The craft of wisdom: Climate activist learning in the hands of Australia's Knitting Nannas

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This article discusses the contribution of craftivism to climate justice learning through the practices of Australia's Knitting Nannas Against Gas and Greed (aka KNAG or the Nannas). Framing activist adult learning as social movement learning locates environmental and climate justice struggles within lifelong learning practices. Established in 2012, the Nannas are an older women's anti-coal seam gas and fossil fuel movement that has grown to encompass intergenerational ecological sustainability activism. Data presented in this paper were collected with active KNAG members in Australia as part of a PhD study using surveys, interviews, document analysis of social media (Facebook posts, digital videos, e-news bulletins) and researcher auto-ethnography. The research identified the milieu of craftivism motivated older women to collaboratively build their activist identity. ecological and environmental literacy, and non-violent direct action activist skills. The learning ecology involved a complex web of social interactions and encounters that stimulated opportunities for active listening and critical reflection, which promoted transformative and emancipatory learning dispositions. Craftivism was analysed to be the catalyst and transformative force that activated situated experiential learning and identity formation.

Keywords: Knitting Nannas Against Gas, social movement learning, nannagogy, climate justice activism, craftivism, critical feminist gerogogy

Introduction

The Knitting Nannas Against Gas and Greed (aka KNAG, or the Nannas) began in 2012. A handful of older women were part of a community mobilisation when the Northern Rivers area of NSW was targeted for coal seam gas (CSG) mining by Metgasco. Motivated to protect the environment for future generations, the women joined a group offering training in non-violent direct action (NVDA). After a number of weekly meetings they became frustrated by the inaction and indecision of their male leaders. The women were annoyed by being denigrated for their activist ideas and relegated to stereotypical ageist and sexist activities of making teas, providing biscuits, and taking minutes. Nanna Joy (pseudonym) explained,

... some of the men involved and the NVDA were not treating the women, especially the older women, as if we had any agency. Pretty much putting us in our little pigeonhole ... [with] suggestions that we provide catering, tea and bickies and that we could do paperworkey bits and pieces. Which is certainly not why we joined the NVDA ... we were pretty much stereotyped and there were quite a few sweet little old ladies there, I suppose they didn't expect us to be on the cutting edge. It's a particular type of sexism that suddenly, once you reach menopause, you've never had sex, you've never used your brain, you haven't heard half the words in the English language and you're deaf. Yeah and they speak slowly and loudly to you!

Highly motivated to take meaningful action, and not wanting to waste time fighting for equality, the women side-stepped the issue and banded together. This was a pivotal moment of transformative learning that led to emancipatory decision-making. Rather than stay thwarted and disenfranchised, the women devised their alternative activism as a form of 'guerrilla surveillance'. Small groups went out into the countryside, parked by roadsides with their knitting, folding chairs, and thermoses to 'scope out the works'; that is, watching, and recording Metgasco

truck movements (Ngara Institute, 2018). Initially, knitting was a way of productively passing the time, but it soon became a form of environmental activism that older women could engage in. The women realised the humour and power of strategically using their essentialist grandmotherly personas. As McHugh (2007, p. 38) stated, this is an "oppositional discourse in which women assume the characteristics assigned to them by a phallocentric culture in order to challenge phallocentrism and its description of and prescription for women". There are now around 40 groups (or "loops") around Australia with some in the USA and UK. The movement has just celebrated its tenth "Nannaversary".

This article explores how crafting became the core social movement learning process of the Nannas. Under the cover of peaceful crafting, the movement developed their community of practice (CoP) that emboldened and empowered older women to make very publicly visible statements about environmental issues. The data presented is part of a larger dissertation into what I termed "Nannagogy", that is older women's environmental activist social movement learning (SML). The research identified the milieu of craftivism that motivated older women to collaboratively build their activist identity, ecological and environmental literacy, and NVDA activist skills. The learning ecology involved a complex web of social interactions and encounters that stimulated opportunities for active listening and critical reflection, which promoted transformative and emancipatory learning dispositions.

Craftivism was analysed to be the catalyst and transformative force that activated situated experiential learning and identity formation. Data were collected through primary sources including: a written online survey (n=67 in 2017); interviews (n=10, 2018 - 2020); and document analysis of social media in the public domain (purposive sample of Facebook posts, digital videos, e-mails, and e-news bulletins, from 2012 - 2020). Analysis using NVivo 11 involved thematic coding and triangulation of multiple data sources. All informants were active members of the movement and were drawn from a number of KNAG loops in approximately 40 locations. Pseudonyms were chosen by interviewees based on women they admired. The research was approved by the James Cook University Human Research Ethics Committee (2017–2021).

This article continues with a brief literature review outlining what we know about older women's social movement learning in the context of climate justice. Following that is an overview of craftivism as a form of NVDA environmental activism. Next, I focus on how the Nannas learned their environmental activism through crafting. The article concludes with implications for using craftivism in climate justice activist learning.

Climate justice social movement activist learning and older women

Australia has struggled to address the challenges of transitioning to a low-carbon economy. Writers who have tackled the subject of Australia's troubled and unresolved climate and energy policies over the last forty years identify complicated vested interests, which explains the conscious undermining of climate science in order to create denialism and confusion (Taylor, 2015; Krien, 2017; Bacon and Jegan, 2020; Wilkinson, 2020). They point to the cultural production of the organised climate denier movement as a form of agnotology (Proctor and Shiebinger, 2008). Challenging disinformation in order to build a mass understanding of the urgency and reality in addressing climate change has become an educative role taken up by environmental activist movements. It seems this has been successful since the recent 2022 Federal elections voted for a new government with a climate action agenda.

In this article, I focus on climate justice activist learning within SML. SML draws from adult learning and social movement theories and is inherently situated in experience that is transformative and emancipatory (Larri and Whitehouse, 2019). Different forms of SML involve communities of practice where individuals and groups learn in a range of ways including: instrumental skill-based cognitive learning (such as NVDA, CSG mining, ecological literacy, and social media use); meta-cognitive development of critical consciousness through conscientisation, critical reflection, questioning insight, productive problem-solving; and epistemic or axiological shifts in worldviews through reconceptualising hegemonic power structures (Ollis, 2011; Curnow, 2013; Branagan and Boughton, 2003; Scandrett et al., 2010). Transformative environmental adult education or transformative learning for sustainability combines ecological and environmental literacy with activist skills and transformative or emancipatory learning dispositions (Hall et al., 2006; Reidy et al., 2018).

Older women have been active in social movements, but their specific contribution is under-researched. Women of all ages have contributed to environmental new social movements (ENSM) and have come together in women's movements as ecofeminists (Walter, 2007; Gaard, 2011; Roy, 2003). Strong links emerged between peace and ecofeminist activisms with women concerned about the environmental effects of militarisation, in particular the anti-nuclear protests in the 1980s and 1990s.

Older women seeking to be environmental and climate justice activists face the "double jeopardy of old age" meaning ageist sexism (Formosa, 2005, cited in Findsen and Formosa, 2011, p. 95). Older people are negatively affected by ageism and limited by perceptions of the older learner as frail, with reduced capacity for learning. Ageism is defined as "the negative social and cultural construction of old age and a process of systematic stereotyping and discrimination against people just because they are old" (Doron, 2018, p. 33).

Ageist sexism leads to older women being rendered invisible and inconsequential. Anecdotally, women talk about a sudden onset of invisibility and condescension that seems to occur with greying hair. Australian writer, Helen Garner (2016), attributes this to the withdrawal of the erotic gaze since older women "are no longer, in the eyes of the world, a sexual being". Feminist scholars have taken up this theme. Cecil et al. (2021, p. 11) consider the "pervasive and insidious nature" that goes with the "social shaming of older women" quoting Bouson (ibid, p. 11) that "younger people often view old women – if they see them at all – as 'little old ladies, as old bags, as useless nobodies'".

The exclusion of female experience has been identified as gender-blindness in environmental education research. Feminist researchers have challenged this arguing the importance of recognising the complexity of human and more-than-human relationships, multiple subjectivities, knowledges, and interactions start with gender inclusivity (Gough, 2013; Gough and Whitehouse, 2020). Gender-blindness has contributed to a knowledge gap in older women's social movement learning (Larri, 2021)

In relation to later in life learning and older women's SML, the literature does not provide definitive answers. Apart from physiological

and psychological barriers, learning continues throughout old age. Certain factors "may even give older learners an edge over younger peers" (Findsen and Formosa, 2011, p. 75), such as the integrity and accumulation of knowledge and abilities acquired throughout one's life (or crystallised intelligence), and an ongoing ability for curiosity and making meaning from new information. Successful later life learning depends on "a wide repertoire of cognitive resources and brain structures that work on their own as well as interacting with one other" (ibid., p. 63).

A cohesive body of study for changes in communication and language ability in older people does not exist. Ageing results in the slowing down of psychomotor reaction times but does not necessarily indicate a decline in intelligence. Attention to and selection of information seem little affected by age however, there are declines in memory, slower semantic retrieval experiences ("on the tip of tongue"), and cognitive processing deficits (Findsen and Formosa, 2011, pp. 65-74). Withnall (in Findsen and Formosa, 2011, p. 163) argues that learning over a lifetime can be protective in reducing dementia, depression, and anxiety.

Transcendental goals and wisdom knowledge that enable living in the current world and preparing inner spiritual integration towards the ultimate process of dving may become of greater interest than other learning. This involves a blend of domains including cognitive (meaning of life pursuits), reflective (transcendence of one's subjectivity), and affective (good-will and compassionate love).

Recent researchers challenge the inherent ageism of the elder as frail and therefore inconsequential, preferring to replace it with opportunities for agency and dignity (Kydd et al., 2018). Shifting power to older learners through emancipatory education contributes to the socio-political transformation of ageist structures.

Older learners are "citizens capable of being reflexive and knowledgeable [who] ... critique societal norms and practices" (Beck cited in Findsen, 2018, p. 844). Critical gerogogy (or educational gerontology) recognises that ageism often remains a barrier to the participation of the elderly in work, post-work and civil society. Conversely society benefits from the inclusion of all citizens. Being able to draw on and draw out the capabilities of elders as a cohort of active citizenry adds depth to society

(Findsen, 2018, p. 844). Society benefits from their life experiences and "social movements (for example, Greypower, the peace movement, environmental groups) may provide further opportunities for elders to actively engage in authentic learning to improve their life chances" (Sutherland and Crowther, 2006, cited in Findsen, 2018, p. 844).

Critical feminist gerogogy informs older women's learning in a womancentred social movement where ageist sexism is less likely. It can be distilled into the following three criteria: (1) respectful relations that seek empowerment and appreciate women's experiences of oppressions including ageism, sexism and their multiple intersectionalities; (2) valuing each woman's individuality by recognising her capabilities; (3) providing enjoyable, engaging and sufficiently challenging learning opportunities in a milieu that supports and celebrates success.

In summary, motivational conditions conducive to older women's learning value individuality and inclusivity in an enjoyable atmosphere of respectful relations, with opportunities for emancipatory personal growth. Learning is a lifelong process, with older learners able to integrate significant life experience and analytical, reflective, future oriented cognitive skills to bear on situations. Older learner activists are generally intrinsically motivated, seeking a legacy of social and intergenerational justice. Older women are likely to be more engaged in social movements where critical feminist gerogogy principles are applied.

The next section discusses craftivism as a strategy for older women's SML in climate justice activism.

Craftivism – a form of NVDA environmental activism

Craftivism turns the domesticity of craft outwards to the public eye (Marsh, 2017). Metaphorically, craftivism represents traditional women-centred forms of connection and collaboration. Threads are drawn together and made visible in the public sphere as deliberative actions, giving voice both physically and visually to women's place in the environment of contestation. Craftivism combines craft with activism by using non-violent means to achieve social and political change (Greer, 2014; Fitzpatrick, 2018). Betsy Greer coined the term craftivism in 2003 defining it as:

... the practice of engaged creativity, especially regarding political or social causes. By using their creative energy to help make the world a better place, craftivists help bring about positive change via personalised activism. Craftivism allows practitioners to customise their particular skills to address particular causes (Lothian, 2018, p. 7).

Greer identified three forms of craftivism: (1) donation – giving to anyone but yourself, using your craft to help others; (2) beautification - making your own public surroundings less banal, reminding others that your city is your own; and (3) notification – teaching others about the causes you believe in, making pieces that speak out against injustice in its myriad of forms (Lothian, 2017). The micro-politics of kindness (or donation) have been used as an educative approach that encourages curiosity and enables a safe learning environment with a greater possibility for dialogue. The ways in which the Nannas learn their activism through their knit-ins is a form of craftivism discussed later.

The ecofeminist praxis that emerged in the 1980's and 1990's embraced non-violent direct action often using tactics that resonate today with 21st century craftivism. Precursors to craftivism feature reclaiming and feminising sites of contestation such as creating yarn webs across entry steps to the US Pentagon in 1980 (Feigenbaum, 2015; McAllister, 2014; Women and life on earth, n.d.; Hamilton, 2016); and attaching personal objects to mesh fences in the UK Greenham Common (1982) and Australian Pine Gap (1983) Defence base Peace Camps (Close, 2018 p. 870; Feigenbaum, 2008; Clarke, 2016; Bartlett, 2016).

Non-violence is promoted as a core value of contemporary social movements for both philosophical and pragmatic reasons. Non-violence aligns ethically with those who strive for a just and democratic society. As such, it is more likely to garner sympathy and engagement from like-minded citizens (Ricketts, 2012). NVDA is also arguably a lot safer than violent protest since violence is likely to be met confrontationally with violence by police, polarising the action, escalating tensions, and alienating sympathisers (della Porta and Diani, 2006). NVDA can achieve loyalty shifts in opposing sides of elites and workers, such as mine workers, security guards, bureaucrats, or business managers (Stephan and Chenoweth, 2008). More recently in Australia legislation criminalising peaceful protest has been enacted. Whilst the legislation

seeks to prevent disruption it is arguably restricting people's democratic freedoms to dissent. Represented by the NSW Environmental Defenders' Office, two Nannas have launched a Supreme Court challenge to test whether these laws are unconstitutional.

Adherents to craftivism claim that the objective is sustainable change based on many small actions and ideas coalescing to create transformation. "Craftivism looks to engage with anyone and everyone in conversation and reflection around critical issues and wicked problems." It is "a movement that combines the principles of social, political, and environmental justice with individual creativity, the act of making by hand, the power of connecting with like-minded people, and a spirit of kindness, generosity and joy" (Fitzpatrick and Konturri, 2015, p.1). Relationships and the community are central to the use of craft for activist purposes, adding another dimension to the conceptualisation of CoP, SML, and climate justice activism. Craftivism promotes a participatory, democratic culture and the use of "wide-ranging media" (Close, 2018, p. 871). Millner and Moore (2021, p. 149) describe craftivism as "communal pleasures of social connection" and "nonviolent presenteeism".

Emery emphasises that crafting and craftivism combines the values of feminist energy, strength, and power:

To craft is to make with feminist energy. To build. To build a world, an environment, a location. Feminist crafters craft in and of the existing world. But worlds that once did not exist are also crafted into materiality, into being, we craft feminist worlds. The practice of crafting makes crafted spaces (Emery, 2018, p. 2).

The formula "sit, knit, plot, have a yarn and a cuppa, and bear witness to the war against those who try to rape our land and divide our communities" described in the Nannafesto, embodies Emery's public woman-centred crafted space. Disarmingly passive as quiet acts of resistance and rebellion, the knit-in proved effective in attracting older women to form or join a loop thus contributing to the broader antifracking movement.

The next section explores the educative role of climate justice social movements and the evidence for crafting as a strategy of SML.

Using crafting for social movement learning in climate justice activism

This article focuses on the first target of SML learning that is learning by persons who are part of a social movement. The second target is learning by persons outside of a social movement as a result of the actions taken or becoming aware of the existence of a social movement (Hall and Clover, 2005; Hall et al., 2006). Learning can be informal, incidental or planned. Construction of meaning through interactions with one another is a dynamic process of making sense of the world and is consequently how we learn. In the context of social movements this occurs in a range of ways such as "when someone attends a protest, when they argue with other activists or with counter protesters or even family members, and when they follow issue-specific blogs" (Snow et al., 2014, p. 38). The Nannas have shown how knitting-in adds another dimension to this list.

Social movements, because they are formed from groups of like-minded people, create cognitive and physical spaces for social learning (Eyerman and Jamison, 1991). Social learning requires conversation, which is a social process and a "deeper, transformative and reflexive learning whereby people challenge the values and norms of present businessas-usual trajectories" (Kent, 2016, p. 150). Educational anthropologist, Niesz (2019, p. 227) agrees "adult education researchers have argued for years that social movements are educators; not only are they sites of popular education and other forms of non-formal education, they are also important sites of learning through the practice of movement activity."

In Australia, learning about the toxic effects of unconventional coal seam gas (CSG) extraction has compelled rural communities to activism. Through the efforts of the Gasfield Free Northern Rivers Alliance (North Coast, New South Wales from 2011 onwards), people learnt a broad range of implications. A social justice focus linked to climate change emerged that was both intergenerational (protecting and preserving for future generations) and intragenerational (recognising the disproportionate ways people are currently impacted) (Stapleton, 2019). Included were: food security (the exploration of CSG mines are located in Australia's richest food production areas); biodiversity (diverse and rare natural environments are threatened); water security

and purity (as one of the driest continents, Australia relies on its precious water resources much of which are held in natural geological formations of aquifers and artesian reservoirs); human health issues (due to the impact of polluting gases on both air and water quality); First Nations cultural ancestral connection to Country; and community cohesion (where fracking is contentious and communities are divided, newcomers 'fly in / fly out' for work, and the added potential for 'boom town' mentalities leading to increases in violence) ("Fracking", n.d.; Acosta et al, 2015, p.7; Ollis and Hamel-Greene, 2015 pp 10, 11, Tosh and Gislason, 2016; Hirsch et al, 2018; Grubert and Skinner, 2017). In ENSM we see an educative shift from teaching the science of climate change to infusing climate change education with a social justice focus. Stapleton (2019) argues this framing has more potential to enable societal shifts towards mitigation and adaptation.

As older environmental activists concerned for future generations, the Knitting Nannas, translated intergenerational climate justice into one of their core values, "Saving the land, air, and water for the kiddies" (https://knitting-nannas.com) and in their "Nannafesto" declared,

We want to leave this land no worse than we found it, for our children and grandchildren. They deserve to have a future with a clean and healthy environment, natural beauty and biodiversity, (and don't we have our work cut out for us!).

Learning activism through crafting

The first Northern Rivers Nanna loop created their novel form of sitin called the knit-in which functions as an educative process for this activist CoP. Similar to a yarning circle or action learning, the knit-in provides a milieu conducive to informal experiential situated group learning and critical reflection. As the women sat knitting, chatting, and observing gas mining company activities, they realised their conversations were also productive. Not only were they making objects, they were also learning about one another, sharing knowledge about coal seam gas mining, and developing cheeky ideas for their activism. Survey Respondent 52 described a range of critical reflection group learning processes when she wrote "we bounce ideas, solutions, plans, plots, creativity, personal psychological analyses and knitting/craft projects off one another." Knit-ins engender camaraderie, empathy and community

- all of which are important elements of critical feminist gerogogy and consequently the building blocks of transformative empowerment. Social movements depend on focused and purposeful social action and a shared collective identity (della Porta and Diani, 2006). Women learn how to build their KNAG collective identity through the knit-in. Respondent 57 valued the "sense of community and the support received from other Nannas" and the "hope that group actions can succeed where individual actions don't." Respondent 43 further confirmed this ethos of collective identity as embodying qualities of persistence, positivity, relentlessness, camaraderie, empathy, and gentleness in their educative approach which she described as an awakening of climate justice awareness:

While I have the nagging concern of what is happening to this beautiful world and the future for my grandchildren and their generation, plus other species of life, the camaraderie and empathy of the Knitting Nannas give strength and hope as a group. With our persistent, positive, relentless but gentle way of protesting against the assault on our environment and other injustices, we are helping to wake up awareness in our communities.

Getting to know one another better means the women appreciate one another's worldviews and capabilities. Social learning requires conversation. Nanna Joy (one of the original Nannas) described the importance of conversation in developing cohesion and connectedness of the movement within and between loops. Through conversation, the women have realised their common bond is action for climate justice expressed as environmental sustainability, now and for generations to come:

There are Nannas who have said it's turned their life around, really just getting these weekly social events. We see the common theme that we're really all very environmentally conscious in our different ways. So we have that tying us together, but also after so many years, we know each other, we know each other's partners and children and you know whose car's not working. And all of those little things, you know, you sit in a line knitting and whoever you're next to, you tell each other stories. And then the next week, you know, you line up, there might be someone

else. So, yeah, it is important ... the internal friendships between the different Nannas and developing a very sincere affection for each other.

Craftivism has been used in the KNAG CoP for its motivational role building women's confidence and sense of achievement in NVDA activism. Nanna Evelyn (a member of the first loop) described this as the "craft of wisdom" which incorporates both humour and creativity. This sparked my interest since it resonated with feminist activism and "the feminist project" defined as furthering "feminist goals of empowerment, social justice, and women's community building" (Kelly, 2014, p. 133). I was surprised to hear from Evelyn that she did not define this as feminist, insisting it was pragmatic in creating an environment where women felt safe to share their wisdom and experience:

[... doing something really little] ... can be symbolic, and I think that's where the knitting comes in — it's symbolism and also creativity. I think that's what makes the Nannas, really. We wouldn't attract attention, we'd just be another group to slam. But we use the craft of wisdom to bring humour into things, to bring a self-confidence and a humour. I don't see it as a feminist thing. I see it as creating an environment where lots of wisdom gets shared and lots of personal experiences, life's experiences.

Quotes from survey respondents confirmed the effectiveness of using the "craft of wisdom" to build the KNAG CoP. For example, Respondent 7 wrote "I love the Nannas' guts and creativity. Older women being radical, outspoken not meek"; and Respondent 54 valued "the spirit of the groups I've met. Openness, creativity, fun, determination, stamina, caring for one another".

The atmosphere of knit-ins is motivational, respectful of diversity and individuality, engaging, challenging, and empowering. Respondent 27 recognised strength "in being part of a group" and that this came about through "cementing friendships, knitting useful stuff and being creative, learning more about the issues, talking and sharing." Respondent 51 was enthused and stimulated by being in KNAG summing up her feelings as, "being with an incredibly diverse and creative bunch of women is the most inspiring and fun thing I have ever experienced." In KNAG older women, feel safe to explore new identities and activities. Respondent

60 valued "opening myself to experiences that I would never have thought I would be in 20 or so years ago" and considered that NVDA was instrumental in promoting "a peaceful empowerment that, as individuals and in groups, we can make a difference".

Empowering women by identifying and using their life experiences and talents contributes to an essential activist skill for the KNAG CoP. Nanna Joy compared this with wasting women's abilities by falling into ageist stereotyping. Joy explained her rationale for the Nannas approach to empowering members:

... you'd sit with six women knitting-in, and so you've got 300 years of experience and you've got graphic designers and nurses and managers and academics and people who have brought up a million children. Yeah, all of these incredible talents that are wasted making cups of tea and pushing petitions under people's faces. This is, I guess, one of the strong points of the Nannas: to find people's strengths and to utilize those strengths within each loop and then within the larger movement. So some people are very good at organising. There are some people who are good with public speaking. We make a point of acknowledging each other as valuable members of society, not as kind of wrinkly invisible, useless drudges, drains on the public purse.

Crafting is used as a tool to build self-confidence and agency. Nanna Evelyn told me how KNAG have realised the ways in which crafting builds confidence and contributes to Nannas feeling capable as activists:

It's not just knitting, it's crochet, it's sewing [or] it's just creating silly things. I think the craft business side of things, it's a way of building confidence in yourself that you can do something really little ... self-confidence to be able to actually feel that you know [about] doing something. It might only be little. I'm not much of a knitter but I do squares for the love wraps. You know, the energy that I put into that is going out there, right? And that's the thing, when you're making things. You know you're actually doing something that is a little bit creative, it might be small but you're putting energy and love into it. And that, in return, gives you a satisfaction and confidence that you can contribute in whatever way is comfortable.

Nanna Jessie (a member of the first loop) admitted that she was not "a great knitter" but was able to knit symbolic soft handcuffs which she considered not to be "grand or particularly creative" but useful and "simple enough not to take a lot of concentration when chatting and plotting with other Nannas." Jessie used her crafting as useful camouflage for critical reflection and their version of strategic planning, or plotting.

Women see the knit-in as more effective than meetings and prefer it for planning, sharing knowledge, and exploring creativity. Respondent 54 valued "the creativity and action plans that can come from yarning with care rather than meeting procedures." Nannas Julia and Rose, both from different loops, explained how their knit-ins function as meetings. This was similar to Respondent 31's comment. She enjoyed "sharing creative protest ideas" and "exchange of patterns [and] ideas for craft." Similarly, Respondent 17 wrote, "we have all increased our knowledge and creativity."

Nannas Evelyn and Jessie evidence different aspects of the micropolitics of kindness (or of donation) which are identified as characteristic of craftivism. In KNAG, this is experienced as an educative strategy because knitting (or any other form of crafting) is motivational, encourages engagement in collective action, and provides a safe learning environment with the enhanced possibility for dialogue and social change. These are essential motivational criteria for engagement in learning (Wlodkowski and Ginsberg, 2017).

Nanna Evelyn described how craftivism is used by KNAG as a form of CoP induction, gently drawing out women's individuality and capabilities, which directly link with the criteria of critical feminist gerogogy:

A lot of Nannas that come in and they're new [say] 'oh I can't knit, I can't do this, I can't do that.' And you'll ask them 'well, what do you do when you're sitting at home watching television, or what do you do when you're out in the garden?' They start thinking and inevitably they'll come up with something they can make.

The products of KNAG craftivism are material and processual. Materially, KNAG make a range of products that emphasise the "the soft power of crafting in company" (Millner and Moore, 2021, p. 149) and

these products communicate caring and positivity. Examples include: soft covers for chains and other locking-on devices, making them more comfortable for protestors; charity blankets; clothes for refugee babies; and crafted soft toys such as finger puppets or chickens given away to children of families affected by toxic fugitive gases produced from fracking.

The Nannas recognise crafting is more than the physical act of making. "Spreading hope and love" as a KNAG was important to Respondent 52 while Respondent 43 felt the camaraderie and empathy of KNAG gave "strength and hope as a group." There is an embodied energy of gifting (the donation of objects), invested with love and generosity of spirit as Nannas at knit-ins varn and share one another's insights in conversation.

Through adopting their Nanna personas, the women have become experts in crafting hope. People are already inclined to trust a grandmotherly figure and when they talk to a Nanna, they realise her information is trustworthy. Communities in which Nannas operate are generally, positive and encouraging of their efforts. Climate justice activism in Nanna hands is embodied with hope. Through visibility, Nannas build hope, non-violence, determination, and public joyfulness. Nanna Vida said,

Once they're there, it really gives hope. It is a bit play acting and putting on a persona and that's an important part of it. That's what gives people hope. They need to believe in something and I think we can provide that.

What women learned

Women entered KNAG with an extensive collective-skills set gained over years of experience drawn mostly from stereotypical female occupations in both paid and unpaid work. The combined capabilities of the older women that were easily transferable to activism were located in organising, planning, coordinating, managing, creating, performing publicly, and crafting. They were passionate, excited to learn and gain more expertise, knowing their life skills gave them the wisdom to stay the course of long-term environmental activism with determination. Nanna Rose (a vocational education lecturer in IT) described the range

of women's skills in her loop and indicated their strongly intrinsic motivation to learn more:

I think part of the strength of the Nannas comes from the variety of skills in the loops. In [our] loop we have graphic artists, banner painters, wordsmiths, tacticians, speakers, social media experts, sewers and knitters of course, and the necessary diplomats! All critical in their own way. I have also observed that women blossom in the KNAG environment and will often take on tasks outside their comfort zone and learn new skills.

Whilst many women had been involved in environmental groups and had gained ecological literacy, they had not been protestors, 55 percent were new to activism. The survey data indicated that women perceived gaps in their learner entry behaviours, in skills which were only learned once they joined the KNAG. What women lacked were NVDA strategies (only 5 percent already had this), specific knowledge of coal seam gas extraction (37 percent learnt this), and understandings of hegemonic power relations within extractive industries and government.

Interviewees considered that one of their most critical skills developed through KNAG was NVDA. Nanna Jesse, a member of the first loop, who did her training in late 2012 during the Northern Rivers campaign, told me, "I learned about changing the energy of others in a tricky situation". This is the skill of de-escalating tense situations. Nanna Evelyn linked her understanding of NVDA with "a willingness and caring capacity to enjoy each other's company whilst participating in confronting and hostile actions". Nanna Vida said she had learned to "never reply whilst angry. Think about it, process, [say I'll] get back to you later. Know when to walk away".

Nanna Jessie, an activist prior to joining KNAG, considered that she had become far more confident in many activist processes such as, "talking with people on the street, market stall info and products to get our message across, street theatre, politicians' annoyance, right up to blockading". Jessie considered that her activism was "richer, deeper, and stronger" since she became a Nanna. The support of the CoP was instrumental in giving her the confidence to try new skills and gain competence in them, while enjoying the process. She enthused about this, "having that Nanna support to do what it takes, to get the message across, to look after each other, and to have some fun along the way."

A significant on-the-job learning for a KNAG was the interplay of power dynamics between mining companies, politicians, and government bureaucracies. This is exemplified by Respondent 26 whose initial cynicism of politicians and big mining corporations was contextualised within fossil fuel use:

While I was cynical about politicians before, I have now become very much aware that they will do and say anything to get votes. They are (on the whole) devious and corrupt. I have learned that big business companies will stop at NOTHING to achieve their goal. There really is no great thought about the future as far as the environment and the community is concerned. They are only interested in power and money. Enough is never enough for them. If there were no people to hold them in check, I hate to think what would happen.

When women critically reflected on what they valued about being a Knitting Nanna, three themes emerged: being appreciated for their individual capabilities; engaging in respectful, empowering relations with one another; and hearing one another's perspectives. Unexpected friendships and camaraderie blended with non-judgemental inclusivity have supported women's willingness to take themselves out of their comfort zones to learn their activism. Knit-ins engender camaraderie, empathy and community – all important elements of critical feminist gerogogy and critical to social movements which depend on focused and purposeful social action and a shared collective identity (della Porta and Diani, 2006). These women have learned how to build their KNAG collective identity through their craftivism, using it as a strategy for induction and identity building.

Implications and conclusion

The Knitting Nannas have shown how craftivism can be a viable form of climate justice education for older women. The milieu engendered by simply knitting or crafting in public provides the perfect conditions for collaborative social learning and activist identity formation. Refusing to be defined or confined by male activists who considered themselves experts, the women established their praxis of drawing on their own collective expertise gained through occupational and life experiences. This constitutes the key element of SML which is learning activism on

the job experientially.

The strategy of surveillance, coupled with the practice of productive sitins established the "knit-in," which the women soon realised was a much more productive activism and very conducive to relationship and trust building. Playful strategising and critical reflection became the formula for the emerging CoP. Having established the pattern and format of the knit-in, identity and praxis followed through ongoing group-situated experiential learning in the developing KNAG CoP.

The insights Nannas gained through situated experiential learning expanded their ecological and environmental literacy and activist skills, helping them to speak out and explain to passers-by what they have learnt about the toxic effects of fracking. Encouragement of one another to be crafty, courageous and determined contributed to transformative emancipatory learning dispositions. The CoP was underpinned by a motivational ethos of older women's empowerment. The visibility afforded by crafting outdoors adds subversive knowledge about the power of their grandmotherly identity in garnering support. The Nannas are known and admired for their courage, determination, and wisdom in their defence of environmental sustainability by challenging ageist sexism.

Thus, craftivism is the vibrant, beating heart of this movement. Craftivism is the central life force that carries these older women's work, stitch by stitch, connecting the threads of their hope for a better future. It provides the scaffold for the KNAG collective heart that gathers all the disparate parts together to form a powerful and cohesive whole. The implications of this research indicate that integrating critical feminist gerogogy with craftivism can engage older citizens in climate justice social movement learning. It is now left to others to test the applicability of Nannagogy in different contexts.

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