiosity, initiative, effort, self-direction, self-discipline, responsibility and self-confidence, as well as a range of capabilities including literacy and problem-solving skills.

Positive personal attributes were regarded as important because they determine how much value an individual places on acquiring knowhow and how active they are in acquiring it:

It's how much you take things on. You can sit in a corner and be a mushroom or you can meet the challenge and you can be part of the learning and the growing and everything else.

### Access to information

Having access to information is a key to building knowhow. Much of the participants' information was acquired by word of mouth. The internet, the various media, local government and service agencies are also important sources of information.

Asked how they obtained the information that they might need, some participants referred to seeking out organisations with expertise. One couple answered:

Well, when we went to the Brotherhood ... [we got] a lot of information there.

Other participants found local government a useful source:

I find council very good, they're very helpful. I can ring them for some handyman stuff.

[There's] a little publication of what's happening in the community ... it's got at least two pages, listings, there's the Lions Club, there's Italian for beginners—and they're all local organisations.

One participant was keen to point out that information that contributes to useful knowhow should not be segmented by age group. As he said of local government publications:

They're not necessarily particularly aimed at the aged, but the aged may be more interested in them. And it's quite a good resource.

Access to experts or people whom they trusted and regarded as well informed was important to some participants, especially at the local level:

... there's people with nous who learn, find out, and then other people go to them and there's the connectedness that you know where to go.

On the other hand, one participant saw the role of the well-informed individual diminishing as information became easier to find on the internet.

Knowledgeable people used to have little trade-craft skills, which allowed them to find things out, which surprised other people. Now you can virtually find anything out just by Googling it.

And, indeed, many participants spoke about the advantages of finding the information they need online.

So, for example, I've got quite a big reference library at home ... Except for the fact that I love books, the knowledge that's in them is virtually redundant, because I could find all those things out—and indeed my dog could, if he could only put his paw on the right bit of the keyboard.

On the other hand, some participants bemoaned the decline of human interaction with local services when seeking information, which reduces the possibility of follow-up questions to clarify a situation:

... a lot of the things now you can't get the local branch, you've actually got to go through a call centre and you've got to press one and press five and ... I think that's a really alienating thing. Your local post office you should be able to ring up and say 'Look I'm expecting a parcel, you know, I can't get out, could you tell me if it's arrived?'

### Life experience

Later life brings a store of accumulated knowhow on which older adults draw constantly, remembering, interpreting and re-interpreting it in different situations and combining it with new experiences. As one participant encapsulated it:

We learn from doing things and experiencing the consequences—good or bad. And I think that's generalised across all people really.

Particular value was placed on knowhow stemming from early life experience leading to knowledge, skills and even habitual behaviours in later years. As one participant explained:

I grew up as an only child. I was one of these people, when I was a kid ... the tip used to be across the road from where I lived, and I used to go across there with the wheelbarrow with stuff ... And I would get things and I'd bring them home ... I'd pull them to bits and find out why they were in the tip ... And that's done me very well over a lot of years ... so these days there's really nothing that stops me, because I've learned along the way because I've taught myself.

While references to knowhow gained in early life seldom included education, a person's occupation was often a source of lasting knowhow that had faded into the background but was then revived in later life.

Yeah, you've got knowledge, worthwhile knowledge. I started life as a boy at a furniture factory ... we had a hard, bad family life. But that knowledge came in useful later in life in my retirement.

One participant spoke about a process of accumulating knowhow that helped her to find her later-life vocation:

Well, see for me it was a progression of something like about 30 years of nursing, in all manner right across the board ... As I said I had to give up work... And I was invited to take charge of an emergency accommodation unit through the Salvation Army. But in order to do that, I had to go and do a counselling course.

Some participants recognised that knowhow often resulted from incidental or serendipitous learning, which they frequently associated with learning from experience. Indeed, many research participants spoke of knowhow as learning from experience:

... once you experience something or once something happens, then that leads you to the experience of learning how to deal with that.

I think too, you start to look at life. You can't change things. You can only deal with what happens. You can't go back and change the past. You can only deal with what's happened to you. So therefore you have to learn that as well, to let go and just live in the moment, perhaps plan a little bit for your future, but then this moment as well you know. So I think you just learn from experience mostly. I do anyway.

Experience might be derived from internal or external sources. For example, one participant mentioned the knowhow about managing types and levels of activity that grew through monitoring the internal workings of her body:

But I think that's a second sort of signal feature of growing old, you become conscious. I mean, for example, I'm conscious that I suffer from time to time from arthritis, which means I've stopped playing tennis because I couldn't hold a racquet properly. I'm still able to walk—but my wife's knees trouble her walking. But you learn to sort of manage these things.

Participants also learned from observing and listening to others, especially those older than themselves:

Obviously learning by observing, taking in the experiences of those around you and those who've been before you. We pay a lot of attention to our earlier generations even coming up to retirement. For example in our friendship circle—we're in our mid 60s—we've had people now in their early 70s through their 80s [join in] so you've got a bit of a pathway of people to follow.

Such experiential learning was highly valued and sometimes seen as evolving into wisdom:

But that's wisdom and that comes with maybe experience of life.

### Intentional pursuit of knowhow

While for the most part participants believed they developed knowhow incidentally through learning from experience, a few spoke of intentional strategies that would help them build more knowhow, such as learning how to use information and communication technologies or pursuing particular interests or hobbies:

... it's obviously by seeking out information if you're aware that you want it.

#### Self-directed inquiry

Self-directed inquiry involves intentionally expanding one's knowhow. While this was not a term participants used, some spoke of pursuing topics of interest or usefulness using the internet or libraries, reading books and magazines, listening to selected radio programs, or seeking advice and support from professional experts or relevant organisations:

Certainly [you want to know] what do people do about this or that? Then you talk about these things, you have conversations about it and then obviously you enhance that with specialist knowledge.

And sometimes you rely on experts in those fields to guide you as well.

Others relied more on the media. One participant who is now blind explained:

I was a great reader; now I'm a great listener of recorded books but that's the substitute ... But I listen to news radio a lot, I listen to agendas and that keeps your mind going and it's just like the same sort of thing, it keeps me mentally active just like the others did.

Another, aged in his 90s, continued to learn what he needed mainly from print material:

Well, I mean I've got a collection of ... I did a lot of photography too years ago, so I bought, I've got like a set of things that I've looked at. There's books and there's workshop manuals, and if I want to know something I'd go and get the book out. And I still do even now.

Although mentioned less often, opportunities to increase knowhow through organised lectures and discussion groups were important to a few:

Look, in the city there's many, many discussion groups. The Wheeler Centre just by the State Library, the BMW Edge, you know. There's the Melbourne Conversations Series the city runs. The library does a lot of things—launches, and discussions with authors. So we're really fortunate. Joanna in particular is good at finding what's going on. There's some good stuff. So I reckon those sorts of things are kind of important if people bother to get stuck into it.

### Education courses

Formal learning led by a teacher was seldom mentioned. It was evident that education courses played only a very small part in what participants regarded as knowhow. Only three of the 32 participants mentioned education courses as contributing in this regard: one who had completed a library technician's course primarily for interest, one who had attended computer training courses and another who attended adult education courses for mental stimulation. The only other structured learning activity was related to using technology, because it built skills useful to daily life:

Well I kind of feel with this though, with technology if you need it in your job or if you need it you can learn it. Like I've done a couple of computer courses.

Otherwise there was a sense that what was studied in structured courses was knowledge rather than knowhow and was soon lost through lack of use:

Like I've done a couple of computer courses and then you come home and think, 'Oh yeah, I can do it', but if you're not using it—doing a spreadsheet, well, I just write it on my hand.

## Social engagement

Of the five modes of acquiring knowhow that were identified, social interaction was by far the most prevalent and highly valued by all 32 focus group and interview participants. Social contact provides opportunities to observe and listen to people of all ages and in diverse contexts. Indeed social contact was the only mode of acquiring knowhow talked about at length by everyone. Casual conversation, recounting stories of experiences and just plain gossip occur wherever people meet and they present significant opportunities for acquiring and creating knowhow. The contexts of knowhow acquisition range from intimate family contact to extended families, friendship circles, working with others to a common purpose and belonging to communities of interest or geographical networks.

### Observation and 'eavesdropping'

Many interview and focus group participants talked about how knowhow accumulates through 'hanging about old people, 'just by watching' and listening:

I heard those stories, my parents were great ones to sit around the table talking about all kinds of people, and anyone who came to the house was invited to the meal, no matter how humble or simple the meal, and they were from a wide range of age groups. So I got to observe a very wide range of age groups from a young age, and saw how they lived, and I suppose it's almost osmosis view. You acquire that kind of knowledge ... I've got wide networks of people.

Talking to my friends, the knowhow of navigating it [ageing] has come from observation of other people, what they need financially, what they need in a practical sense, the skills that you retain, the skills that you don't retain, how much your physical health is paramount in your sense of wellbeing.

### Day-to-day conversation

Conversation in families and among social networks was considered essential to knowhow as people exchanged ideas, stories and information:

People talk about things rather than ask you things and then at some other point they'll say, 'That was really valuable information you gave me or you told me earlier'.

But I also have a very strong group of friends that I ask for advice. Many of them are my own age, but some are younger, some are older, and I'll call on them. I don't hesitate to ask about anything.

### Opportunities to clarify and verify information

Not all the knowhow that people glean is accurate. Some participants spoke of finding out things from their social contacts but then turning to experts or other trusted, well-informed peers for confirmation:

Certainly what do people do about this or that? Then you talk about these things, you have conversations about it and then obviously you enhance that with specialist knowledge.

Some participants voiced their concerns about the reliability of information from unfamiliar sources that purported to be expert. Their scepticism motivated them to validate it before adding it to their store of knowhow. For example, with respect to the internet:

I tend to use the web a lot too, but I would reinforce that [information] by then speaking to other people about it because I like to check it.

Checking with trusted others was a common response. One focus group participant had recently received a letter advising her to check whether she might be susceptible to stroke and to hurry as there were only 61 discounted appointments available for precautionary tests. When she mentioned it in her volunteer group at the op shop, two immediate responses were:

I got that one too. I think a lot of us got that one.

It looked very official; I thought it was a department of health [letter].

The group then discussed the importance of having a trusted group with whom to check:

... hearing that's useful too because otherwise the information comes from leaflets in your letterbox and they may or may not be reputable or good workmanship or things like that. I think a sense of referral and things is really important, recommendations and referrals for all sorts of areas that you need help with.

### Group activities

Older adults often accumulate knowhow through the social interactions that accompany group activities. Book groups, local library activities, bowling and knitting clubs, neighbourhood houses, churches, men's groups—what one participant referred to as 'Edmund Burke's *little platoons*'—are popular meeting places for older adults. Here the simple act of socialisation with like-minded persons for the purposes of enjoyment and recreation becomes a platform for acquiring knowhow, even though it may well not be intentional. The social setting of these groups is where information is exchanged, experiences are shared and worldly affairs discussed:

I think people underestimate how many little platoons there are at work. Are you familiar with Edmund Burke's phrase, 'little platoons'? It was his way of describing small, social organisations in our community. So it's the bridge club, it's the CWA, it's the Italian Women's Knitting Club. And these things all exist, and yet knowing about them is sometimes hard to find out. Now they quite often meet in different places, so having access [to information] ... how do you find out that there's a bowling club and how do you join it, is part of growing older I think.

The church op shop whose volunteers constituted one of the focus groups was one such platoon, where they continually generated and updated knowhow:

This sort of thing, this op shop business is excellent because we do connect with our minds here a great deal and at church.

Another little platoon, a men's group, generated knowhow through regular meetings to share common interests:

I'm not conscious of being there to give people knowhow or even knowing a lot. It's somehow ... they're more incidental things that happen in my relationship with people. I learn from them and I put a strong focus myself on collaborative stuff. Let's face it, the men's group is an extremely helpful source of information.

One participant spoke of the importance of such groups for her as a single woman:

Well if you live alone you don't often have the sources to dip into in that environment. If you don't have family support you have to find some other outlet so this lot have to suffer me asking.

A multiplicity of other social and activity groups were named by participants, some of whom also emphasised the role of local government in disseminating information about group activities.

### Social isolation

Although it was not a topic directly addressed in interviews or focus group discussions, participant contributions sometimes indicated the potential problems of extending knowhow for those who were socially isolated. As one pointed out:

Yeah but you don't see it in the paper, you don't see it in a magazine. If you look at the things that say a person who's a bit isolated and lives maybe on their own without a lot of family [might not know], they would more than likely have their magazines for something to do but they wouldn't see anything like that there so they won't know, how are they going to know that these services are available?

## 5 Discussion and reflection

### Knowhow is real but hard to explain

I shall reconsider human knowledge by starting from the fact that we can know more than we can tell. (Polanyi 1966)

Writing about knowing how and knowing that, Smith (1988) explains knowhow as ‘a repertoire of perceptual structures which we are able spontaneously to call in aid in relevant circumstances’ (p. 3). This practical, heuristic knowledge is, as Nyiri tells us, the hardest to get at; and even experts ‘rarely have the self-awareness to recognise what it is’ (Nyiri 1988, p. 21). It is hardly surprising then that our research participants struggled to crystallise what one described as ‘lurking’ in the memory. Even though we tried, as Nyiri suggests, to mine it ‘out of their heads painstakingly, one jewel at a time’ (p. 21), for most participants, the concept of knowhow remained obstinately tacit.

These explanations of knowhow are evident in one participant’s conceptualisation:

Well some of it’s from past experience. I mean for example, I’m reading a book at the moment by Daniel Kahneman called *Thinking fast and slow*, and he constructs the mind as having an intuitive side and a thoughtful side. But a portion of the intuitive reaction to things is simply accumulated experience from the thoughtful side. So it’s bit like playing table tennis, when you first start you actually have to think about how you’re holding a bat, but after a bit of practice you do it without thinking. So there are aspects of decision making I think, and things, knowledge that you have, where you’re not conscious of how you’ve accumulated it, but you’re still able to apply it.

Other researchers concur about the challenges in explaining knowhow. Recognising the complexity and abstract nature of the concept, Garud points out that because knowhow is knowing by doing, it is quite possible to operate on the basis of knowhow alone (that is, without knowing why or knowing that) and that often knowhow can only be articulated indirectly through stories or actions (Garud 1997, p. 85).

### Knowhow is highly valued by older adults

While the anecdotes told by the older adults in this study offered some insights into what they understood as knowhow, the concept emerged more clearly when they were asked to consider what knowhow they valued and how they believed it was generated.

Much of the knowhow our research participants valued echoes the findings of other research: knowhow about social connectedness and staying healthy (Schuller & Watson 2009); about health, finances and recreation (Williamson 1997); and about moving home, becoming a carer, becoming disabled and bereavement, as mapped by the LEAP Project in the United Kingdom (Davies 2002). Research participants valued other knowhow besides: knowhow about available services and their entitlements, how to

care for family and neighbours, downsizing and property maintenance, and ways of understanding more about themselves and the world they live in.

Knowhow is sometimes devalued as a form of knowledge, especially by many educationists because they claim it is largely unreflected—by which they usually mean it has not been reified as propositional knowledge. Freire (1972) would disagree. It is through people's opportunities to name their world, he argued, that a form of literacy is activated that expands people's options for how they live in the world, a world in which all learners are teachers and teachers learners, just as is demonstrated by the means of generating knowhow found by this study.

### Knowhow expands through social engagement

Opportunities for generating knowhow depend on living in an environment that is conducive to social contact with family and friends and social networks where observations and conversations, both incidental and purposive, take place.

This mode of generating knowhow is consistent with Bandura's social learning theory which draws heavily on the concept of modelling, or learning by observing behaviour. Together older adults not only acquire knowhow, as they name their world they create it in a dialogic process and generate it through their social networks. The theory of reciprocal determinism asserts that just as an individual's behaviour is influenced by the environment, the environment is also influenced by the individual's behaviour. In other words, a person's behaviour, environment and personal qualities influence each other (Bandura 1971). As Garud points out:

Knowhow is generated through interactions between producers and users ... this knowledge is not just resident in either of these 'nodes' but is created and situated at the nexus of the ... relationship (Garud 1997, p. 87).

By nature, knowhow is acquired incidentally and often unexpectedly through other activities in the company of others. This has been a key to the success of Men's Sheds, which provide opportunities for social learning by which participants make sense of subject matter and the world as they interpret and reinterpret reality in different ways (Golding, Mark & Foley 2014). As Golding and colleagues also point out, as social learning builds networks, it spreads well beyond the individual and both builds and is built by the sorts of social capital that Helliwell and Putnam (2004) describe: 'bonding social capital'—that is, social interaction in families, social and cultural groups; and 'bridging social capital'—that is, social interaction with people who are unlike you and who will therefore provide new information and challenge your thinking.

In an explication of the capabilities approach, Nussbaum (1999, p. 44) posits a framework that comprises four kinds of capabilities essential to wellbeing:

- *basic capabilities* – immutable capabilities a person is born with. This means a person's potential, which may or may not be developed in later stages of life

- *internal capabilities* – built on the foundation of basic capabilities and developed throughout the course of life
- *external capabilities* – either freedoms or choices given, or constraints or limits imposed, by a person's social environment
- *combined capabilities* – the interplay of internal and external capabilities (or the lack of them) that enable or constrain a person from living a valued life.

In this schema, the evolution of knowhow proceeds from the basic and internal capabilities accumulated by older adults at their particular point in life, their lived experience on which they draw for building new capabilities. Generating knowhow is an iterative process. Internal capabilities include attributes such as interest, curiosity, initiative, effort, self-direction, self-discipline, responsibility and self-confidence, as well as a range of knowledge and basic skills that they have acquired in the course of their lives such as literacy, numeracy and problem-solving skills. They are the positive personal attributes and abilities that, as they expand, enable more knowhow to generate.

From the perspective of the capability approach, a just society is one in which people have the opportunities to develop the capabilities they need to live lives they have reason to value (Sen 1999). Generation of knowhow also depends on opportunities for rich and sustained social interaction, on 'the freedoms or choices given by a person's social environment'. Research participants identified the most important elements for the evolution of knowhow as the incidental opportunities enabled by social interaction and informed by life experience, which are intertwined and often indistinguishable from each other. The outcomes of this are combined capabilities.

Interestingly, participants commented relatively little on the intentional search for knowhow or engagement in intentional learning. Very few mentioned enrolment in education programs or organised learning activities, except for acquiring ICT skills, as important for acquiring knowhow. This is consistent with Australian data that shows that few older adults participate in organised education programs. In 2011, for example, only about 0.2 per cent of Australians aged 60 and over were enrolled in higher education and 0.8 per cent in vocational education. Just over 2 per cent (69,000) were members of U3A (AIHW 2013).

However, an environment conducive to the evolution of knowhow must be rich in readily available information. Williamson's study found that of greatest importance for information acquisition—and exchange—are an older person's family and friends. While none of the participants in this study reported external constraints on accessing or exchanging information, it was evident that information can exist in forms that older adults without internet skills or connection or those who lack mobility or financial means cannot access. Exchange, digestion and 'translation' in the company of others enriches the quanta of information available and can help its transformation into knowhow.

## 6 Conclusion

While knowhow is a nebulous, largely tacit concept which accumulates often incidentally and serendipitously through life experience, it is essential to older adults if they are to live well in a complex and dynamic society. Well-developed knowhow is fundamental to meeting the two principal challenges for older adults and contemporary society posited by Kirkwood et al. (2010, p. 33):

The first is how to ensure the greatest numbers of older people maintain the best possible mental capital, and so preserve their independence and wellbeing, both for their own benefit, and also to minimize their need for support as they age. The second challenge is how to ensure that the considerable resource which older people offer (particularly through their mental capital) is recognised and valued by society, and that they have the opportunity to realise the maximum benefit from that, both for themselves and the wider society.

All the participants in this study were well connected and engaged frequently with friends, family and extended social networks. Such was their reliance on social interaction for building knowhow that it was difficult to imagine how they could manage their lives proficiently without it.

Knowhow evolves in the company of others. Some is deliberately sought but, like Levi-Strauss's *bricoleurs*, we generate much of our knowhow by gathering material as it presents itself, often without conscious purpose, shaping it to the current situation by putting pre-existing things together in new ways, adapting, transforming, meandering and digressing, moving forward and backward (Levi-Strauss 1966). It is not a solitary activity but relies on an environment where older adults are among others to develop and exercise their capabilities individually and communally.

In Australia where many older adults are isolated from family and friends and do not have the resources to participate in social and community activities, it is apposite to consider what impact social isolation might have on their opportunities to accumulate the knowhow essential to preserving their independence and wellbeing, adapting to change and competently managing their lives. We should also consider the loss to society of the considerable resource that they can no longer offer. Beyond the risks social isolation poses to health and mortality, this study emphasises the importance of social engagement for older adults to generate and maintain the knowhow to live healthy and fulfilling lives.

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