Researching Nannagogy:

A Case Study Celebrating Women in Their Prime Crafting Eco-Activism

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Cover page photograph: KNAG Tour of Kenya Gasfields, Chinchilla, Queensland, September 2016

Source: Judi Summers (Lismore KNAG Loop) reproduced with permission

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Acknowledgement to Country

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Recovery - Waratahs after the bushfires, 2021
(Source: LJLarri)

"Let us be witness to wonder perceiving all Nature as a prayer come alive."

(Yom Kippur / Day of Atonement liturgy, Emanuel Synagogue, Sydney, 2021)

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Abstract

This doctoral research investigated educative mechanisms capable of creating transformative action addressing political stasis on climate change within an environmental activist movement in Australia. The study focused on the dynamics of situated, experiential, and social transformative learning in an emerging quickly growing older Australian women's environmental movement called the Knitting Nannas Against Gas and Greed (aka KNAG, the Knitting Nannas, or simply the Nannas).

Knowledge of older women's environmental activist learning is a lacuna in environmental education, adult learning, and social movement learning. Filling this gap required a transdisciplinary approach that drew together considerations of gender, critical gerontology, environmental climate activism, new and traditional media, and craftivism.

Feminist poststructuralism informed the research in order to analyse older women's emancipatory learning journeys overcoming ageist sexism amongst the broader anti-coal seam gas (or "fracking") movement. A descriptive case study methodology of a multi-site bounded system was used to illuminate the range of social learning techniques employed by the women both within and across the almost forty groups known as "Loops". A mixed method research strategy was used which integrated qualitative and quantitative data through three empirical data sets - an online survey, semi-structured interviews and social media analysis. Autoethnography reflecting on the researcher's learning experiences and observation added depth to the data mix.

To explore the Nannas' learning processes, which the researcher has termed "Nannagogy", two foci of inquiry were delineated. These were: 1) initial motivation and learner entry behaviours; and 2) longer-term engagement and sustained motivation for ongoing social movement learning. The objective of the research was to determine the forms and processes of learning employed as the women built and grew their movement. This novel research described and analysed Nannagogy and sought to evaluate its transformative potential.

Nannagogy is a hybrid operating through a dynamic of instrumental, communicative, transformative, and emancipatory learning embedded within the Nannas' community of

practice. The principles of self-directed, needs-based, critical feminist educational gerontology were demonstrated through primary data.

This research has shown how older women have broken through ageist sexism, by utilising collaborative social learning and contributing their energy in these most critical of times. The women joined a regional mobilisation against fracking as individuals, with minimal expertise as activists. Once they found one another, they drew on their considerable professional and life skills to create an older women's environmental activist identity that attracted national attention. They did this by adopting a creative oppositional discourse, strategically subverting an essentialised grandmotherly persona.

The first Nanna Loop established the elements of Nannagogy by engaging in creative critical reflection to re-form the non-violent direct action "sit-in" as a "knit-In". Their formula "sit, knit, plot, yarn, have a cuppa and bear witness" was established as women knitted in public places such as mining company sites, local politicians' offices, and community markets. The movement successfully gained a recognisable identity attracting and inducting women across the continent.

Seeking out knowledge to understand the dynamics of the fossil fuel industry and its environmental impacts took hours of research and social learning, as did creating performative information dissemination activities. On the job of activism, Nannas learned and critically reflected from their situated experiences. Data demonstrate the Nannas' community of practice is social media enabled.

This research challenges conventional wisdom that older women are caught behind a digital divide. Adeptly using a multiplicity of media channels to research and spread knowledge, their adoption of digital activism is evidence of "connectivist" learning in and through a digitised world of activist networking. Social media visibility has contributed to building the Nanna identity and strengthened this activist community, with the added social benefits of increasing older women's well-being, adding value and purpose to their lives. Online and offline spaces were created in which Nannas are seen and heard. Their skilfully crafted identity gained credibility for its ability to mobilise hundreds of people, contributing vital numbers to the larger anti-coal seam gas movement.

Data show how the Knitting Nannas have effectively advocated for policies of ecological sustainability. The Nannas have proven ageist sexism robs society of leadership, expertise, elder wisdom, and resilience in the challenge to address the impacts of fossil fuel extraction.

The combined policy directions of the UN Decades on Ecosystem Restoration and Healthy Ageing (2020 – 2030) offer overlapping opportunities for nations to embrace older citizens' right to quality learning later in life, seeking ways to build capacity in local communities for ecological and economic sustainability. The vitality, creativity, and intelligence of courageous and determined older women activists is explored in this study. The reverberations of their contributions are analysed as both subtle and seismic. Social movement learning combined with environmental activism in the digital 21st century is proving to be an effective form of transformative learning for sustainability. In caring and wise hands, environmental activist social movement learning can be a powerhouse of transformational and emancipatory learning.

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Glossary

ageivism	An emerging ideology of social action calling for social action on the protection and promotion of the rights of older persons based on the grounds of political, social and economic principles of identity, dignity, and social justice (Doron, 2018)
community of practice	A community in which individuals participate in collective group social learning activities in order to generate knowledge, negotiate meaning, form identities, and develop agreed cultural norms (Lave and Wenger, 1991; Curnow, 2013; Farnsworth et al., 2016)
connectivism	Learning in and through a digitised world of active participants in conversation
constructivism	A learning theory that acknowledges the ways in which individuals actively construct their own knowledge (Biggs and Tang, 2011, p. 22)
cross-post and cross-share	"Cross-sharing" and "cross-posting" are two ways of sharing content on Facebook. Cross-sharing involves clicking "share" or using the "@" as a tag in front of an individual or a page name; to cross-post, the page administrator intentionally feeds content to other groups or organisations by enabling links to their pages
disorienting dilemma	A particular life event or oppressive action that requires a process of critical self-reflection and is the catalyst for perspective transformation
ecopsychology	A synthesis of the psychological and ecological that integrates the human-nature relationship fostering caring, connection, healing, and a more harmonious holistic understanding of the world with the objective of positive ecological behaviour change (Hibbard, 2003; Fisher, 2013)
environmental activists	People who work to bring about political or social changes in order to protect the natural world and the ecological systems that sustain life on the Earth
environmental new social movement	Social movements concerned with environmental causes 'New' is compared to 'old' social movements which were concerned with the socialist union or worker-based political projects that have traditionally been associated with hierarchical and formal organisational structures. New social movements are typically "non-class-based or cross-class-based political projects oriented towards identity formation or autonomy" (Holst, 2018, p. 77) they are non-hierarchical, leaderless, consensus driven, coordinated through collectives and networks, and using non-violent direct action (NVDA) and sometimes more radical forms of civil disobedience (Newlands, 2018).
fracking	coal seam gas extraction whereby the rock substrata is fractured by hydraulic processes
gender blindness	Universalising human identity from a male stance which claims

	to be gender-neutral but uses the male pronoun; the effect is to make women's voices and experiences invisible
gerastology or feminist gerontology	The study of "old women from a feminist perspective" that "… stresses power relations and ways power influences not only female and male identities but also their disparate life chances" (Cruikshank, 2013, p. 188)
gerogogy or educational gerontology	Those practices and issues that are relevant to teaching and learning in relation to older people: memory, cognitive development, coping with transition in later life, teaching theories and methods, learning theories, realisation of full developmental potential, and a philosophy which underpins the whole conceptualisation as being controlled by the person concerned
later life learning	Learning as an older person in any form ranging from formal (structured and accredited), non-formal (structured but not accredited), and informal (unstructured, peer and social learning, or self-directed)
meme	The rapid spread of a "particular idea presented as a written text, image, language 'move' or some other unit of cultural 'stuff'" on the internet (Knobel and Lankshear in Shifman, 2014, p. 13)
protest	Site of contestation in which bodies, symbols, identities, practices, and discourses are used to pursue or prevent changes in institutionalised power relations (Taylor and van Dyke in della Porta and Diani, 2006, p. 165)
social movement	Purposive collective actions intended to transform the values and institutions of society (Castells, 1997 in Burgmann, 2003)
social movement learning	The intersection between adult learning theory and social movement theory (Scandrett et al., 2010, p. 125)
transformative environmental adult education	environmental social movement learning which combines three elements: (1) ecological literacy (recovery of a sense of place, recognition of the importance of biodiversity, reconnection with nature); (2) activist skills (acting and resisting, building alliances and relationships, learning skills, recognition of historical struggles and resistance); and (3) learning dispositions (valuing messiness in learning, understanding relations of power, transformative or emancipatory learning) (Hall et al., 2006, p. 18). Anti-fossil fuel movements fit these descriptions and therefore can be seen as a form of learning for and in social action
transformative learning	a form of learning, the effect of which is a "dramatic, fundamental change in the way we see ourselves and the world in which we live" (Merriam and Baumgartner, 2020, p. 126)

Abbreviations

ABN	Australian Business Number, a compulsory unique business number issued by the Australian Taxation Office for sole traders, partnerships, companies or trusts
AES	Australasian Evaluation Society
AGL	mining and energy supply company, originally known as the Australian Gas Light company, but now known only by its initials
AL	action learning
ALT	adult learning theory
CBD	central business district
CEG	critical educational gerontology
CFG	critical feminist gerogogy
CoP	community of practice (different from COP which refers to "Conference of the Parties" as part of the United Nations Framework Conventions on Climate Change)
CPRS	Carbon Pollution Reduction Scheme
CSG	coal seam gas
CWA	Country Women's Association, founded in 1922, now the largest women's organisation in Australia (State Library of New South Wales, 2012)
EE	environmental education
EfS	education for sustainability
ENSM	environmental new social movement
ETS	emissions trading scheme
FN-KNAG	Far North Queensland Nannas
FNQ	Far North Queensland
GAB	Great Artesian Basin
GFNR	Gasfield Free Northern Rivers Alliance
IMF	International Monetary Fund
IPCN	Independent Planning Commission of New South Wales
IWD	International Women's Day
KNAG	Knitting Nannas Against Gas and Greed, or also Knitting Nannas Against Greed, or Knitting Nannas Against Gas, or simply Knitting Nannas depending on which loop a Nanna belongs to
LPG	liquid petroleum gas
LTG	Lock the Gate, an Australian farmer-based anti-CSG activist organisation
MP	Member of Parliament, the title given to local elected politicians
NSW	New South Wales
NVDA	non-violent direct action
SMLT	Social Movement Learning Theory
SMT	social movement theory
TAFE	Technical and Further Education, Australia's government funded post-secondary school vocational education system equivalent to community colleges or polytechnics in other countries
TLfS	transformative learning for sustainability

UN	United Nations
UNFCC	United Nations Framework Conventions on Climate Change
XR	Extinction Rebellion

Part 1: Introduction, Literature Review, Epistemology and Methodology

Vision begins to happen in such a life

as if a woman quietly walked away

from the argument and jargon in a room

and sitting down in the kitchen, began turning in her lap

bits of yarn, calico and velvet scraps,

laying them out absently on the scrubbed boards

in the lamplight, with small rainbow-colored shells

sent in cotton-wool from somewhere far away,

and skeins of milkweed from the nearest meadow -

original domestic silk, the finest findings -

and the dark blue petal of the petunia,

and the dry dark brown face of seaweed;

not forgotten either, the shed silver

whisker of the cat,

the spiral of paper wasp nest curling

beside the finch's yellow feather.

Such a composition has nothing to do with eternity,

the striving for greatness, brilliance -

only with the musing of a mind

one with her body, experienced fingers quietly pushing

dark against bright; silk against roughness,

putting the tenets of a life together

with no mere will to mastery,

only care for the many-lived, unending

forms in which she finds herself,

becoming now the shard of broken glass

slicing light in a corner, dangerous

to flesh, now the plentiful, soft leaf

that wrapped round the throbbing finger, soothes the wound;

and now the stone foundation, rockshelf further

forming underneath everything that grows.

Transcendental Etude, final stanza, Adrienne Rich , 1977

I am Nanna, hear me roar

In numbers too big to ignore

And I know too much to go back an' pretend

'Cause I've heard it all before

And I've been down there on the floor

No one's ever gonna keep me down again

Oh yes, I am wise

But it's wisdom born of pain

Yes, I've paid the price

But look how much I gained

If I have to, I can do anything

I am strong

(Strong)

I am invincible

(Invincible)

I am Nanna!

You can bend but never break me

'Cause it only serves to make me

More determined to achieve my final goal

And I come back even stronger

Not a novice any longer

'Cause you've deepened the conviction in my soul

Oh yes, I am wise

But it's wisdom born of pain

Yes, I've paid the price

But look how much I gained

If I have to, I can do anything

I am strong

(Strong)

I am invincible…

Contemporary version of *I Am Woman,* Helen Reddy and Ray Burton, 1972, adapted by the Knitting Nannas replacing "woman" with "Nanna".

Beginning threads

I begin my thesis with these two pieces of poetry representing a duality of sensibility and purpose exemplified by the Knitting Nannas Against Gas and Greed (popular acronym KNAG, and also referred to in this thesis as the Nannas). The first excerpt from poet and feminist philosopher, Adrienne Rich, sets the scene within an older women's sensibility that connects the creative flow of weaving and crafting a life filled with meaning. The second is the iconic anthem of the 1970's Second Wave Feminism, Helen Reddy's *I am Woman*, claimed by the Nannas as their anthem replacing "woman" with "Nanna" (Knitting Nannas Against Gas Grafton Loop Facebook post, October 1, 2020). It is a very deliberate call to arms acknowledging a group of older women's determination to be heard and seen in creating a better world for all. The KNAG network, by breaking through the generally accepted stereotype of more youthful activists, means that older women are now visible as environmental activists protesting against coal seam gas extraction, or "fracking".

Critical feminist theorists in environmental education disciplines identify the female perspective as often missing (Gough, Russell and Whitehouse, 2017; Gough and Whitehouse, 2019). A significant gap exists in the field of transformative environmental adult education research in relation to the motivation for and engagement of older women in environmentalism, particularly in the anti-fracking movement. Transformative environmental adult education is the term used by Hall et al. (2006) to describe environmental social movement learning. The concept combines ecological and environmental literacy, activist skills, and transformative or emancipatory learning dispositions. Social movement learning is the intersection between adult learning theory and social movement theory that "accounts for both learning and social commitment" (Scandrett et al., 2010, p. 125). Education in this context is a broad term that describes being enlightened, including settings such as formal (structured and accredited), non-formal

(structured but not accredited), and informal (unstructured, peer and social learning, or self-directed) (Engelbrecht and Skladzien, 2010).

In this study, what the Knitting Nannas are doing in terms of transformative adult environmental education is explored, applying a poststructuralist feminist lens to uncover the breadth and depth of "Nanna" identity/ies and the implications of this for women's learning later in life. This research is a new line of inquiry. It is an attempt and to address this omission by understanding how older Australian women have educated themselves to become a forthright cohort of environmental activists, establishing a niche position in advocating for the transition to a low-carbon future in the face of many years of climate change denialism in Australia. It is this critical situation that KNAG responds to, by fostering public knowledge through its educative non-violent protest-based actions. Nannas would not be sitting, knitting, and plotting if there had been sufficiently strong national policy and leadership commitment to address the well documented and scientifically accepted effects of anthropogenic climate change (IPCC , 2014; Australian Academy of Science , 2015; Australian Academy of Science , 2021).

Chapter 1.   Introduction

1.1   Central aim and key research question

This study is an investigation of older Australian women's transformative learning to become environmental activists protesting coal seam gas extraction in their local communities. This thesis defines environmental activists as people who work to bring about political or social changes in order to protect the natural world and the ecological systems that sustain life on the Earth.

Drawing on motivational learning theory (Merriam and Bierema, 2013; Wlodkowski and Ginsberg, 2017), the researcher sought to investigate and differentiate factors affecting the older women's initial motivations and then explore their sustained engagement in learning their activist skills. The aim of the research was also to identify the effects of transformative environmental adult education later in life on women's well-being while ageing.

The research approach was a case study of the Knitting Nannas Against Gas and Greed (KNAG). Critical feminist theorists in environmental education disciplines identify the female perspective as often missing (Larri and Newlands, 2017; Gough, Russell and Whitehouse, 2017; Gough and Whitehouse, 2019). The KNAG network is breaking through the generally accepted stereotype of activists as youthful. This has meant that older women are now visible as environmental activists protesting against fracking.

This project is innovative for two reasons. Firstly, an older women's environmental activist group is examined through the lens of informal adult education. Secondly, new knowledge is added to the little researched field of the adult learning processes of older women in general, and more specifically in environmental activism. An analysis is made of three major elements: the profiles of women who chose to become KNAG, how this affected their activist learnings, and how this unique engagement of older women across Australia provides insights into environmental learning later in life.

There is a significant gap in the field of transformative environmental adult educational research in relation to the motivation for and engagement of older women in environmentalism in general and extractive mining in particular. To begin to address this,

drawing on the Knitting Nannas' own language, the portmanteau of "Nannagogy" is employed to encapsulate the concept of older women's social movement learning.

1.1.1   Definitions of key terms

In this dissertation the following key terms are used: social movements, new environmental social movements, social movement learning, transformative environmental adult education, and transformative learning. These are now defined below.

Firstly, social movements are "purposive collective actions whose outcome, in victory as in defeat, transforms the values and institutions of society" (Castells, 1997 in Burgmann, 2003, p. 3). Seen as distinct social processes, social movements engage actors in collective action through three mechanisms: (a) "conflictual relations with clearly defined opponents"; (b) "linked by dense informal networks"; and they (c) "share a distinct collective identity" (della Porta and Diani, 2006, p. 20).

Secondly, new environmental social movements are concerned with environmental causes and are a mix of organisational approaches and practices from both new social movements (NSM) and old social movements (OSM) (Newlands, 2018, p. 9). Old here means concerned with the socialist union or worker-based political projects that have traditionally been associated with hierarchical and formal organisational structures. New is taken to mean "non-class-based or cross-class-based political projects oriented towards identity formation or autonomy" (Holst , 2018, p. 77) and these are non-hierarchical, leaderless, consensus driven, coordinated through collectives and networks, with the use of non-violent direct action (NVDA) and sometimes more radical forms of civil disobedience (Newlands, 2018). The Australian anti-fossil fuel movement fits Newlands' description of new environmental social movements (NESM), being comprised of "two strands – hierarchical and non-hierarchical organisational structures, or professional and radical" (ibid., p. 10).

Thirdly, social movement learning lies at the intersection between adult learning theory and social movement theory in a way that "accounts for both learning and social commitment" (Scandrett et al., 2010, p. 125). Social movement learning distinguishes two targets of learning: (a) learning by persons who are part of a social movement; and (b) 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, & Clover, 2005; Hall et al., 2006).

Fourthly, transformative environmental adult education is the term used by Hall et al. (2006) to describe learning within and for the environmental social movement. The concept combines ecological and environmental literacy, activist skills, and transformative or emancipatory learning dispositions. Anti-fossil fuel movements fit these descriptions and therefore, transformative environmental adult education can be seen as a form of learning for and in social action.

Lastly, transformative learning is described by Merriam and Baumgartner (2020, p. 126) as a "dramatic, fundamental change in the way we see ourselves and the world in which we live".

1.1.2   *Central aim*

This research project began with the central aim to explore this overarching question:

What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy?

1.1.3   *Research questions and objectives*

The research objectives are framed in terms of stages of older adult learning processes identified as educational gerontology. Gerogogy, or educational gerontology, refers to specific instructional practices relevant to older learning (Petersen, 1976; Findsen and Formosa, 2012; Glendenning, 1993) Learners typically move from initial motivation (or curiosity) to becoming involved, then actual engagement where motivation is sustained through ongoing activities (Burns, 1995 pp. 222, 224; Lorenzoni et al, 2007 p. 446).

This research is guided by an overarching central aim informed by three research questions, following themes proposed by Burns (1995) and Lorenzoni et al (2007). Burns (1995) considered, "it is intrinsic motivation that provides the main drive to seek further knowledge and skills, although initially it may be seeded by the extrinsic motivation of better pay and conditions" (p. 222). Having got the adult learner to a place of learning, the next

step is to keep them engaged. The learning context needs to "meet the needs and preferences of the learners" (ibid., p. 224). Motivation theory applied to adults looks at extrinsic (e.g. external rewards such as increased pay) and intrinsic motivation (e.g. internal personal satisfaction such as enjoyment or increased self-esteem).

A definition of motivation consistent with Burns and relevant here for its use in a similar environmental context to study people's engagement with climate change in the UK was applied by Lorenzoni et al. (2007). They wrote:

> The term *engagement* in this paper is taken to mean a personal state of connection with the issue of climate change … A *state* of engagement is understood here as concurrently comprising cognitive, affective and behavioural aspects. In other words, it is not enough for people to know about climate change in order to be engaged: they also need to care about it, be motivated and be able to take action (p. 446).

The first research question focuses on finding out what the women learned about creating and growing their self-organised new environmental social movement. The initial motivation, in other words, the inspiration that created the movement, underpins the learning that followed in developing the women's activist identity. From the perspective of individual women, this is a process which happened for women as they joined the Nannas. From the perspective of the organisation, growing the movement involved attracting members. Understanding why older women were attracted to KNAG and the pre-existing capabilities that predisposed their involvement in the movement, their learner entry behaviours, are central to addressing this question.

The second question requires an investigation of learning processes that maintain and sustain engagement and commitment to the causes addressed by their new environmental social movement. This is likely to facilitate transformative learning whereby women are energised by their activities and begin to have personal and group insights into how to be better activists achieving their goals within the KNAG identity. The third question enables a synthesis of findings in order to encapsulate the utility of "Nannagogy" and its contribution to society. The research questions, objectives, and associated data are listed in Table 1.

Table 1: Research questions, objectives and data

Research Question 1: <u>Initial motivation, learner entry behaviours and identity formation</u>:

What have the older women learned about starting and growing their movement to 40 or so groups in just four years, from 2012 to 2016?

a. What were the motivations of older women that led to establishing and joining KNAG groups?
b. What capabilities (knowledge, skills, attitudes and world views) did these older women bring with them that enabled their learning?

<u>Objectives for RQs 1a and 1b: Who are the Knitting Nannas</u>?	<u>Data collected in survey and interviews</u>: Demographic data (age, location, educational attainment; occupation/s, etc.); identity descriptors; length of involvement with KNAG; attraction to KNAG, motivational interests; and 'entering behaviours', prior activist involvement/s, environmental concerns, intergenerational concerns, adult learning experiences, skills sets (awareness of strengths, capabilities)
i. Investigate the profiles of women who join the Nannas and whether it is possible to identify a typical Nanna.	
ii. Identify why women were attracted to joining the movement, the reasons for the movement's growth and their key learnings about this.	
iii. Explore KNAG's identity to clarify essential defining features or characteristics of KNAG members.	

Research Question 2: <u>Engagement and sustained motivation</u>:

What learning processes have enabled older women to sustain motivation and ongoing engagement in activism supporting the transition to a low-carbon future?

a. What role, if any, do mechanisms from adult learning theory play in the KNAG movement and how does this relate to current social movement learning theory? This includes consideration of: communities of practice; connectivism; critical feminist gerogogy; transformative environmental adult education; and situated, experiential, instrumental, transformative, emancipatory and learning later in life.

Objectives for RQ 2a: What is it that women learn through being a Knitting Nanna and how do they learn, their learning processes?	<u>Data collected in survey, interviews and social media analysis</u>: insights into learning about how the 'sit, knit, chat, and having a cuppa' activities described in the "Nannafesto" contribute to learning; the 'what' and 'how' of learning during a rally or protest; identity and role of Nannas and relationship to older women's activism; skills in IT, social media and media messaging across platforms and channels; active aging and lifelong learning; and perception of reactions of non-Nannas
i. Identify the knowledge, skills and attitudes that are valued and taught amongst the Knitting Nannas that contribute to their key learnings.	
ii. Identify the ways in which these are taught, the learning processes.	

iii. Investigate the ways in which KNAG groups create an older women's community of practice in transformative environmental adult education.	(other protesters, police, landholders, mining workers, passers-by, politicians)

Research Question 3: Implications:

What contribution does this research into older women's transformative environmental adult education, 'Nannagogy', make to the fields of adult learning and social movement learning?

    a. What are the critical success factors that have enabled older women's engagement in climate change and environmental activism?

    b. What recommendations are made for policy, leadership and practical field work in researching or supporting older women in their activist journeys?

Objectives for RQs 3a and 3b: What is successful about "Nannagogy" and how can it be successfully applied?
 	
   i.   Synthesise the defining characteristics of "Nannagogy".
  ii. Evaluate the significance and utility of this approach to older women's environmental activist learning in the context of social movement learning theory.
 iii. Determine the implications for future research, public policy, and practical fieldwork.
	Critical synthesis of all data.

1.2   Context

1.2.1   Waxing and waning of Australia's commitment to action on global warming and
climate change

The larger background for the existence of the Nannas is explained in this discussion of
national context. Australia's commitment to action on global warming and climate change
has waxed and waned over the last forty years. We have shifted from accepting the
anthropogenic causes of climate change in the 1980's and 1990's to becoming sceptical and
confused in the late 1990's and early 2000's to then adopting a stance of concerted action
from 2007 to 2013, to almost two decades dubbed the *Energy Wars*, marked by a lack of
consensus and political inertia, to our current position as an international pariah (Rudd and
Woodroofe, 2021; Seccombe , 2021).

From the late 1980's to the mid 1990's, Australia was a world leader in adopting and
promoting policies to address climate change. These were the years, led by the Hawke and
Keating Labor governments, when the social consensus on climate change action was
generally accepted. Taylor (2015) argues this was due to greater political bipartisanship, an
accord between capital and labour, more social democratic politics, and a greater
involvement of scientists and environmental organisations in decision-making. From the mid
1990's until 2007, political leadership under the Howard Liberal government waned as an
ideology of free market economic rationalism gained prominence, which meant the
economy, so-called "human exceptionalism," and the exploitation of natural resources
began to gain prominence over the environment and sustainability (ibid., p. 172). Taylor
identifies this era as the beginning of "a climate of uncertainty" that has been effective in
"creating and maintaining public confusion and official inaction on climate change" (Taylor,
2015, p. 146).

Lagging slightly behind this transition was the legacy of earlier times when the
Commonwealth Government's environment portfolio was situated as the driver of a lifelong
approach to environmental education. This positioned Australia for a fundamental and
systemic shift in the whole of society, by engaging in the worldwide movement of education
for sustainability. As Larri and Colliver (2020, pp.63-64) state, "much of this positioning was

due to specific individuals both in environment portfolios federally and from States and Territories in environment, education or research capacities".

Two national plans were developed: the *Environmental Education for a Sustainable Future: National Action Plan* (Environment Australia, 2000) and *Living Sustainably: The Australian Government's National Action Plan for Education for Sustainability* (DEWHA, 2009). The 2000 plan established a coordination structure for numerous initiatives across all sectors of industry and education. In the background was a shift in public opinion towards concern about climate change due to a severe drought that affected most of south-eastern Australia from late 1996 to early 2010. The Rudd-Gillard-Rudd Labor governments (2007-2013) were elected on a platform that included addressing climate change. Prime Minister Rudd is known for his reference to climate change as "the biggest moral challenge of our time" (Taylor, 2015, p. 170).

The first official act of Rudd's government was committing to the Kyoto Protocol that his predecessor, Prime Minister Howard, had refused to sign. The 2009-10 Labor budget featured strategies towards a green economy linked to the Carbon Pollution Reduction Scheme (CPRS) which began in July 2012 (ABC News online , 2014). Programs addressed clean energy, energy efficiency, climate change research and, importantly, education. Some of these measures had been instituted as part of Australia's strategy to spend its way out of the global financial crisis of 2007-2008. During Rudd's second term as prime minister, and due to the collapse of the European carbon prices well below Australia's set price of $23 to $3.34 per tonne, he announced plans to terminate the carbon tax and replace it with an emissions trading scheme (ETS) (ibid.). Wilkinson (2020, pp. 67-69) describes the considerable political challenges for Labor in satisfying the interests of worker unions and companies in big "greenhouse polluting" industries (cement, oil and gas, coal, chemical, iron and steel, and power generators) and still achieving meaningful emissions reductions.

The downfall of the Rudd-Gillard-Rudd Labor governments and election of the conservative Liberal/National coalition in 2013, headed by Prime Minister Tony Abbott, led to replacing both CPRS and ETS with the Direct Action Policy in which the government paid companies to reduce emissions. Such a scheme is generally questioned for its validity to achieve significant emission reductions over the long term (Thomas, 2014). This government

systematically dismantled the initiatives established by previous governments. Backed by vested interests including right-wing think tanks, the Minerals Council of Australia, conventional energy generators, scientists sceptical of anthropogenic climate change, and supportive media narratives, the government created confusion and doubt about the urgency and scientific veracity of fossil fuel's contribution to global warming (Taylor, 2015, pp. 103-146, 167-171; Bacon and Jegan, 2020; Wilkinson, 2020).

In Australia, influential business adviser to Prime Minister Abbott, Maurice Newman, referred to climate change as "scientific delusion" (ibid., p. 142). Following this thinking, Abbott and his Treasurer, Scott Morrison, adopted a form of "coal evangelism" (Krien , 2017, p. 48). At the opening of a new coal mine Abbott spoke publicly about coal being "good for humanity, … for prosperity, … as an essential part of our economic future, here in Australia and right around the world" (Edis, 2014; Wilkinson, 2020, p. 151). In Federal Parliament on 8 February 2017, Morrison handed around a large lump of coal, coated with lacquer purportedly thus making it clean and taunted the Opposition saying "Don't be afraid, don't be scared, it won't hurt you. It's coal" (Hamilton, 2017). These gestures were emblematic of promoting market forces as drivers of prosperity, and the lack of commitment to action against climate change and for environmental protection (Taylor, 2015, p. 141).

In 2021, the same divisive political leadership has left Australia in a policy vacuum when it comes to taking climate change and energy security seriously in a rapidly de-carbonising global economy. World leaders are pressuring Australia to set targets in line with the International Energy Agency's latest report (July 2021), *Net Zero by 2050: A Roadmap for the Global Energy Sector*, which envisages a future without coal or gas. Still the Morrison government maintains its proposed so-called "gas led" COVID-19 recovery and recently announced its intention to build a gas power plant at Kurri Kurri in the NSW Hunter Valley, which has been described as a future stranded asset (Speers, 2021). The two political cartoons in

Figure 1.1 are indicative of the frustration felt by many Australians at the current Federal Government support for fossil fuels and its lack of policy addressing climate change in the wake of the increasing natural disasters prior to the 2019/2020 Black Summer mega-fires.

Figure 1.1: Two political cartoons by Cathy Wilcox "Let us Pray" (28 September 2017) and "My Country" (5 February 2019) published in the Sydney Morning Herald.
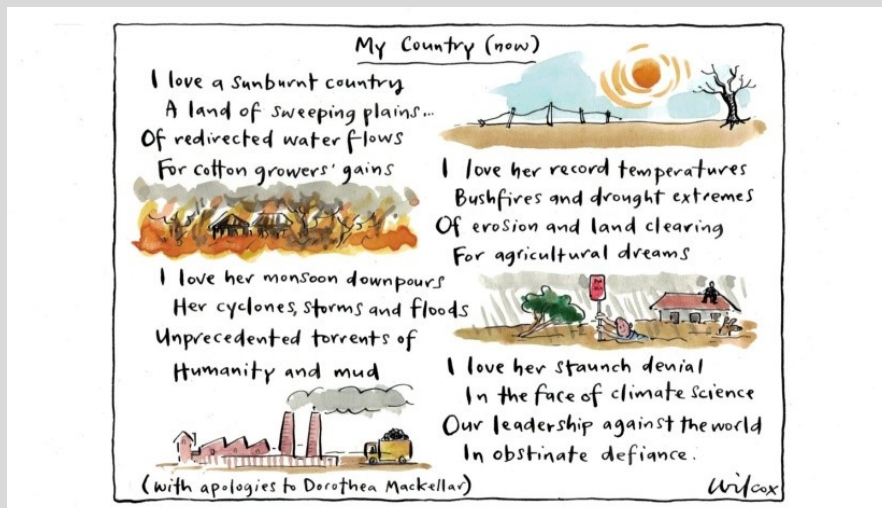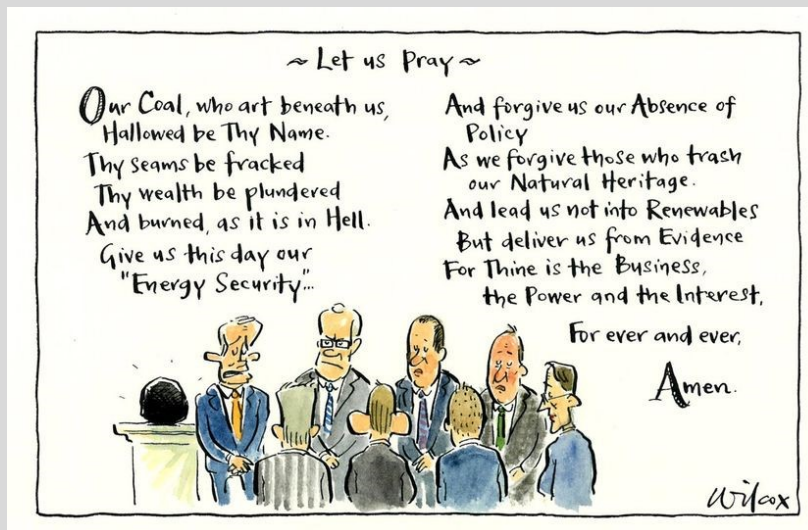
1.2.2   Activist context: Fighting coal seam gas fracking

The Nannas have focused on bringing to public attention the dangers of mining CSG. CSG has emerged as a major environmental concern in many countries, with many bans in place. This is because extraction involves high pressure injection of mega-litres of fluid mixed with toxic chemicals into geological gas seams to loosen up and extract the petroleum resources of natural gas and some oil. Also referred to as hydraulic fracturing or fracking, the resulting contaminated water is partly recovered and the rest often seeps into groundwater systems. Not all the gas is captured and fugitive gases, mainly methane, also enter

groundwater systems and are released into the air ("Fracking", n.d.; Acosta et al., 2015, p.7; Tosh and Gislason, 2016, p. 2).

Australia is a major exporter and domestic supplier of liquid petroleum gas (LPG) which is generated from CSG (Larri and Newlands, 2017). The Australian States of New South Wales and Queensland hold the largest reserves, where most of the environmental activism has taken place. Reserves also exist in the Northern Territory, Victoria and Western Australia.

In Australia, CSG is an environmental concern because much of the land targeted for exploration is in farming and rural communities. This has implications for 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); and community cohesion (where fracking is contentious and communities are divided or there are newcomers who fly in and fly out for work and the added potential for so-called boom towns leads to mentalities which increase violence) (Ollis and Hamel-Greene, 2015 pp. 10, 11, Tosh and Gislason, 2016; Hirsch et al., 2018 pp. 7, 10; Grubert and Whitney, 2017 pp. 46-47).

1.2.3   *Connecting gender and environmental issues*

Fracking has been identified as breaching international human rights frameworks which recognise that environmental degradation through and mining operations can have adverse effects on human rights, such as climate change and desertification (Acosta et al, 2015, p. 13). An example is the *Convention on the Elimination of All Forms of Discrimination against Women* (2016) which connects the rights of women to adequate living conditions (e.g. water and housing), and public participation in contributing to decision-making that affects them. The *United Nations Framework Conventions on Climate Change* (UNFCCC, 2014) takes these rights further by recognising the challenges facing humanity due to climate change and, in

particular, the impact on women. At the Conference of Parties[1] 18 (2013), agreement was reached on strategies to promote the gender balance and improve the participation and representation of women in climate negotiations.

An acknowledgement that earlier climate mitigation and adaptation policy initiatives have been gender-blind is being redressed by the UNFCCC. Gender-blindness refers to universalising human identity from a male stance which claims to be gender-neutral but uses the male pronoun. The effect is to make women's voices and experiences invisible. The UNFCC now require recognition of women in the climate change debate as the future depends on engaging women in environmental activism at all levels to fully address the challenges of climate change (IUCN, UNDP, & GGCA, 2009).

Whitehouse (2015) writes about the implications of climate change for environmental education. She considers that:

> … in terms of citizenship, the more limited participation of women in negotiations and climate change decision-making hampers women's capacity to put forward their views and solutions. Educators have to pay attention to gender (again) and to rising inequities, especially between those who have citizenship rights and those who do not (pp. 19, 21).

Feminist social movement researchers have begun to consider the implications of that gender-neutrality. One of these implications is that it cannot fully take account of the dynamics or motivations of collective mobilisations and collective identities (Maddison and Shaw, 2012). In light of the international efforts to be gender aware, it was unusual to see the emergence of a new environmental social movement in Australia which was specifically run by and for older women. Questions began to emerge in my mind about how and why these women had formed their identity apart from the broader anti-fracking movement. An initial investigation of the Nannas' website indicated the women were learning their activism as they went and were not claiming to be social activists or even feminists, as one might have expected. This presented a unique opportunity for informing transformative

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[1] The Conference of Parties is an annual meeting of States that are parties to the UN Convention on Climate Change (see http://unfccc.int/bodies/body/6383.php).

environmental adult education, through giving voice to older women who had a collectively formed this new environmental social movement.

1.3   Thesis structure

This thesis is organised into three main parts. Part 1 comprises the introduction, Part 2 is a presentation of the findings, and Part 3 constitutes the discussion and conclusion.

The purpose of Part 1, which has three chapters, is to set the parameters of the research. This is done first by clarifying the research aims, objectives, and key definitions. This is followed by a consideration of the sociopolitical and cultural context in which the research is located. The third section of Part 1 sets out the thesis structure. Next the literature review determines what possible parameters and characteristics are relevant to investigating older women's environmental activist learning through their involvement in new environmental social movements in the 21st century.

The final chapter of Part 1 details the approach to research undertaken in terms of four conceptual levels: (1) the epistemology (theory of knowledge frame) delineates the researcher's assumptions of the knower and the known, the researcher's position as a poststructuralist feminist researcher, and how this has influenced this inquiry; (2) the axiological ethics and values of being a feminist researcher are set out; (3) the methodology (the theory of the research process) is characterised as a transdisciplinary descriptive case study of a multi-site bounded system; and (4) the research strategies (methods or techniques used in gathering evidence) are described as sequential mixed methods case study with a developmental design (Bazeley, 2018, p. 73).

Part 2 has four chapters which present findings from survey, interview, social media analysis and autoethnographic data. The analysis of the data provides answers to the research questions stated in Section 1.1 and restated in relation to the methodology and research strategies in Section 1.5. The findings are broken down into key themes in order to arrive at the defining characteristics of Nannagogy. The first is Chapter 4 KNAGing facts: Who are the Nannas and what motivates them? addresses Research Question 1 about the initial motivation for creating the KNAG movement, learner entry behaviours and identity formation. chapters 5, 6 and 7 address Research Question 2 about the learning processes that have enabled older women to sustain motivation and ongoing engagement in

transformative environmental adult education within the KNAG social movement. The first theme is presented in chapter 5 *The "Nannafesto" and the "Nanna Way": Organisation for a learning disorganisation*. This is based on what is learned and how this is learned through the non-hierarchical network of autonomous interdependent groups that constitute the KNAG. The second theme, chapter 6 *"Viva La Nannalution": Using craftivism to transform crisis into social movement learning*, addresses the question of what craftivism contributes to the Nannas' experience of transformative environmental adult education as a form of non-violent direct action and in the sense of crafting strategy. The third theme, chapter 7 *"KN-IT-working": using social media for learning and empowerment*, involves a 21st century aspect of social movement learning, social media savvy connectivism. This means learning in and through a digitised world of active participants in conversation (Siemens, 2008; Downes, 2012). In particular, this focuses on the ways in which KNAG connect online, the significance of this for the emerging field of social movement learning theory (SMLT), and why the internet provides older women activists with a platform to voice their agenda, challenging ageist sexism as environmental activists.

In each chapter, the findings are presented to identify the transformative environmental adult learning processes, how these occur within the KNAG movement and what additional learning processes were found.

Part 3 concludes the thesis with chapters 8 and 9. Chapter 8 *Defining Nannagogy: A community of practice in older women's activism* synthesises findings to Research Questions 1 and 2, by presenting an interpretive model combining the dynamics of transformative environmental adult education and social movement learning as they apply to older women in the KNAG movement. This is characterised as the KNAG community of practice where individuals participate in collective social learning activities in order to generate knowledge, negotiate meaning, form identities, and develop agreed cultural norms (Lave and Wenger, 1991; Curnow, 2013; Farnsworth et al, 2016). Research Question 3 is addressed in the final Section 8.2 which considers the contribution and implications of this research to transformative environmental adult education, social movement learning theory, learning later in life, ageing well, and the human rights of older women in climate change. Chapter 9 *Conclusion* is a reflection and synthesis on the research journey and offers final remarks.

Figure 1.2 is an overview of the thesis structure.

Figure 1.2: Researching Nannagogy: A Case Study Celebrating Women in Their Prime Crafting Environmental activism - Overview of thesis structure

PART 1: INTRODUCTION, LITERATURE REVIEW, EPISTEMOLOGY AND
         METHODOLOGY

Chapter 1: Introduction
Chapter 2: Literature review
Chapter 3: Epistemology, axiology, methodology and research strategies

PART 2: FINDINGS

Overview

Chapter 4: KNAGing facts: Who are the Nannas and what motivates them?
Chapter 5: The "Nannafesto" and the "Nanna Way": Organisation for a
           learning disorganisation
Chapter 6: "Viva La Nannalution": Using craftivism to transform crisis into
           social movement learning
Chapter 7: "KN-IT-working": using social media for learning and
           empowerment

PART 3: DISCUSSION AND CONCLUSION

Overview

Chapter 8: Discussion: Defining Nannagogy - a community of practice in
           older women's activism
Chapter 9: Conclusion

Chapter 2.   Literature review: Older women's learning in 21st century environmental new social movements

Overview and purpose

The purpose of this literature review is to determine what possible parameters and characteristics are relevant to investigating older women's environmental activist learning through their involvement in environmental new social movements in the 21st century. This is with reference to the overarching research question:

> **What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy?**

There is minimal research literature that holistically relates to this question. A systematic search of literature since 2016 identify gaps pertaining to women's experiences in adult learning and social movement knowledge in general, and more specifically for older women. At the time of writing, my co-authored publications lead the field when searching with the key words 'older women and learning and social movement' with the addition of 'ecofeminism' and 'environmental adult education' (Larri and Newlands, 2017; Larri and Whitehouse, 2019).

This gap is a form of gender-blindness identified in environmental education research where human identity is universalised from a male stance, and although it is described as gender-neutral, it uses the male pronoun. The failure to distinguish between genders has led to the exclusion of female experience, which feminist researchers have challenged, arguing the importance of recognising the complexity of human and more than human relationships, multiple subjectivities, knowledges, and interactions which starts with gender inclusivity (Gough, 2013; Gough and Whitehouse, 2020).

In order to scope the field and draw together key concepts, the focus was placed on literature that provides definitions and insights. This supports critical analysis of the research data. The following five questions framed the literature review:

1. Who are older women and what issues do they face?

2. What are the characteristics of older women's transformative learning in environmental new social movements?

3. What is known about older women's environmental activism in social movements?

4. What are older women's online capabilities in 21st century networked activism?

5. What are the educative challenges facing older women's environmental activism?

After reviewing the literature, there is a summary of the key findings. The chapter ends with a synthesis of criteria for data analysis distilled from the literature.

2.1   Who are older women and what issues do they face?

2.1.1   Older women - demographics

Older adulthood is part of the continuum of ageing through adulthood. "Elder" or "the eldest" refer specifically to persons. "Older" or "the oldest" refer to both persons and things. The respective forms of the terms are used interchangeably in this thesis (What's the difference between 'elder' and 'older'?, 2021). The Australian Bureau of Statistics (2018) defines older people as those aged 65 and over. The American Psychological Association's (APA Dictionary of Psychology , n.d.) classifies categories of older from 65 as young-old (65-74), old-old (75 to 84), and oldest old (85 and beyond). Many countries report an accelerating rate of population ageing. Internationally, it has been calculates as increasing "from one in eight people aged 60 years or over in 2017 to one in six by 2030 and one in five by 2050" and "by 2030 there will be a 34% increase from 1 to 1.4 billion. By 2050 this is expected to be 2.1 billion" (World Health Organization , 2020, p. 2). Women live proportionally longer than men, by around three years. "In 2017, women accounted for 54% of the global population aged 60 years or older and 61% of those aged 80 years or older" (ibid). Australian demographics are consistent with this trend (Australian Bureau of Statistics, 2018).

2.1.2   On being older – ageism, ageivism, sexism and climate change

Older people are negatively affected by ageism and limited by perceptions of the older learner as frail, with reduced capacity for learning. Israel Doron (2018, p. 33) defines ageism 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". Ageism is also

seen more broadly as either positive or negative and it affects other ages, for example young people can be subject to denigration on the basis of their age (Doron, 2018; Applewhite, 2019).

Active ageing and successful ageing are late 20th century concepts that have been incorporated into international policy such as World Health Organization's 2002 *Active Ageing Report*, the UN's 2002 *Madrid International Plan of Action on Ageing*, and more recently the UN's *Agenda 2030 on Sustainable Development* (2015), and the UN's *Decade of Healthy Ageing 2020-2030*. Critics of active ageing consider these policies emphasise capitalistic and individualistic ideologies because they stress "independence, self-reliance, consumerism and individual responsibility over interdependence, reciprocity, cooperation and filial piety" (Doron, 2018, p. 34). However they do add weight to the rights of older people by considering healthy ageing contributes to learning later in life and sustainable development. The *Decade of Healthy Ageing* (World Health Organization, 2020, p. 7) links the rights of older people with sustainability through the UN Sustainable Development Goal 4, Quality Education, stating, "healthy ageing requires lifelong learning, enabling older people to do what they value, retain the ability to make decisions and preserve their purpose, identity and independence. It requires literacy, skill training and barrier-free participation, including in digital skills".

More recently, Chazan, Baldwin and Evans (2018) co-edited *Unsettling Activisms: Critical Intervention on Aging, Gender and Social Change* in order to go beyond defining activism and activist within the heteronormative, colonial, Eurocentric, and ableist assumptions, insisting on breaking the silences on diverse intersectionalities. Similarly to Doron, they also challenge the discourse of active ageing preferring "activ*ist* ageing" (ibid., p. 10) and view ageism as "informed by systems of structural power and as imbued with possibilities for collective action and positive societal contribution" (p. 11).

Older activists' challenging of ageism is an emerging ideology of social action which Doron (2018, p. 35) defines as "ageivism," which is described as combining the "politics of identity and the concept of ideology and calls for social action on the protection and promotion of the rights of older persons based on the grounds of political, social and economic principles of identity, dignity and social justice".

Gender must be factored into ageism and ageivism. Women face the double discrimination of sexism and ageism. As Wilinska (2016, p. 334) notes "whether in gerontology, sociology, or feminist studies, older women emerged as the key category exemplifying the experience of living within two interweaving systems of oppression: ageism and sexism."

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. Gerike (1990) in her article *On Gray Hair and Oppressed Brains* wrote grey hair is a cultural signifier of older ageing that leads to workplace discrimination and is linked to a stereotype of being unprofessional. She wrote:

> Sexism in combination with ageism also causes women problems in the job market as they age. Many women dye their hair because they fear, perhaps with good reason, that they might lose their jobs, or find it difficult to obtain jobs, if their gray hair were visible. In many professional circles, gray hair on women is considered unprofessional (1990, p. 39).

This theme is still an issue for older women. Cecil et al. (2021, p. 11) considers the "pervasive and insidious nature" that goes with the *"social shaming of older women"*. They quote 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' "*. Cecil et al. investigated women's choice of natural grey hair colour. They found thirty Facebook groups dedicated to discussing the pros and cons of grey hair and surveyed eighty women across nine countries. Women who decided keep their natural grey chose authenticity over the stigma of incompetence, invisibility, and age discrimination.

It was not until the mid-1980's that Women's Studies researchers began looking into the effects of ageism through the ground-breaking collection of essays of Barbara Macdonald and Cynthia Rich (1984), *Look Me in the Eye: Old Women, Aging and Ageism*. Macdonald expressed her frustration at the slow uptake in developing the theoretical base for ageism in her address to the 1985 U.S annual conference of the National Women's Studies Association.

Years later, in 2006, Rich commented on the continued lack of a theoretical base in the women's movement for the women of the 1970's and 80's second wave feminism as we move into old age in large numbers:

> … they could make a difference – but without a theoretical base there's no theoretical analysis, no base for what they're encountering. Without a theoretical foundation that Women's Studies can provide us, women have no idea how to think about our ageing and our organising (Lipscomb, 2006, p. 4).

Margaret Cruikshank (2013) confirmed the ongoing gap in Women's Studies and described how it is being filled by feminist gerontology (gerastology) - the study of old women from a feminist perspective - that "… stresses power relations and ways power influences not only female and male identities but also their disparate life chances" (ibid., p. 188). Agency is diminished when we are "aged by culture" (ibid.); breaking this nexus enables activism and active ageing for those who choose it.

All the aspects of ageism and ageing are encompassed and expanded by gerastology in ways that critically explore the stereotyping, essentialising, sentimentalising, and patronising of old women. This emancipatory ideology is taken up by critical feminist gerogogy, as discussed in the next section. Even referring to "older" women denigrates because it implies an othering – older to whom? Rosenthal (2014) highlights the contradictory and limiting nature of the socially constructed stereotypes of old women that she says contribute to the fear and denigration of ageing. In this quote she explains the impact of negative stereotypes on younger women and that what seems to be complementary is inherently condescending to older women:

> Varieties of ageism directed towards women today contribute to a picture of ageing women as unproductive, dependent, rigid, weak, defenceless, morally old-fashioned, timid, ugly, senile and lonely. The list of negative stereotypes can be extended, making it no surprise that younger women look past us and through us as if by denying our existence they will magically avoid growing old. Positive stereotypes harm us less directly but in the end are no less limiting, casting us as perfect mothers forbidden our own neediness or wisdom-filled crones denied challenge and growth.

Often when one of us by our actions contradicts the stereotypes of the nature of old women, we are told we are exceptions or we are permitted to pass as young (p. 6).

Cruikshank concludes old women are not "uniformly wise or universally oppressed" and we need to find "meaning in particulars" (2013, p. 208). Delving into women's experiences and developing models for theoretical bases towards organising for activism foreshadowed by Macdonald and Rich seems crucial.

The United Nations Human Rights Council (2021) considered the human rights implications of climate change on ageing populations. The Council (ibid., p. 16) found as well as ageism, and "multiple intersecting forms of discrimination", older persons are likely to experience vulnerabilities caused by climate change on their health, access to food, land, water and sanitation, housing, livelihoods, and fundamental well-being. There is also a lack of attention to protecting the climate related rights of older persons in national and international law.

A positive finding was the contribution older people are making in mitigation of and adaptation to climate change impacts. As an example, through a journal publication from this research (Larri and Whitehouse, 2019), the work of the Knitting Nannas was referenced. In this report, it was recognised that "older persons possess enormous knowledge, experience, skills and resilience" and that enabling their "participation in climate action is not only a human rights imperative, but also a means of ensuring effective solutions for all people and for the planet" (ibid.). Amongst the recommendations proposed are: strategies to include older persons in policy-making and planning, such as membership of national delegations to United Nations Framework Convention on Climate Change; opportunities for later life learning to maximise the voice of older persons concerned for the sustainability of their communities in the face of climate change; and facilitating intergenerational dialogue around climate change and the environment.

2.2   What are the characteristics of older women's transformative learning in eco-activist social movements?

2.2.1   *Older women's social movement learning*

The knowledge gap and gender-blindness towards older women's SML has already been noted in the introduction to this literature review. Canada's Raging Grannies are an exception. Much has been written about the Raging Grannies in relation to their role as social change agents educating others and countering ageist sexism (Roy, 2000, 2003, 2007; Caissie, 2006; Scmitz, 2009; Sawchuk, 2009, 2013; Pedersen, 2010; McHugh, 2012). Only one scholar, Miya Narushima (2006), has researched the implications for later life learning of older women's social activism within this movement. Narushima concludes the "social and collective learning environment" enabled significant personal benefits such as "self-help, self-acceptance, liberation and the realisation of their capacity to become an agent for change". The women experienced ongoing self-actualisation into later life along with "creativity, critical thinking, a sense of self-liberation, and well-being in late adulthood" (ibid., pp. 38-41).

Women of all ages were present at the Greenham Common Women's Peace Camps protesting the deployment of US nuclear missiles in Europe (1981-2000) but the learning experiences of older women are not specifically identified. Filmmaker, Beeban Kidron (2013) wrote "the women of Greenham Common taught a generation how to protest." First-hand accounts in the film *Carry Greenham Home* section *Did we make a difference?* (Kidron and Richardson, 1983) indicate collaborative learning, critical reflection and personal transformative learning occurred. Interviewee Frances Connelly said "… as well as the political impact which I believe we had, we also learned a huge amount from each other, and I think the effects of that are still here today." Two unnamed women said "I think Greenham made a huge difference at all levels from the geopolitical level of pushing the world towards the disarmament that was embodied in the IMF Treaty to the radical transformations in individual women's lives" and "Greenham did more for me than I did for Greenham."

Ollis and Hamel-Green (2015) have written about adult education in the context of coal seam gas protests in Gippsland, Victoria describing it as informal, incidental, often emotionally charged, holistic, purposeful, transformative, and involving individual and

collective social learning. They do not report on the nature of learning in terms of gender and power perspectives.

2.2.2   *Critical feminist gerogogy*

Critical feminist educational gerontology informs older women's learning needs and interests. As indicated above, gerogogy is a shorthand term for educational gerontology. Glendenning (1993) defined gerogogy as "those practices and issues that are relevant to teaching and learning in relation to older people; memory, cognitive development, coping with transition in later life, teaching theory and method, learning theory, realisation of full developmental potential and a philosophy which underpins the whole conceptualisation, as being controlled by the person concerned" (p. 15).

Feminist gerontologists validate older women's experiences, seeking these women's empowerment and enhancement of self-esteem through respecting them for their intelligence, skills, talents, and abilities. They adopt a feminist approach that "includes honestly and openly giving opinions, options, and feedback as well as asking questions. It means collaborative as opposed to hierarchical interaction, and being challenging rather than confrontational" (Garner, 1999, p. 9). Feminist gerontology seeks empowerment of older women in "developing new roles, in identifying their abilities and strengths, and in utilizing their knowledge" (ibid.). This is a continuation of feminist praxis from the pivotal catch-cry "the personal is political," linking both personal and social change (Schuster, 2017). A second wave feminist philosopher in older age, Betty Friedan, recognised the need for "the empowerment of age, new roles for people over sixty, seventy, eighty, in work and business, public and private sectors, churches, synagogues, and in the volunteer cutting edge of the community" (1993, cited in Garner 1999, p. 12).

By applying a lens of ageist sexism, critical gerogogy challenges ageism and locates learning later in life as more than the functionalist, medical or deficit models of gerontology that cast older adults on a trajectory of disengagement, decline, decreased capacities, and ultimate frailty of both body and mind. Older people's education should attend to issues of knowledge, power, and control. This proposes 'a radical vision' for gerogogy "as a collective and negotiated enterprise, as well as assuming a liberating and transforming notion which endorses principles of collectivity and dialogue as central to learning and teaching" (Findsen

and Formosa, 2011, p. 105). Taking this further, Formosa (2005, cited in Findsen and Formosa, 2011, p. 95) insists that without a critical or feminist standpoint gerogogy is "another patriarchal discourse where women are sentenced or rendered passive" and thereby face "a double jeopardy of old age" meaning ageism and sexism. This is an emancipatory and transformative vision engaging people in "the process of questioning their existing knowledge" (Formosa, 2002, p. 76) that is linked with transformative and emancipatory adult learning, echoing the ideas of Gramsci, Freire, Mezirow, which are to be discussed next.

Critical feminist gerogogy 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 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.

2.2.3   *Transformative learning*

Merriam and Baumgartner (2020, p. 126) describe transformative learning as a "dramatic, fundamental change in the way we see ourselves and the world in which we live." Transformative learning developed from the tradition of radical adult education that emerged from the works of both Italian socialist/communist, Antonio Gramsci (1891-1937), and Brazilian educator, Paulo Freire (1921-1997). Both theorists were deeply rooted in critiqued relations of power and domination between learners, teachers, and the dominant culture and placed learners and educators as equals in dialectical relationships. Gramsci characterised the process as reciprocal, participative, and collaborative. Both Gramsci and Freire were deeply rooted in social movement activism and saw education in this context. This accords with critical feminist gerogogy in challenging the dominance or hegemony of ageist sexist social patterns and relates to the fluid nature of SML.

Both theorists developed philosophies of education that have underscored much research related to education for social action (Niesz et al 2018, p. 24). Gramsci defines hegemony as "a social condition in which all aspects of social reality are dominated by or supportive of dominant groups" (Mayo, 1994, p. 127; Walter, 2007). Gramsci's support for

educating Italian factory workers achieved industrial democracy in Italy in the early 20th century. It contextualised education within a cultural basis which was instrumental in countering hegemony.

Freire worked with Latin American social movements aimed at political literacy, enabling people to "detach themselves from their world of action to reflect on it and gradually begin to view it in a different, more critical light" (Mayo 1994, p. 139). Like Gramsci, Freire is also critical of top-down prescriptive education which he terms "banking education" (Freire cited in Mayo, 1994, p. 135) in which students are passive, uncritical recipients of knowledge prescribed by the dominant culture. Freire's term "conscientização" (translated from the Portuguese as "conscientisation") refers to "the process of developing a critical consciousness about one's position in the world" in relation to taking action on social, political and economic contradictions that culminates in a transformation (Hanson, 2010, p. 25).

An ongoing process, conscientisation begins with dialogue "where the learner becomes increasingly aware of the various oppressive forces in his or her life and eventually becomes part of the process of social change" (Merriam and Baumgartner, 2020, p. 134). In terms of thinking skills, this describes metacognition and more universal epistemic and axiological knowledges. Freire's approach to learning is sociocultural, seeking social emancipation (ibid., p. 128). Similarly to conscientisation, Mezirow identified the nature of individual transformative learning processes whereby critical reflection is stimulated by experiencing a '"disorienting dilemma" or "activating event," followed by "reflective discourse" and then action (Merriam and Baumgartner, 2020, pp. 130-131; Cranton, 2002, p. 66). "Questioning insight" from project and work-based action learning is another form of informal transformational group learning, promoted for its ability to stimulate innovation and workplace improvements. Participants act "on the learning gained from reflection on experiences. The focus is on making a difference in the outside world, although the inner world is inevitably involved in the process of reflection" (McGill and Beaty, 2001, p. 16).

Applying transformative learning to critical feminist gerogogy in empowering older women, Formosa (2005, cited in Findsen and Formosa, 2011, p. 95) proposes the following five principles: "(i) acknowledging older women as an oppressed population due to the

'double standard of ageing', (ii) recognising that the oppressive position of older women is also the result of lifelong cumulative disadvantages, (iii) rejecting that there is a universalised singular identity among women and emphasising a 'politics of difference', (iv) abandoning traditional strategies of learning and embracing a feminist praxis in older adult education and related research."

2.2.4   *Effects of ageing on later life learning*

Definitive answers to the effects of ageing on learning later in life are not apparent in the literature. Later life learning is defined as learning as an older person in any form, ranging from formal (structured and accredited), non-formal (structured but not accredited), and informal (unstructured, peer and social learning, or self-directed) (Engelbrecht and Skladzien, 2010). 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. In fact, in terms of the psychology of older learning, Findsen and Formosa (ibid, p. 63) conclude there is "sparse empirical evidence on the relation between age related brain changes and later life learning" and "it is difficult to isolate the distinct processes involved in late life learning since the latter relies on multiple cognitive skills which emerge from a complex interaction of multiple brain systems." Further, 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."

Findsen and Formosa (2011, pp. 65-74) summarise the literature on older brain functioning in relation to intelligence, attention, memory, communication, reasoning and problem-solving, all of which contribute to learning and integrating new information. Ageing results in the slowing down of psychomotor reaction times but does not necessarily indicate a decline in intelligence. Standardised IQ testing of older people is unreliable. Attention to and selection of information are little affected by age however, there are declines in memory, slower semantic retrieval experiences ("on the tip of tongue"), and cognitive processing deficits.

A cohesive body of study for changes in communication and language ability in older people does not exist. Problem-solving and the fluency of reasoning does decline with age to varying degrees. Transcendental goals and wisdom knowledge that enable living in the current world and preparing inner spiritual integration towards the ultimate process of dying become more important. 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).

The concepts of learning in the young-old and old-old stages and in the oldest old and potentially frail stages represent attempts to distinguish learner needs by their degree of activity, dependency and presumed frailty. In the field, it is acknowledged that access to meaningful learning contributes to wellness and quality later in life (Boulton-Lewis, 2011; Field, 2011; Boulton-Lewis and Buys, 2015). 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, pp. 115-130). 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 recognises that ageism is a barrier to participation of the old and 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).

2.2.5   *Defining motivation and sustained engagement in older women's activist learning*

A key to understanding the initial and then sustained commitment to learning in activism comes from the neuroscience of motivation. Merriam and Bierema (2013, p. 147) define motivation as "the drive and energy we put into accomplishing something we want to do. We cannot see or touch it, but it is ever present in our thought and action." The adult

and older adult brain accesses prior knowledge and experience through a mature pre-frontal cortex which is "the centre for emotional stability, moral reasoning, judgement, and executive functions such as concentration, planning, delayed gratification and prioritising" (Wlodkowski and Ginsberg, 2017, p. 84). The adult brain is neurologically capable of integrating experiences and thus being reflective and future oriented.

Adults are likely to be more driven by intrinsic rather than extrinsic motivation because they are more able to discern the personal or subjective value and worth of what is being learned. Extrinsic motivators include external rewards such as an increased salary, a gift, or an award that conveys public acclamation and status. Wlodkowski and Ginsberg identify five integrated levels required for sustained adult motivation and four motivational conditions for enhancing adult learning (ibid., pp. 87-100). These motivational levels are: (1) feelings of success; (2) intentional willingness to learn or volition; (3) finding relevance, value, worth and applicability to real world situations; (4) enjoying learning to the point of "flow"; and finally, the highest level, combining all levels (5) vital engagement and "felt meaning" resulting in a sustained love of learning for the particular subject in which they are invested. The motivational conditions are consistent with the informal nature of SML. They are summarised below:

(1) Inclusion fosters involvement achieved by respectful and connected co-learning;

(2) Learning that is needs-based increases positive learner behaviours;

(3) Alignment with learners' worldviews combined with engaging and challenging content sustains involvement; and

(4) Putting new skills and knowledge successfully into practice (competence) builds confidence.

Wlodkowski and Ginsberg consider that "people actively construct their own knowledge and learn through their interaction with and support from other people and objects in the world" (Bruning and Schraw, 2010 cited in Wlodkowski and Ginsberg, 2017, p. 82). In education, this is termed "constructivism" (Biggs and Tang, 2011, p. 22). Fox and Quinn (2012) found that older activists in Ireland were motivated to become activists for intrinsic reasons - wanting to change the world for the better by seeking social justice; a sense of

duty in wanting to make a difference and leave a legacy for others; advocating for others who may not be able to do so themselves; and a strong philanthropic sense of helping others.

2.2.6   *Environmental social movement learning – situated, experiential, transformative, emancipatory*

Australian women's activism has been well documented in relation to numerous social issues (Burgman, 2003): domestic violence, reproductive rights, pay equity, and equality of opportunity in education and careers. The scholarship that looks specifically at older Australian women's involvement and learning processes in environmental activism is novel and this has meant broadening the literature base to inform the research question.

In terms of furthering an understanding of the relationship between learning and effective activism, Scandrett et al. (2010, p. 125) argue that investigating the intersection between adult learning theory and social movement theory "can lead to a synthesis which accounts for both learning and social commitment." Figure 2.1 conceptualises this intersection.

Figure 2.1: Social Movement Learning Theory (Source: L J Larri, 2019)
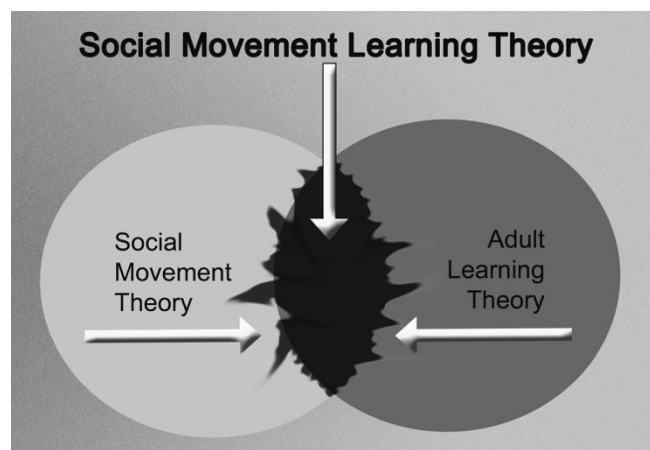
Historically, adult learning theory concentrated on understanding individual experiences of learning. However, social movements are collectives of individuals who share the same or similar ethical outlooks - they are concerned about environmental, social and/or cultural justice. Eyerman and Jamison (1991) describe social movements by their cognitive praxis, as learning communities of individuals engaged in the purposeful generation and distribution of knowledge. Social movements, because they are formed from groups of like-minded people,

create cognitive and physical spaces for social learning. 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 business-as-usual trajectories" (Kent, 2016, p. 150).

SML distinguishes two targets of learning: (a) learning by persons who are part of a social movement; and (b) 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). The research for this thesis is concerned with the learning of older women within a movement. 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).

Educational anthropologist, Tricia 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 their review of educational scholarship on social movements, Niesz et al. (2018) conclude:

> Indeed, movements themselves are educators, engaging participants in informal education (through participation in movement activity), non-formal education (through the educational initiatives of the movement), and even, sometimes, quasi-formal education (through special schools within movements). Moreover, movements are producers of knowledge that, when successful, educate not only their adherents but also broader publics (p. 2).

Social movements are sites of situated experiential learning because adult learning comes from experience. Lindeman (1926, p. 7) describes experience as "the adult learner's living textbook." Kolb considers learning is "a continuous process grounded in experience" where "knowledge is continuously derived and tested out in the experiences of the learner."

Dewey states that "all genuine education comes through experience" (both Kolb and Dewey cited in Merriam and Baumgartner, 2020, pp. 149-150).

Cognitive praxis based in experience results in knowledge production. Niesz (2019) encapsulates the products that emerge from SML knowledge production:

> Movements both require and promote learning and education (of varied types, informal, non-formal, and formal) at every stage in their lifecycle, from the articulation and framing of the movement's vision, to organizing, to engaging in collective action, to influencing policy, law, institutions, and social life (p. 227).

In adult learning theory, four methods are associated with experiential learning. These are: "reflective practice, situated cognition, communities of practice, and cognitive apprenticeships" (Merriam and Baumgartner, 2020, p. 150). Reflective practice is an enabler to praxis through two mechanisms. The first is "reflection-on-action" which involves the conscious analysis and re-evaluation of prior experiences, with a view to considering how to do things better or differently. The second mechanism is "reflection-in-action" which involves dynamic reshaping during the experience. Colloquially this is often described as "thinking on your feet" or "keeping your wits about you" (ibid., pp. 160-164). The result is the development of higher order or meta-cognitive thinking skills such as "productive problem-solving strategies, mindful decision-making tactics and creative, innovative thinking" (Hoskins and Crick, 2010, p.130) which contribute strategies for social activism.

Situated cognition and communities of practice (CoP) are forms of experiential learning that go hand in hand. Ollis (2011) integrates theories of situated learning and CoPs (drawing from Lave and Wenger) to argue the importance of such insights for building capabilities for effective activism towards the critical work of ecological sustainability. Ollis and Hamel-Green (2015) found learning in anti-CSG activism was informal, incidental, often emotionally charged, holistic, purposeful, transformative, and took the form of individual and collective social learning.

Learning processes are inseparable from the settings and contexts in which adults learn (Merriam and Baumgartner, 2020, pp. 165-170). Learning in context recognises that "thinking and learning make sense only within particular situations. All thinking, and cognition are situated within particular contexts: there is no such thing as non-situated

learning" (ibid., p. 167). Taking this further, Ollis and Hamel-Green (2015) consider the specific activist learning occurring in the contested site of CSG mining. They found that most CSG protesters were circumstantial activists rather than lifelong activists, having been drawn in by necessity in order to save their rural lands and communities. The novice activists learned formally from more experienced Friends of the Earth activists and informally in the social environment of campaigning. In particular, they learned knowledge of CSG, protest tactics, and community development skills. Ollis and Hamel-Greene conclude "the situated site of protest is a rich space for adult learning to occur" (ibid., p. 218).

When people join together in a specific context, building rapport, sharing experiences and learning from one another's insights over time, it is highly likely that a CoP will emerge. Curnow (2013, p. 837) distils the essence of the concept - "the group, not the individual, is the source of knowledge, and meaning derives from participation in the community. It is through participation in the collective activity that meaning is negotiated, identities are formed, and the community of practice coalesces." Lave and Wenger (1991; Farnsworth et al., 2016) developed the concept based on two premises: (1) that learning is a social process situated within a context that is cultural and historical; and (2) a CoP can occur in any area of human endeavour.

Wenger differentiated CoPs from teams (Farnsworth et al, 2016). CoPs are learning partnerships related to a domain of practice in which they have the legitimacy to define competence. Teams on the other hand are task driven partnerships with a goal to accomplish. This does not mean that teamwork does not involve learning but that the purpose is different. Identity in CoPs is formed on two levels: (1) how the individual negotiates their identity within the CoP through participation and the competence by which their membership is recognised; and (2) how the individual's identity in the CoP is reflected in other social contexts.

The process of building one's identity within the CoP is encapsulated in the concept of "legitimate peripheral participation." This is the process of knowledge and skill acquisition necessary for "full participation in the sociocultural practices of a community" (Lave and Wenger, 1991, p. 16). Whilst Lave and Wenger mention learning in CoP can be affected by power, they do not expound (Salminen-Karlsson, 2006). Hodges (1998) provides a critique

of CoP that exposes legitimate peripheral participation as loaded with hegemonic historicised powerlessness and marginalisation. She identifies two examples, these are: (1) patriarchal subjugation to a higher god in Alcoholics Anonymous; and (2) uninterrogated gendered relations of early childhood education reliant on developmental "normality" of children and induction of student-teachers into this predominantly women's workplace (ibid., p. 278). Curnow (2013) built on Hodges and others (Paechter, 2006; Salminen-Karlsson, 2006; Barron, 2007; Hughes, Jewson, and Unwin 2007) critique of CoP to further explore the unchallenged reproduction of dominant ideologies and impact of power and social difference (gender, class, and race) on learners.

When Curnow (2013, p. 837) researched the status of women activists in a student movement advocating for ethical purchasing, she found the women's transition from periphery to centrality was blocked by male colleagues' sexist attitudes. Despite gaining the requisite skills, the women were relegated to performing menial tasks and behind the scenes support, in other words the repetitive and reproductive work that enables other work possible. When the women compared their experiences with one another, they were able to identify patterns and interpret systemic problems of sexism. Through being marginalised, the women developed a sub-CoP and eventually challenged the male privilege that relied on exclusionary leadership styles. Curnow determines that her case study demonstrates "social movements are sites of situated learning where power dynamics related to socio-historical inequity are reproduced and contested and their critical consciousness led to political analysis and collective action" (ibid., p. 847). Without realising it, the women's process was transformative and involved feminist conscious-raising and conscientisation. Curnow (ibid.) describes the pivotal role of conscientisation in delegitimising the masculinist leadership and shifting the praxis of the movement to inclusivity:

> Women's conscientisation process led them to reject and challenge the legitimacy of the male-led community of practice and, once delegitimised, the larger community of practice had to establish a new centre and newly ascribe meaning and value to their practices. In this way, we can see conscientisation as a process that has the potential to shift the centre of a community of practice through the praxis of peripheral participants in order to produce new cultural forms, learning, and resistance (p. 848).

Thus, CoPs are applicable to social movement learning. In both, learning is recognised as a situated, unstructured, informal and social process where knowledge is collaboratively co-created and shared amongst members of the community or movement. In the process a collective culture, patterns of interaction and identity emerge (Curnow, 2013; Ollis and Hamel-Greene, 2015; Scandrett et al, 2010; Kluttz and Walter, 2018). CoPs were originally conceptualised by Lave and Wenger (1991) as work-based participatory learning through apprenticeship-style enculturation where people move from novice to full practitioner, the opposite of formal teaching and learning.

One significant difference is that CoP theory assumes an existing work culture into which novices become progressively integrated from a periphery to the centre. Social movements on the other hand are emergent forms of grassroots collective action for social change. Social movements are characterised by "shared collective identity" linked through "dense informal networks" engaged in "conflictual relations with clearly identified opponents" over significant time periods, thus becoming a collective force (della Porta and Diani, 2006, pp. 20-25).

The process of social movement germination is itself a community of practice in identity generation rather than a place of integration and adaptation. Eventually, as a movement grows, it is likely to take on the need for enculturation processes or identity reproduction (Lave and Wenger, 1991; della Porta and Diani, 2006, pp. 105-113). The 1970's women's liberation movement consciousness raising groups are considered as a form of CoP in which women shared personal experiences that lead to a transformative collective understanding of patriarchal power structures in society (Curnow, 2013, p. 839).

Social movements concerned with environmental causes are a mix of organisational approaches and practices from both new social movements and old social movements (Newlands, 2018, p. 9) New social movement are taken to mean "non-class-based or cross-class-based political projects oriented towards identity formation or autonomy" (Holst , 2018, p. 77) and are non-hierarchical, leaderless, consensus driven, coordinated through collectives and networks, use non-violent direct action (NVDA) and sometimes more radical forms of civil disobedience. Old social movements are concerned with the socialist union or worker-based political projects that have traditionally been associated with hierarchical and

formal organisational structures (Newlands, 2018). The Australian anti-fossil fuel movement fits Newlands' description of ENSM being comprised of "two strands – hierarchical and non-hierarchical organisational structures, or professional and radical" (ibid., p. 10).

According to social movement theory, ethical and frame alignment are basic preconditions for success in mobilising people into social movements. The aim is to have a congruence of values between individuals and the social movement (della Porta and Diani 2006, pp. 82-84). Snow et al. (2014, p. 36) in their review of 25 years since initially proposing the concept, emphasise the "well-documented role that framing plays in mobilisation." Framing is "an ongoing ever-changing and dynamic process" (ibid., p.38) connecting individuals' cultural values, and their beliefs and interests, with the objectives of the movement. Social movements engage and mobilise participants by '"frame bridging" or "frame extension" (della Porta and Diani, 2006, p. 82). For example, in the Gippsland gasfields, people were mobilised by the shared values of protecting agricultural and environmental values (Ollis, 2011).

Environmental SML has been described by Hall et al. (2006 p.18) as "transformative environmental adult education" combining three elements: (1) ecological and environmental literacy (the recovery of a sense of place, recognition of the importance of biodiversity, reconnection with nature); (2) activist skills (acting and resisting, building alliances and relationships, learning skills, recognising historical struggles and resistance); and (3) learning dispositions (valuing messiness in learning, understanding relations of power, transformative or emancipatory learning). By using the term "education" within the context of social movements, Hall et al. (ibid.) indicate situated experiential social learning as the primary mode of enlightenment or gaining understanding. As previously mentioned, this is informal learning. By being general in their definition, Hall et al. (ibid.) allow for the possibility of social movements drawing on the other opportunities for education within formal and non-formal contexts.

Following on from the principles of transformative environmental adult education, Clover et al. (2012, pp. 10, 11) blend feminist and critical adult education with ecological and environmental knowledge. They developed the definition of transformative environmental adult education used in this thesis to inform learning in environmental movements in that

"environmental adult education focuses specifically on learning and teaching for a more just, equitable, equal, healthy and sustainable world." Clover et al. (ibid.) ground their approach in environmental citizenship arguing that a political orientation is necessary. Integral to this definition is the objective of transformative environmental adult education as learning to actively champion for the environment and change society. This requires critical transformative insights that lead to recognising and challenging hegemonies that prevent ecological systems thinking (discussed in the next section on environmental activism). Clover (1995) recognised the social construction of gender affecting women's environmental activism and stressed women needed to articulate their own vision of liberation in environmental education, whether formal or informal. Clover et al (2012) frame citizenship as

> …rights, responsibilities and duties people have towards one another, but also towards the rest of nature and the planet itself. Environmental citizenship, drawing from feminist and critical adult education, is people as actors who can influence not only the context of environmental decision-making but policy-making vis-à –vis natural resources (p. 27).

More recently, in Australia, environmental citizenship has been framed as transformative learning for sustainability (TLfS) which reflects a similarly deeper emancipatory shift, encompassing "values, mind-sets, worldviews and identity to trigger shifts in behaviours and practice" (Reidy et al., 2018, p. 26). Embedded in transformative learning and as its recent environmental descendent, TLfS is a combination of both individual and societal transformational learning.

Anti-fossil fuel movements therefore can be seen as a form of learning for and in social action. Walter (2007, p. 252) argues that "as a field of practice and research, transformative environmental adult education, in essence exists only within the environmental movement and other new social movements – the feminist, civil rights, indigenous rights, anti-globalisation, and other movements of marginalised and oppressed groups".

2.2.7   *Frameworks in social movement learning theory*

Gaining emancipatory knowledge can be a goal in all facets of adult education, as we critically question, for example, the role of technology, which is instrumental knowledge, or

the underlying assumptions of a political system, which is in itself communicative knowledge. It is an explicit goal in life skills learning, literacy programs, self-help groups, Women's Studies courses, and community action groups.

Cranton (2002, pp. 80-81) identifies transformative learning theory is based on Habermas's three kinds of knowledge. These are:

(1) instrumental knowledge which is cause-and-effect, objective knowledge derived from scientific methodologies and generally the goal of education in trades, technologies, and sciences;

(2) communicative knowledge which relates to understanding ourselves, others, and social norms, and is validated by consensus; and

(3) emancipatory knowledge which is transformative and is a product of self-awareness through critical reflection, which frees us from constraints.

Branagan and Boughton (2003, pp. 348-354) reference Newman by adapting these three levels of learning to differentiate types of SML. These are:

(1) instrumental learning, the most basic level, where activists upskill to be able to mount campaigns;

(2) communicative or interpretive learning that focuses on people, symbolic interaction and social construction of meaning including processes like interpreting legal rights within planned actions, or group problem-solving in creation of slogans and graphic communications; and

(3) critical or emancipatory learning – critical questioning of assumptions underlying systems and worldviews, conscientisation or perspective transformation.

They signal that active social movements are key features of a learning society critical to the major challenge of the 21st century; that is, "helping society overcome a fallacious and un-interrogated acceptance of the benefits of economic growth" (ibid., p. 358)

Scandrett et al. (2010, p. 138) drew on Freire's concept of the thematic universe where the process of conscientisation progresses from within the learner's context (or minimum thematic universe) outwards in concentric circles to a broader understanding of the "general

historical situation of the epoch." Scandrett et al. theorised three levels of education and learning in social movements that bear similarities to Branagan and Boughton's interpretation of Newman's taxonomy which they called the micro, meso and macro levels. A key difference is the introduction of knowledge production through SML processes, whereby conceptual frames give relevance to learning. In their research, this is the "environmental justice frame" (ibid., p. 137). The micro level is individual-interactive thinking where individual, mainly self-directed learning is fed by a mix of lay and specialist knowledge. Individuals also share and question knowledge with others. The meso level relies on reframing knowledge gained at the micro level with realisations leading to transformative paradigm shifts. It is described as "making sense of unexplained experiences" and "stimulated by discursive encounters" (ibid., p. 137). This is much the same as the process of resolving disorienting dilemmas in Mezirow's transformative learning. The final macro level is where activists' practice of resistance has accumulated learning from micro and meso levels and encounters systemic, cultural-ideological, or societal realisations. This is the level at which people begin to identify hegemonic alliances that undermine the material interests of the masses or oppressed groups. Scandrett et al. (2010) summarise SML within the environmental justice frame as challenging the oppressive corporate culture of resource exploitation to achieve justice for those negatively affected:

> Social movement learning is directional in the sense that campaigns have objectives to obtain concessions from an exploitative system, and the logic of the collective claim of the movement is a challenge to a system which denies the interests of the oppressed. Whilst the corporate culture, dominated by assumptions of neo-liberalism, sets limits in what can be known and how it can be known, the praxis of environmental justice movements serves to challenge these assumptions with the interests of those who suffer from its effects (p. 138).

Kluttz and Walter (2018) expand Scandrett et al.'s work to conceptualise learning in the climate justice movement with additional overlays at the meso and macro levels, drawing on the operation of "intersectional and interlocking oppressions (capitalism, colonialism, imperialism, fascism, patriarchy, heteronormativity, White Supremacy)" and Indigenous decolonising theoretical lenses to shift to "ecocentric epistemologies" where "all our relations (human and nonhuman) have affective, material, spiritual, and transformative

power for adult learning" (ibid., p. 97). Kluttz and Walter add two vectors to differentiate learning in each of the levels (from unorganised to organised) and across the levels (from individual to collective).

Through this expanded framework, Kluttz and Walter follow themes of power and place across the three levels and show how they interact for individual and collective levels. Kluttz and Walter (2018, pp. 96-97) are concerned with the ways in which social movements engender "learning, knowledge generation and social action" in order to overcome what they see as "overlapping forms of oppression, both historically and in contemporary society." They also draw on Freirian conscientisation and feminist understandings of educative activism and transformative learning. They emphasise the complex and dynamic nature of SML as involving shifts from individual to collective and sociocultural, historical and location contexts (ibid., p.96):

> … we understand social movements in part as identity movements through which both individuals and the collective engage in cognitive praxis to learn new identities, create new knowledge and take action for social change. We understand SML processes to be complex, dynamic, and "messy" processes which constantly shift from the individual to the collective and back again, and are dependent on specific social, cultural, and historical contexts: movements may wax and wane, shift focus and geographical space; individuals may have greater or lesser commitment to movements over time, causes, and place, as their adult lives, identities, and concerns shift.

Klutzz and Walter's framework is insightful for stressing the non-linear interactions of learning across all dimensions. Collective and macro level learnings can affect learning at micro and meso levels. They recognise the range of learning from informal to formal. To date, this framework is the most developed conceptualisation of SML and is located within environmental and climate justice activism, which makes its applicability attractive as an analytical tool to the case of the KNAG.

2.3   What is known about older women's environmental activism in social movements?

2.3.1   *Environmental activism and ecofeminism*

Environmental activism is "a form of engagement in social and/ or political campaigns with the aim of preventing damage to the environment" (Kraja , 2018, para. 1). Ecofeminism embraces a holistic non-hierarchical interdependency of all life and Earth systems that informs environmental activism. In order to understand the interconnectedness of all things, ecofeminist philosophers propose breaking away from binary, dualistic, hierarchical, androcentric ways of thinking (Plumwood, 1993). Simone de Beauvoir identifies both women and nature as "other" in patriarchal systems, Irigaray defines "phallic logic" as subjecting woman to man's domination, and d'Eaubonne coins the term, "l'eco-feminisme" to highlight the unsustainability of overpopulation and depletion of resources (Glazebrook, 2002 p. 12). Glazebrook (2005) proposes gynocentric "eco-logics" which value multiplicity, reciprocity, care and partiality, nourishment and guidance, gender inclusivity, and an openness to and respect for difference that displaces the logic of domination. Glazebrook argues that the inclusivity of eco-logics encompasses phallic or binary logic, but cannot privilege it above other logics "it must share the space with other ways of thinking" (ibid., p. 89).

Gaard (2011 pp. 27, 28) considers that social justice "grassroots" activism in the 1970's across many continents fuelled the emergence of women's environmental activism in anti-nuclear and peace movements, which was linked with challenging environmental destruction, militarism, corporatism and unsustainable energy production. Women of all ages have contributed to many eco-movements. Specific women's actions include: the Uttar Pradesh Indian Chipko movement championed by Vandana Shiva of tree hugging women reacting to exploitation of forest resources (1970's and 80's); the reafforestation Green Belt Movement in Kenya led by Wangari Mathai (created in 1977); Greenham Common Woman's Peace Camp protesting the deployment of US nuclear missiles in Europe (1981-2000); the anti-war nuclear disarmament Australian Pine Gap (1983) and Cockburn Sound (1984) Women's Peace Camps organised by Women for Survival Women's Action Against Global Violence based in Sydney, and Women's Action for Nuclear Disarmament in Perth (Murray, 2010; Brú Bistuer and Agüera Cabo, 2004); Canada's Raging Grannies anti-nuclear war older women's movement begun in 1987 (Roy, 2003); and Canada's anti-logging Clayoquot Sound Ecofeminist Peace Camp in 1993 (Walter, 2007, p. 254).

2.3.2   *Ageist sexism and strategic essentialism*

Examples of older women's eco-activist groups or social movements are rare. In the area of eco-pax protest movements, combining environmental protection with peace, Carole Roy is notable for her scholarship on the Raging Grannies who began in 1987 in Victoria, British Columbia, and quickly spread across Canada and the USA, with a current membership of around 100 groups or 'gaggles'. Initially the women, aged between 52 and 67, were mobilised by the threat of visiting nuclear powered and armed US navy warships and submarines and the information that emergency plans existed for the military but not for civilians. The Raging Grannies formed as a reaction to sexism and ageism in the peace group they were initially involved with. The Grannies found themselves relegated to the reproductive work of "becoming fetchers and gatherers" being asked to bring coffee and not being heard or acknowledged for their ideas compared to the younger women (Roy , 2003, p. 13).

Fairhurst et al. (2004) finds women have had a long history of engagement in social movements but research and analysis only became an issue in the 1960's when feminist scholarship began to be concerned with power and women's visibility. The many studies of women in social movements since the mid-1980's have been criticised for "reinforcing traditional gender roles in social movements, tending to focus on the domain of reproduction as women's realm" (ibid., p. 205). It is no surprise that women-centred social movements developed from connections between women and "women's involvement in social movements has revealed the fluidity of their positionalities and identities" (ibid., p. 206). Echoing feminist gerogogy, amongst the many reasons why women join activist organisations is the opportunity to learn and personally grow as part of the politics of becoming and the struggle for identity (ibid.). Fairhurst et al. conclude that women's role as "active agents of socio-political changes" has "remained largely unnoticed or taken for granted" (ibid., p. 208) and women's invisibility will continue unless gender is included in social movement research.

Turning specifically to older women, the situation is similar - many have been part of activist and eco-activist movements but there is limited scholarship about them. Even more limited is evidence on the public record of older women-centred social movements. Most of the knowledge about these groups is found on their websites. McHugh (2012) is unusual in writing about three of these organisations in her analysis of older women's social change

activism, recognising that "women engaged in any of these organisations are not only socially active, but are challenging cultural constructions of older women. They are visible, active participants in society" (p. 288). Examples of older women advocating for women's issues with feminist intent include:

- Las Madres (the Mothers) of the Plaza De Mayo (Buenos Aires, Argentina);

- the Older Women's Network (Australia http://www.ownaustralia.org.au/, Canada http://olderwomensnetwork.org/, Europe http://www.eurit.it/Eurplace/orga/own/bollet/index.html);

- the Old Women's Project (San Diego, USA http://www.oldwomensproject.org/index.htm); Old Lesbians Organising for Change (USA https://oloc.org/);

- Older Wiser Lesbians (aka OWLs, international including Australia);

- Older Dykes (Australia http://olderdykes.org/);

- Older Women's League (USA https://en.wikipedia.org/wiki/Older_Women%27s_League); Grandmothers Advocacy Group (Canada); and

- Red Hat Society (international in 14 countries https://www.redhatsociety.com/).

Sexism in social movements is a recurring and under-researched theme (Jenkins, 2015; Tosh and Gislason, 2016). Roy (2003) describes two examples where women in mainstream peace movements left due to sexism to form Women Strike for Peace (from 1961 onwards in the US) and the Greenham Common Women's Peace Camp (from 1987 to 2000 in the UK). Investigating women's environmentalism in extractive mining in the Peruvian and Ecuadorean Andes, Jenkins (2015, p. 447) documents how women had protested alongside men but formed women-specific groups as a way of combating sexism and marginalisation within the broader anti-mining movement. When Velasquez (2017, p. 256) researched the emergence of Ecuador's Andean rural women's anti-mining movement she found that "sexism within the existing movement sparked a gendered critique, ultimately leading to the establishment of the anti-mining women's group Frente de Mujeres Defensoras de la Pachamama (Women's Front for the Defence of Mother Earth)". Agrarian women from anti-mining struggles across the country came together through this movement and became

publicly visible and vulnerable to violence from the pro-mining state. The women shared their experiences about the negative impacts of mining on food production and their concerns for future generations through the loss of livelihoods, ecological and environmental values. Despite compensation from the mining companies, many had lost their sources of income and sustenance through increasingly unproductive lands.

A common thread of women's environmental activism is strategic essentialism. Essentialism is the practice of assuming the nature of things is fixed rather than culturally defined. Women are often essentialised as being close to nature, earth mothers, nurturers, and therefore more likely to be concerned with environmental issues and planetary well-being (Murray, 2010; Bartlett, 2015). This is "descriptively false in that it denies the real diversity of women's lives and social situations" (Stone, 2004, p. 142). Sexism and ageism are examples of the negative effects of essentialising (McHugh, 2007).

The strategic use of essentialism 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" (ibid., p. 35). While numerous feminist scholars look at the intersection of motherhood and activisms, fewer have extended this to include an analysis of grandmotherhood and activisms (Chazan and Kittmer 2016; Chazan and Baldwin 2017). Sawchuk (2009) critiques the ageist and sexist narratives of grandmotherhood, finding the Raging Grannies' "strategic deployment" (ibid., p. 173) of the grandmother identity is disarming and efficacious. Police were reluctant to move them on or arrest them and they claimed it was easier to get their message across using humour and parodying the image of essentialised older women (ibid., p. 180-181). Chazan and Baldwin (2019) described how the Seattle Grannies had worked in solidarity with younger activists by diverting media and police attention. In one action, this involved chaining themselves to rocking chairs locked across train tracks while younger activists locked on to oil drums. The Grannie's "rocker lockdown" was considered a "visual victory," according to one media account (ibid., p. 251). The Grannies have used strategic essentialism and humorous performative activism as their identity brand to engage and educate audiences in understanding a myriad of issues, including the toxic impacts of coal seam gas. Ecuadorean anti-mining women drew on their Pachamama (Mother Earth Inca goddess)

mythology to "present a more cohesive identity and narrative around their activism" (Jenkins, 2015, p. 453).

2.3.3   *Craftivism - a form of non-violent direct action 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 is credited with coining 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).

Some years later Greer adding that a project can be considered to be craftivism if it conforms to one or more of the following three principles: (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, 0:38 seconds).

Women who engage in public craftivism do so within the sphere of performative activism and NVDA; often this is humorous but may also be confronting or disturbing. "Performative activism" and "visibility politics" were first coined by Barbara Green (in 1997) in describing British suffragette militancy (Mayhall, 2000). Performative activism is creative "activist engagements that deploy performance" and "activist performance" is "performance that serves as activism or social justice pedagogy in shifting consciousness". Both are "forms of political, ideological and affective mobilisation and activism that include performance and art in practices of activism, advocacy, pedagogy and consciousness-raising" (Shefer, 2019, p. 422) and, when recorded, become online content, potentially increasing audience engagement in the movement's causes. This requires various skills: de-escalation when

confronted by angry reactions; spokesperson, police and media liaison; rights in knowing legal boundaries; and, potentially, knowledge of arrestee rights and support (Extinction Rebellion, n.d).

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, Ch. 2). NVDA by protesters is also arguably a lot safer than violent protest since violence is likely to be met confrontationally with violence by law enforcement, polarising the action, escalating tensions, and alienating sympathisers (della Porta and Diani, 2006, p. 174). A strength of NVDA is its ability to achieve loyalty shifts in opposing sides of elites and workers, such as mine workers, security guards, bureaucrats, or business managers (Stephan and Chenoweth, 2008).

Adherents to craftivism claim that the objective is sustainable change based on many small actions and ideas coalescing to create transformation. Tal Fitzpatrick and Katve-Kaisa Konturri assert that "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" (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 and SML. 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 "non-violent presenteeism".

Garber (2013) stresses craft is about the accessibility of "making" without formal training, often this relates to the domestic arts. She states:

> Many crafted items are often part of gift exchange, and often functional, connecting them to daily life. Many of them result in gestures of caring: covers from the cold, for example. Craft and making are often learned informally—from a friend or relative, from books or online sources or experimentation, from a community education site such as a craft store or a community centre or a group of like-minded learners (such

as a knitting circle). Craft making often forms the basis of a community, be it a quilting bee, a knitting circle, a group of yarn bombers, or an internet blog. These are a few reasons why the connection between crafts and activism is currently strong (p. 54).

Emery takes this connection further and positions crafting and being crafty as "a methodology for touching the world with feminist hands" (2018, p. 1). This acknowledges that crafting and, by extension, craftivism, is a primarily woman-centred activity and has the potential to be a feminist enterprise. This makes sense when we consider, with Emery (2018, p. 2), the origins of the word "craft" meaning "strength and power" (from Old German), to which she adds "drive and energy" (from Swedish). Thus crafting and craftivism combines the values of feminist energy, strength, power, drive and energy:

> 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).

Feminist art historian, Anne Marsh (2017, p. 19) connects craftivism within the tradition of process-oriented practices of women-only participatory and relational art-making as "doing feminism" that emerged in Australia in the 1970's. She identifies craftivism "builds on a history of feminist practices amongst women" such as women's peace camps. Similarly, Millner and Moore (2021) trace craft and activism back to the socialist and feminist mass movements, including embroidered trade union banners and suffragette banners, brooches, sashes and handkerchiefs as examples. They define feminist crafting as "an active practice of personal-political care" (p. 149) and claim craftivism is a "powerful form of experiential agency" (p. 138) because it acts within our material lived experience. Marsh, Millner and Moore identify KNAG as feminist craftivists in the same category as Pussy Riot, and the #MeToo Pussy Hats for using craftwork for political activism.

In the hands of women activists, knitting, sewing and other crafting, become an opportunity for claiming space and expressing resistance by invoking the essentialised femininity that draws attention by creating cognitive dissonance. Knitting in public is arguably a revolutionary act that dates back to Les Tricoteuses (Stops, 2014, p. 8), the

women who knitted while sitting at the base of the guillotines in the Place de la Révolution, protesting their enforced exclusion from political participation during the French Revolution (1789-99). The knitted red liberty caps they made came to symbolise the French Revolution and the new order. Australian Greens politician, Christine Milne has described KNAG who knit yellow and black berets as contemporary peaceful revolutionaries "defiantly but legally and peacefully knit in their own Place of the Revolution, outside offices of corporations and members of parliament and Parliament House itself" in order to protect the environment and their communities from CSG (Milne, 2017, Ch. 9).

Ecofeminist craftivist forms of reclaiming and reframing spaces from the 20th century inform this thesis (Clarke, 2016). Included are the US 1980 Women's Pentagon Actions, and the Greenham Common and Pine Gap Women's Peace Camps. The US 1980 Women's Pentagon Actions that protested violence to the Earth through militarism, nuclear testing, environmental degradation and violence to women (Feigenbaum, 2015; McAllister, 2014; *Women and life on earth*, n.d.) included an affinity group called the "Spinsters" who created multi-coloured yarn webs across Pentagon steps, preventing access to entrances. The action complemented the protests by creating a metaphorical reweaving of "the web of life that is torn asunder by bombs and missiles" (Hamilton, 2016, 7 mins 27 seconds). After some time, a security guard eventually cut through the webs with a knife in order to clear one of the entrances, leaving the broken web as collateral damage.

Women responded energetically and creatively to calls for collaborative public art, craft and performative visual statements in support of the Greenham and Pine Gap protests. In both protests, women illegally entered and held tea parties inside the facility grounds (Bartlett, 2013 p. 10). Thousands of women responded to the Greenham "Embrace the Base" demonstration (12 December 1982) inviting women to bring objects from home as emblems of real life in contrast to the unreal world represented by the military base (Close, 2018 p. 870). Objects fixed to the mesh fence included family photos, wedding dresses, baby clothes nappies, a china tea service, letters of support from the Democratic Organisation of Iranian Women, covers of feminist publications *Spare Rib* and *Outwrite*, statements from the *UN Declaration of Human Rights*, a *Code of Nursing Ethics* and hundreds of tampons dipped in red, peace dove paper cut-outs, wool spider-webs threaded through the wire, balloons, and peace signs (Feigenbaum , 2008 p. 187; photo Fiona Hall collection of Anne Sheridan).

Feigenbaum notes that the objects were seen as a sharp contrast to the bleak, metal surface of the fence.

At Pine Gap, the first day of protest, Australia's Remembrance Day (November 11), began with a women's march to the security gates of the Joint Defence Space Research Facility (an Australian–US military base 20 km south of Alice Springs). Around 800 women were led by First Nations activist Mum Shirl (Clarke, 2016). Held high were two 12 metre horizontal banners and life-size banners of women not able to get to the Peace Camp, a distributed communal collaborative art-making process called *Double our Numbers* initiated by Frances (Budden) Phoenix. "After the March, the banners were placed along the mesh fence of the military base in their brilliant life-size painted colours, embroidered and stitched, attached with ephemera, displaying the diversity of the coalition of women," reclaiming and feminising the space (Bartlett, 2016 p. 308), thus remaking:

> … an exclusionary border into something much more homely … Such decorative work draws on a heritage of women's traditional domestic arts practices and also politicizes them, bringing them into the domain of protest in order to highlight the gendered dimensions of thinking through war and peace as well as material practices (Bartlett 2013 in Clarke 2016 pp. 299-301).

Yarn bombing is a form of craftivist graffiti that involves intervention in the landscape, whether urban or not, and takes these practices into the 21st century. Often anonymous, these unexpected aesthetically haptic[2] gifts create a cognitive dissonance "reweaving our assumptions and expectations" of domestic and public spaces (Price, 2015, p. 84). Mann (2015) argues that yarn bombing harnesses the "politics of whimsy" to feminise as well as creating "micro-political gestures" that disrupt our habitual perception of the world.

Shoshana Magnet and colleagues (2014) draw on the "politics of kindness" to develop an educative approach that encourages curiosity and enables a safe learning environment ,with a greater possibility for dialogue. In the classroom, as in society, micro-politics can mobilise political and social change by working through "small acts of political engagement … on the level of bodily affect or cultural sensibility" (ibid., p.8). This harks back to the

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[2] The word "haptic" is used to mean non-verbal communication through touch.

popular mid-1980's feminist bumper sticker I remember - "Practice random acts of kindness and senseless beauty." This was originally coined by California-based writer, Anne Herbert ,and first referenced in the "Whole Earth Review" (July 1985) with the statement "anything you think there should be more of, do it randomly. Don't await a reason. It will make itself be more, senselessly" (O'Toole, 2017).

2.4   What are older women's online capabilities in 21st century networked activism

Determining older women's internet and social media use is a challenge due to a lack of comparable data, with data for older people not being disaggregated by gender. Proportionally, there are more Australian women over 65 (16.7%) than men (15.0%). Government and academia recognise the benefits of digital engagement for older people but little is known about the nature of its utilisation. In general, this age cohort has much fewer digital users and they limit themselves to only a few platforms when compared to younger age groups. They are most comfortable with email (a Web 1.0 technology) and have begun to use social media (Web 2.0 technologies) like Facebook and SMS on their smartphones (Haukka and Hegarty, 2011; Australian Bureau of Statistics , 2018; Yellow Social Media Report, 2020).

There is a significant gap in scholarship related to senior citizens use of social media for activism. Trentham et al.'s (2015) findings remain the most relevant so far. They state:

> Though much has been written about the use of social media by senior citizens to maintain social connections with family and friends (e.g., Facebook, Skype, and email) … little is known about seniors citizens' use of social media in advocacy work (p. 558).

Trentham et al. found seniors were cast within an ageist deficit model as invisible rather than active citizens, agentic and with voice. They were "passive targets for health intervention services and not as contributors to society, and certainly not as political activists". The challenge is to change the "dominant discourse that disempowers senior citizens, which they consider involves naming, resisting, and reframing ageist depictions and storylines of older persons so they do not become digitally disengaged" (ibid, p. 565).

Studies of grandmothers found many were experienced computer users transferring their skills from workplaces of the 1990's. Their uptake of new digital media was often

intergenerational due to family pressure to keep in touch with their children and grandchildren by using smartphones, for example sending pictures when minding grandchildren. Having acquired these new skills these older women valued digital services more for intra-generational opportunities to connect with friends and for leisure and entertainment (Carlo and Rebelo, 2018; Yachim and Nimrod, 2020).

Ability in digital activism requires skills in online networking; creating, accessing and disseminating knowledge online; internet research skills; and capability in using Web 1.0 (for example email) and Web 2.0 (or social media) tools. Connectivism is a learning theory developed by Siemens (2008) and Downes (2012) which deals with learning processes in a 21st century digitised world. Expanding the understanding of learning into digital social movement activism involves the ability to construct and traverse networks, as activists engage in self-directed and autonomous information seeking and share information with each other (Guerin, 2016).

Digital platforms have been taken up by feminist organisations and activists and these are considered by researchers in terms of "networked feminism" and "digital sisterhood" as the "default mode of campaigning and communication for activists" (Fotopoulou, 2016); 'fourth wave feminism' (Aitken, 2017); "redoing feminism for a neoliberal age" and such platforms host tensions between collective and individualist expression (Baer, 2016; Jouët, 2018); "hashtag feminism" and "feminist memes" (Baer, 2016); facilitating SML though "community informatics" (Irving and English, 2011); and "cyberfeminism" as an expression of challenging the "machismo culture" of cyberspace (Spender, 1995). Fotopoulou (2016, p. 8) identifies that older feminists in activist organisations struggled to incorporate both email and social media technologies in their activism and felt this created a gap with younger feminists. However, there is no research into older women's uptake of digital platforms in older women's movements.

Jouët (2018, pp. 142-146) finds members of contemporary French feminist social movements in their twenties and thirties rely on digital communication tools to coordinate activities and use the web as an alternative medium with which to promote their cause. Age differences were not identified. These women combined online and offline media and

actions, often creating events and curating them online. They drew on feminist traditions of performative activism, using humour and satire.

2.5   What are the educative challenges facing older women's environmental activism?

2.5.1   Agnotology and carbon politics

This is an era when "fake news," defined as the "deliberate presentation of (typically) false or misleading claims *as news*, where the claims are misleading *by design,*" (Gelfert, 2018, p. 108, italics in the original) is widely debated. The task of exposing manufactured misconceptions and disseminating credible evidence-based knowledge has become an educative challenge taken up by grassroots climate activists. It has been well documented and scientifically accepted that there are numerous effects of anthropogenic climate change (IPCC , 2014; Australian Academy of Science , 2015; Australian Academy of Science , 2021). Nevertheless, Australia has not succeeded in beginning to address a transition to a low-carbon economy. Over the last four decades, numerous writers have researched and traced Australia's unresolved climate and energy policy directions (Taylor, 2015; Krien, 2017; Bacon and Jegan, 2020; Wilkinson, 2020). Common themes emphasise complicated vested interests, which, when uncovered explain an overt undermining of climate science, with the aim of fostering denialism and confusion.

As explained above, agnotology is the cultural production of ignorance. Revealing what is missing from much of the morass and spin of climate denialism exposes a "strategic ploy, active construct" or "disinformation" which is deliberately false, harmful, or creates doubt (Proctor, 2008, p. 15; Wardle and Derakhshan, 2017, p. 20). Huntley (2020, pp. 134-135) is critical of people who "earn a living from climate denial" as part of an organised "climate denier movement". In relation to Australia, authors write about climate and energy battles or wars. There has been a lack of ability to achieve political bipartisanship, media meddling is rife, and opportunities have been missed when the possibility of resolution was within reach (Taylor, 2015; Krien, 2017; Bacon and Jergen, 2020; Wilkinson, 2020).

Wilkinson (2020, p. 10) describes the vested interests as a "loud chorus … carbon club of politicians, business leaders and their climate-sceptic allies … dug in for the long haul" and the task of decarbonising as "wickedly difficult". Wilkinson quotes Frank Jotzo, an expert economist, on the Morrison Government: "they've made that quite clear, that their prime

objective is to protect Australian fossil fuel production and export industry interests" (ibid., p. 199). The result has been "decades of bitter division" (ibid., p. 70). This is now a high stakes "battle still in full swing":

> The economic shock caused by the COVID-19 pandemic has made the task of addressing climate change that much harder, especially in Australia. The profits and the jobs from the carbon-heavy industries remain the backbone of many communities. Seriously cutting Australia's greenhouse gas emissions— climate mitigation— is again bitterly contested. Yet the risks to Australia from rising global emissions are impossible to ignore. Global temperatures are on track to hit well over 3 degrees Celsius of warming by the end of the century, with devastating consequences. By the start of this decade world leaders were supposed to get serious about trying to limit the rise to a 1.5 degree Celsius threshold (Wilkinson, 2020, p. 70).

Bacon and Jergen (2020) relate the way Australia's most powerful media company, News Corp, has produced climate scepticism in its coverage by:

> … producing ignorance [rather] than informing people so they can participate in debates about solutions. If people are confused or ignorant about potential threats, they cannot be expected to support action to confront these. Our research clearly demonstrates active opposition by News Corp Australia to the development and implementation of effective public policy to address the massive threats of anthropogenic climate change (p. 6).

Krien (2017, p. 1) characterises her analysis as "climate deadlock" and a "long goodbye" to fossil fuels She systematically exposes "pea and thimble" tricks such as mining being promoted as a major sector of Australia's economy, although it constitutes only 7% of Australia's gross domestic product and employs 2% of our workforce, with added government support to the fossil fuel industries through massive subsidies (p. 23).

Taylor (2015) traces Australia's shift in climate change policy through media analysis from 1987 to 2001. She attributes much of this change in narrative and public opinion to differences in political leadership, underscored by the influence of vested interests.

Oreskes and Conway (2011) write about similar dynamics in the US designed to influence public opinion and policy-making. Deliberate obfuscation by politically conservative scientists was instrumental in creating doubt and controversy about evidence linking cancer with smoking; pollution with acid rain; chlorofluorocarbons with ozone holes in the Earth's atmosphere; and fossil fuels and global warming. The scientists, Fred Singer, Fred Seitz, Robert Jastrow, and William Nierenberg, had all been in positions of authority in US science administration and had established powerful networks with media "admirals and generals, congressmen and senators, even presidents … They used their scientific credentials to present themselves as authorities, and they used their authority to try to discredit any science they didn't like" (ibid., pp. 20).

2.6   Summary of literature reviewed

Figure 2.2 provides the reader with a summary of the questions that framed the literature review and the key findings. References to the literature can be found previously in the relevant sections.

Figure 2.2: Literature review summary of findings

Who are older women and what issues do they face?

An increasing demographic in Australia and worldwide, older women, are categorised as young-old (65-74), old-old (75 to 84), and oldest old (85 and beyond). Older women live within two interweaving culturally-based systems of oppression: ageism and sexism. Breaking the nexus of these oppressions enables agency, activism and active ageing for those who choose it. Women's Studies continues to lack the theoretical base for activism that addresses the oppressions experienced by older women. The human rights implications of climate change on ageing populations combine ageism with multiple intersectionalities and vulnerabilities associated with fundamental well-being. Older people are hardly visible in climate related protections in national and international law, yet there are opportunities to draw from their wealth of knowledge, experiences and resilience when moving towards effective solutions.

What are the characteristics of older women's transformative learning in environmental new social movements?

The knowledge gap due to gender- and age-blindness about older women's social movement learning provides multiple opportunities for research. Critical feminist gerogy (or educational gerontology) informs older women's learning in a woman-centred social movement where ageist sexism is less likely. Critical feminist gerogy 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.

Motivational conditions conducive to older women's learning respect 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.

Social movement learning (SML) draws from adult learning and social movement theories and is inherently situated in experience, transformative and emancipatory. Different forms of SML involve communities of practice where individuals and groups learn in a range of ways: instrumental skill-based cognitive learning; 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. Transformative environmental adult education or transformative learning for sustainability is a specific form of SML that combines ecological and environmental literacy

with activist skills and transformative or emancipatory learning dispositions.

What is known about older women's environmental activism in social movements?

Older women's environmental activism is under-researched. Women of all ages have contributed to ENSM movements and have come together in women's movements as ecofeminists. 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 1980's and 1990's.

Ecofeminist praxis embraced non-violent direct action and performative activism as core values and tactics have been carried into 21st century craftivism. Craftivism combines crafting with activism and conforms to one or more of the following: (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. 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.

Precursors to craftivism feature reclaiming and feminising sites of contestation such as creating yarn webs across entry steps to the US Pentagon, attaching personal objects to mesh fences in the UK and Australian Defence bases, and breaking through fences to hold tea parties on prohibited military installations. Canada's Raging Grannies are a rare example of well researched older women's eco-peace feminist activism. Begun in 1987, these women formed as a reaction to ageist sexism in the broader peace movement that relegated them to stereotypical roles associated with reproductive labour. They have used strategic essentialism and humorous performative activism to engage and educate audiences in understanding a myriad of

issues, including the toxic impacts of coal seam gas. Whilst not a specifically older women's movement, the Ecuadorean Pachamama anti-mining women are an example of strategic essentialist identity framing in their adoption of the Inca Mother Earth goddess.

What are older women's online capabilities in 21st century networked activism?

Older women's online capabilities in 21st century networked activism are similarly under-researched. Older women are likely to be most familiar with email (a Web 1.0 technology) and social media (Web 2.0 technologies) like Facebook and SMS on their smartphones. There is no research into older women's take-up of digital platforms in older women's movements. Expanding the understanding of learning into digital social movement activism links with the online learning theory of "connectivism" which involves the ability to construct and traverse networks as activists engage in self-directed and autonomous information seeking from each other. Research identifies that younger French feminists in their twenties and thirties rely on digital communication tools to coordinate activities and use the web as an alternative medium to promote their cause. The women intertwined online and offline media and actions, often creating events and curating them online. They drew on feminist traditions of performative activism using humour and satire.

What are the educative challenges facing older women's environmental activism?

Despite the well documented and scientifically accepted effects of anthropogenic climate change, Australia has struggled to address its transition 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 created denialism and confusion. Investigating the cultural production of the organised climate denier

> movement is termed "agnotology". Challenging disinformation in order to build mass understanding of the urgency and reality in addressing climate change becomes an educative role taken up by environmental activist social movements.

2.7   Synthesis of criteria for analysis

The following set of criteria for data analysis Figure 2.3has been distilled from the literature review. These criteria will assist in answering the research questions.

Figure 2.3: Criteria for data analysis

Critical feminist gerogogy:

(1) respectful relations that seek empowerment and appreciate women's experiences of oppressions including ageism, sexism, and multiple intersectionalities;
(2) valuing each woman's individuality by recognising her capabilities; and
(3) providing enjoyable, engaging and sufficiently challenging learning opportunities in a milieu that supports and celebrates success.

Motivation for engagement in older adult learning is intrinsic rather than extrinsic and, in social activism, this stems from wanting to leave a positive legacy through changing the world for better.

<u>**Levels of motivation for engagement in learning:**</u>
(1) Feelings of success;
(2) Intentional willingness to learn or volition;
(3) Finding relevance, value, worth and applicability to real world situations;
(4) Enjoying learning to the point of "flow"; and
(5) Vital engagement and "felt meaning" resulting in a sustained love of learning for the particular subject in which they are invested, which is the highest level and combines all others.

<u>**Motivational conditions for SML are summarised as:**</u>
(1) Inclusion fosters involvement achieved by respectful and connected co-learning;
(2) Learning that is needs-based increases positive learner behaviours;
(3) Alignment with learner's worldviews combined with engaging and challenging content sustains involvement; and
(4) Putting new skills and knowledge successfully into practice (competence) builds confidence.

Transformative environmental adult education:

(1) Ecological and environmental literacy;
(2) Activist skills;
(3) Transformative emancipatory learning dispositions.

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, 0:38 seconds).

In the following chapter, the methodology by which these criteria are employed is laid out in detail.

Chapter 3.   Epistemology, axiology, methodology and research strategies

This doctoral project has drawn on my twenty-five years of professional experience in applied social research program evaluation. Much of this work was in education for sustainability, higher education access and equity, and public sector employment, ageing and disability programs. Like my research participants, my expertise has been gained experientially in the "school of work" through on-the-job, self-directed adult learning. Membership of the Australasian Evaluation Society has functioned as a community of practice that enabled my professional development through annual conferences, engaging in social learning during regional meetings, being the NSW Regional Representative to the Board, and instigating a special interest group which investigated the use of social media for evaluation purposes. Social program evaluators adopt an ethical stance whereby our work engages us in social justice, considered by Mertens (2016, p. 103) to be a "transformative axiological assumption". As doctoral research can be considered an instructional setting (Ireri and Omwenga, 2014), this brief description of my pre-doctoral skills and capabilities is intended to convey a reflection of my "entry learner behaviour" and to provide insights for the reader into my existing scaffold of knowledge, skills and attitudes.

In this chapter, the approach to the research undertaken is given in detail. The chapter offers explanation of the: (1) epistemological (theory of knowledge) frame which delineates researcher's assumptions of the knower and known and how this has influenced my inquiry as a poststructuralist feminist researcher; (2) axiological ethics and values - on being a feminist researcher; (3) methodology (the theory of the research process) which is characterised as a transdisciplinary descriptive case study of a multi-site bounded system; and (4) research strategies (methods or techniques used in gathering evidence) which comprise a sequential mixed methods case study with a developmental design (Bazeley, 2018, p. 73).

3.1   Arriving at a feminist poststructuralist epistemology

The journey towards my adoption of a feminist poststructuralist epistemology began in the mid 1990's through my professional work in managing education and social programs with evaluation components. Evaluation was a burgeoning profession in Australasia with vibrant conferences drawing leading lights from the USA, UK, and Europe. Our community of

practice came together at annual conferences. We eagerly followed and engaged in ontological, epistemological, and methodological debates. One example was the seemingly irreconcilable American Evaluation Society "paradigm wars" between promoters of "quantitative (deductive, experimental, statistical) and qualitative (inductive, observational, interpretive) methods" (Bazeley, 2018, p. 5). Debate in the Australasian evaluation community fostered a third approach promoting the combination of multiple methods, or a "mixed methods movement" (ibid, pp. 4-6). Another debate pivoted around the nature of truth as applied to determining the value and worth of social interventions. We considered questions such as the emphasis that should be placed on the social construction of reality given that Gestalt psychologists advised "individuals will not act on what they are told is real, but on what they themselves believe to have personal or social meaning" (Lincoln and Guba, 2004, p. 228). The conceptual shift from positivism enabled the emergence of constructivist evaluation and broader inquiry through social constructivism.

Lincoln and Guba (ibid.) encourage consideration of "subject-object dualism", the "role of causality", the "nature of possible truth statements; and the role of multiple ways of knowing – that is, experiencing – the world brought on by race, class, gender, historical and embodied variations in human life" (ibid.). They argue, "truth is taken directly from stakeholder experience" and is "greatly constrained by the time, context, and particular experiences of the stakeholding community that generated it" (ibid., p. 231). They are critical of the disembodied knower of a universalised scientific method, describing this mythical character as, "transcendentally disinterested, factually objective, undisturbed by the mundane concerns of gender, race, class or bodily experience of the world" (ibid). Their alternative epistemology acknowledges standpoints whereby social locations and identities are explored within an axiology that recognises that human values infuse human projects. Guba and Lincoln promote "continuous interplay of data collection and analysis" in a hermeneutic (interpretive) circle of co-construction with stakeholders (Alkin, 2004). I drew on their work to take up an epistemological frame as a constructivist co-researcher valuing people's multiple realities and interpretations of common experience within this doctoral research.

In 1997, at an Australasian Evaluation Society annual conference, I encountered Marxist feminist identity researcher Frigga Haug's *Memory Work*. Onyx and Small (2001 p. 775)

explain this as a "feminist social constructionist method" that draws on everyday experience as the basis of knowledge and casts the researcher and subjects as equal, referring to all as "co-researchers". The "Subject" and "object" are collapsed, as is the "knower" and "known". Davies and Gannon (2008, p. 315) describe this respect for the other as "post-structural ethics" and "mutual embeddedness in discourse and relations of power".

In my experience, respecting the "other" has come from being "other" – Jewish, migrant, female (and feminist), and now older. I have experienced and challenged racism, heterosexism and now ageism. My country of origin, South Africa during the apartheid era, contributed to my commitment to social justice and understanding of oppression. I do not claim to fully understand that place since I migrated as a four year old to Australia in 1960, but I have travelled back as an adult, both during and early post-apartheid. Over that time, I saw a shift from the constraining effects of explicit State sanctioned racism on all South Africans to a sense of liberation. As one of my cousins still living there succinctly reflected, "we knew it was wrong and it had to end."

"Healing the world" (or "tikkun olam" in Hebrew) is a Jewish cultural ethic instilled within me. This concept relates to any kind of healing and is applied equally to social justice and environmental protection. Recognising the impact of culture on worldview, I cannot escape the deeply ingrained values embedded in me through Judaism. "Doing one's duty" is reflected in the maxim from the first century Rabbinical sage, Hillel who said, "if I am not for myself, who will be for me? And when I am for myself, what am 'I'? And if not now, when?" Throughout my childhood and adulthood, I have felt a duty to challenge inequality learned from the cultural weight of millennia of anti-Semitism, culminating in the Holocaust and beyond.

Second Wave Feminism and the United Nations Decade for Women (1976-1985) coincided with my formative university years and early visual arts teaching career. I found new and influential pedagogical insights studying and putting into practice the ideas of Paulo Freire's *Pedagogy of the Oppressed* (1970), Martin Buber's humanist philosophy applied to education, art historian John Berger's *Ways of Seeing* (1972) which critiqued the male gaze in art, and art critic and activist Lucy Lippard who championed feminist art.

Involvement in the union movement through the NSW Teachers Federation and working as a "non-sexist" educational curriculum specialist (in the 1980's) built my skills in feminist activism. Challenging oppressions and dissembling hierarchical power structures in favour of equality were consistent with my existing values. In terms of social movement theory this constitutes "frame alignment" (della Porta and Diani, 2006). Feminist research is premised on an understanding of western society as unequal and hierarchical (Doucet and Mauthner, 2008). As Doucet and Mauthner (ibid, p. 328) write, "feminist research should not just be *on* women, but *for* women" and "concerned with issues of broader social change and social justice." A feminist poststructuralist epistemology is promoted by Gough (2013) in relation to environmental education research because of its potential to: (1) deconstruct fundamental binaries of teaching and learning such as teacher/learner or knower/known; and (2) de-centre dominant male perspectives in environmental education discourses. The objective of poststructuralism is emancipatory. In the hands of feminist environmental education researchers, it "focuses on how women have been empowered, and are empowering themselves, rather than looking at universalised subjects" (ibid, p. 380).

3.2   Axiological ethics and values - on being a feminist researcher of older women

> In the beginning was not the word. In the beginning is the hearing. Spinsters spin deeper into the listening deep. We can spin only what we hear, because we hear, and as well as we hear. We can weave and unweave, knot and unknot, only because we hear, what we hear, and as well as we hear. Spinning is celebration/cerebration. Spinsters Spin all ways, always. Gyn/Ecology is Un-Creation; Gyn/Ecology is Creation (Mary Daly, 1984, p.424)

Today we use the term "spinster" deprecatingly to mean an older woman unlikely to marry. However, in a process of "re-searching" as Mary Daly (1984) points out, this was not its original meaning:

> … which has receded into the background so far that we have to spin deeply in order to retrieve it, is clear and strong: "a woman whose occupation is to spin". There is no reason to limit the meaning of this rich and cosmic verb. A woman whose occupation it is to spin participates in the whirling movement of creation. (p. 3)

Being a feminist researcher, I am mindful of the tradition of "interruption and silence" (Spender, 1982, p. 12) identified by feminist researchers in which women appear to have "no visible past, no heritage; our experience of existing in a void" (ibid). My research objective is to place on the record older women who have created space in environmental activism by empowering themselves, casting off being defined by others. I do not want others to ask, as Dale Spender did "why didn't I know?" about the thoughts, issues, and strengths of so many women who have come before, are active now, and will continue to be agentic (ibid, pp. 3-13).

Social movement research has not sufficiently accounted for gender and activism (Maddison and Shaw, 2014). The inexplicable interstices, glaring silences, and omissions in social movement learning research are explained by feminist theory which challenges the rationalist presumption that knowledge production is "value neutral", instead recognising that "knowledge and the production of knowledge are inherently gendered" (ibid, p. 417). Feminist research generally valorises experience as a valid process of knowledge creation. This enables feminist researchers to represent human diversity by developing research methods "designed to reveal the gender problematic through prioritising women's lived experience of the social telling in their own voice" (Byrne and Lentin in Maddison and Shaw, 2014, p. 416).

In the current research project, reflexive and relational dynamics research strategies (Doucet and Mauther, 2008; DeVault and Gross, 2012) included: (1) emphasising participation was voluntary and participants could withdraw at any time for whatever reason without explanation; (2) involving original KNAGs in the design and review of survey questions and including questions of usefulness to them; (3) including a question in surveys inviting any additional comment or critique of the survey or issues raised within it; (4) inviting questions of me and my work during interviews; (5) reporting progress and findings to the participants throughout the project via email or at KNAG conferences, and where possible seeking critical feedback as to the veracity of findings, which has yielded factual corrections; (6) spending time in the field with women as a participant observer, experiencing the ways in which groups and individuals have defined themselves subjectively; (7) participating as a learner in KNAG organised workshops and field trips to

CSG installations; and (8) inviting women to participate with me and co-present at academic conferences.

The above led to generous reciprocity, shared honesty and, rather than undermining researcher objectivity, this enhanced my credibility with KNAG members (KNAGs), deepened data quality, and led to invitations to meetings and knit-ins, all of which have contributed insights supported by evidence from data. Visual evidence of my co-participation as a researcher are presented in Figure 3.1, Figure 3.2, Figure 3.3 and Figure 3.4, which follow.

Figure 3.1: A morning with the Lismore Loop, 2017 (the author is on the far left and far right, Source: L J Larri)

Seeing the location of first knit-ins outside politicians offices that have become an iconic strategy for the Nannas
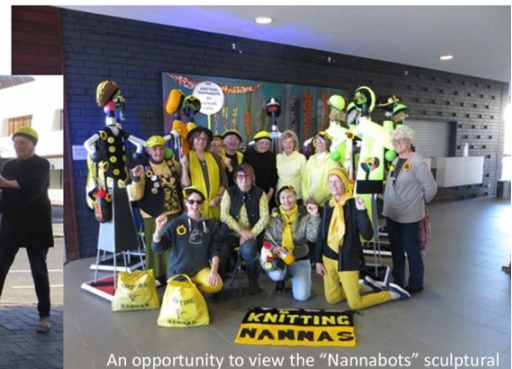
An opportunity to view the "Nannabots" sculptural installation in the foyer of the Lismore Theatre (Sandra Burton, Lismore Nanna & sculptor in collaboration with the Lismore KNAGs)

Figure 3.2: Knit-in, an environmental educators' conference installation, 2016 (the author is on the bottom right, Source: L J Larri)

Figure 3.3: Participants and co-presenters, 2018 (the author is on the far left. Source: L J Larri)
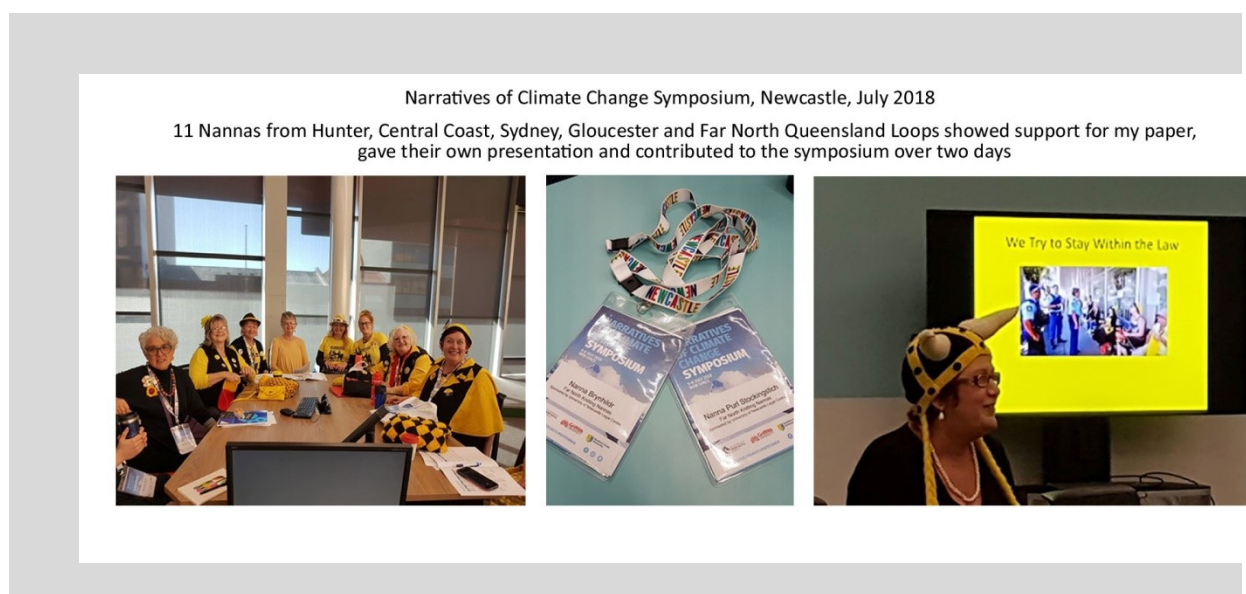
Figure 3.4: Presenting and participating in KNAG conferences 2016, 2017, 2018 (the author is on the middle top row. Source: L J Larri)

3.3 Methodology – transdisciplinary descriptive case study of a multi-site bounded system

3.3.1 Transdisciplinary

Older women's eco-activist learning is a lacuna in environmental education, adult learning and social movement learning. Filling this gap required a transdisciplinary approach accepting the complexity and interdependence of multiple disciplines. Nicolescu (2010, p. 17) defines transdisciplinarity as "that which is at once between the disciplines, across the different disciplines, and beyond all disciplines. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge."

Connecting adult learning theory with social movement theory establishes the territory of "social movement learning theory" (SMLT). Environmental education is located as a sub-

set of this. Within this territory, further theoretical intersectional overlays include studies in gender, critical gerontology, environmental climate activism, new and traditional media, and art theory, specifically craftivism. The convergence of these intersections, depicted by the question mark (in Figure 3.5), constitute the novel contribution this thesis brings to SML.

Figure 3.5: Thesis transdisciplinary intersections
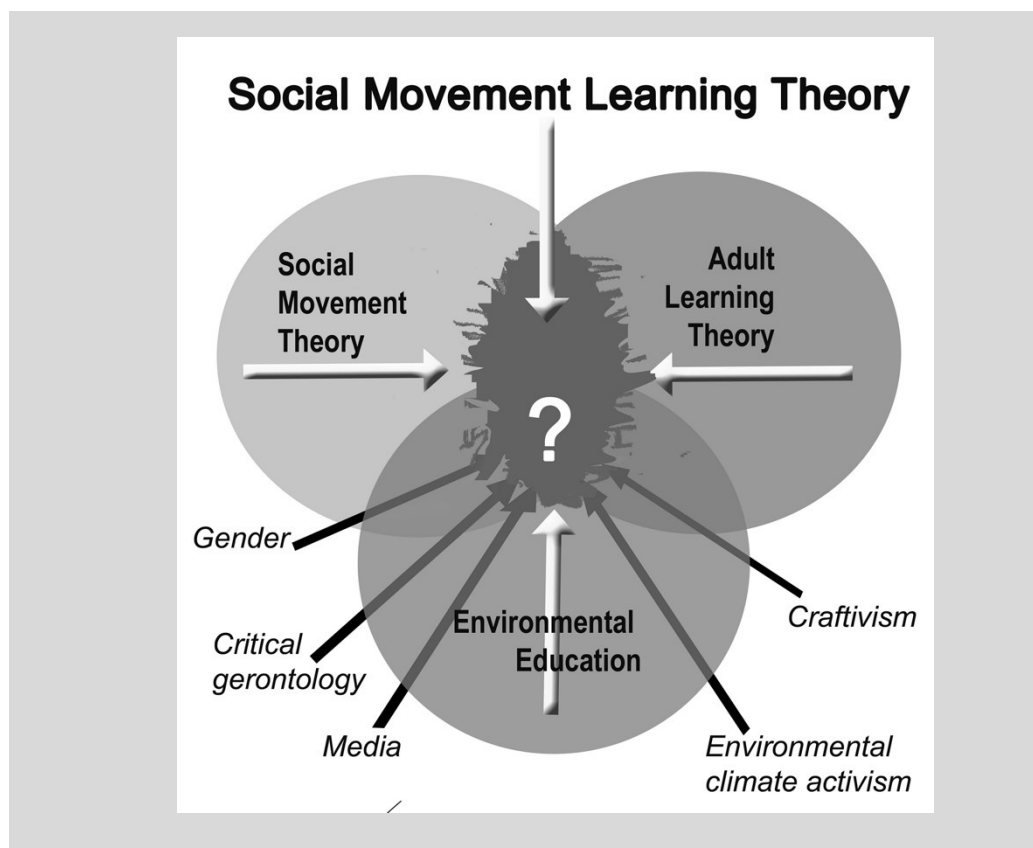
3.3.2   Descriptive case study of a multi-site bounded system

An in-depth descriptive case study approach was chosen because this has been shown to work well in educational research where there are complex social elements with multiple variables (Merriam, 2014, p. 51). The nature of learning in social movements as a mix of complex, dynamic, and "messy" processes which constantly shift from the individual to the collective and back again (Kluttz and Walter, 2018, pp. 96-97).

For Davies and Gannon (2008, p. 315), post-structural ethics requires the researcher to be open to the "not yet known" and the "not yet understandable". The obligation on the part of the researcher is for openness in understanding other/s and herself as both grow

and change. Methodology involves planning for what is proposed and what is emergent. Learnings from field observation, the ongoing review of new research and data analyses were incorporated into other phases. Figure 3.6 graphically represents the planned and emergent methodological phases and shows the sequencing, timing, and mix of methods employed.

Dick (2014, p. 3) defines a case study as, "an in-depth examination of a single social unit (individual, group, or beyond) or phenomenon," adding that "the unit or phenomenon is studied within its normal context." Merriam's definition (2014, p. 40) is similar in that a case study "is an in-depth description and analysis of a bounded system", which is a "single entity, a unit around which there are boundaries." The "bounded system" in this case is the known and available Australian KNAG network as the unit of analysis. It is "multi-site" because the network is comprised of a membership of older women within a range of geographically located sub-groups known as loops. All research participants were active members of the KNAGs at the time of undertaking the research. This case study is "descriptive" as the research aim is for a "rich and thick" description of the KNAG network with a specific focus on adult learning in informal settings (Merriam, 2014, p. 43).

Figure 3.6: Research strategies sequencing, timing, and mix of methods

Phase 1. Project plan, Stakeholder engagement, Ethics approval (2016)
Plan research project and design data matrix, gain Ethics Approval.
Engage KNAG - Discuss the research project with original Knitting Nannas Lismore Loop and gain support for the research in facilitating linkages with the KNAG Loops and members.

Phase 3.
Real-time field observation
2016 - 2019

2016:
August: Chinchilla Nannual Conference - observation of KNAG learning culture and women's demographics
October: Australian Association for Environmental Education Bi-annual conference - KNAG installation with two Nannas
November: Sydney Peace Prize presentation to Naomi Klein

2017:
March: Sydney KNAG Knit-in Martin Place
July: Lismore KNAG Knit-in politician Thomas George offices
August: Narrabri Nannual Conference

2018:
July: Narratives of Climate Change Symposium with KNAG reps, Newcastle University
August: Newcastle KNAG Nannual Conference

2019:
February: Protect our Water public forum hosted by Illawarra KNAG.
November: Sydney & Illawarra KNAG Knit-in and Water Catchment public information event Martin Place

Phase 2 .
Ongoing
Literature
Review to
integrate
emergent
research
2016-2021

Phase 4 .
Ongoing
Social and
Traditional
Media
Analysis
2017-2021

Phase 5. Conduct survey (May – November 2017)
Questionnaire design, feedback, testing, online launch and respondent recruitment, monitoring responses

Phase 6. Conduct initial interviews (July & August 2017 – January & February 2018)
Design schedule, conduct first four interviews face-to-face July 2017, conduct further three interviews online late 2017/early 2018

Phase 7.
Autoethnography added to research strategy with Ethics Approval (April 2019)

Phase 8. Conduct additional and follow-up interviews (October 2019, February/August/ November 2020)

3.4   Ethics and research approvals

This research project was approved by the James Cook University Human Research Ethics Committee on 3 May 2017 and was allocated ethics approval number H6886. See Appendix 1. The research was deemed to be of "negligible risk" in which the only foreseeable risk was no more than inconvenience, which in this case would relate to the inconvenience of taking the time to complete an online survey or undertake participation in an interview.

The research complied with the [James Cook University Code for the Responsible Conduct of Research](#) which requires its researchers to foster and maintain a research environment of intellectual honesty, integrity, and scholarly and scientific rigour. This policy was adapted from the [Australian Code for the Responsible Conduct of Research](#), (June 2018) and co-authored by the National Health and Medical Research Council, Australian Research Council, and Universities Australia.

3.5   Research strategies - a sequential mixed methods case study with a developmental design

3.5.1   Sequential and developmental

The research strategy is a sequential mixed methods study with a developmental design whereby "analysis of preliminary data informs and/or initiates the development of a subsequent data collection" (Bazeley, 2018, p. 73). In starting with a survey and building from that I have implemented a "mixed methods sequential explanatory design in which a quantitative large sample is followed by qualitative (multiple) case study" (Onghena et al, 2019, p. 461).

An initial draft questionnaire was developed based on analysis of the documentary *Knitting Nannas* (O'Keefe and Brown, 2014; Larri and Newlands, 2017), the KNAG website, and researcher observation of KNAG members at the 2016 KNAG Nannual Conference (Chinchilla, 26-28 August). Getting to know KNAG culture contributed to how I constructed the interview and survey questions in ways meaningful to the Nannas themselves. The many years I spent evaluating social programs gave me confidence in producing the online survey design.

3.5.2   *Mixed methods*

There has been substantive literature troubling the incompatibility of mixing quantitative and qualitative research methods. This is based on the different ontological and epistemological traditions inherent in each which led to the "paradigm wars" of the late 1980's and early 1990's (Bazeley, 2018, p. 5) mentioned earlier (see Section 3.1). Quantitative being linked to positivism and realism, qualitative being linked with post-positivism and interpretivism (Fox and Alldred, 2018). In the late twentieth century research methodologies have developed from a purist or incompatibility positioning to accepting the coexistence of both qualitative and quantitative. Mixed methods have become accepted as "a third major approach to social science research" (Bazeley, 2018, p. 5). Aligning with the objective of a descriptive case study, Onghena et al., (2019, p. 463) promote mixed methods for researchers aiming for a rich narrative case study that integrates qualitative case study with statistical analysis adding "narrative flesh".

Mayoh and Onwuegbuzie (2015, p. 91) offer five reasons for mixed method research based on: strengthening validity through triangulation; building robust complementarity by combining methods; sequential development where one method enhances another; the ability to build analysis of data from different perspective; and the possibility of expanding the research scope. In this study the methodology reflects the first four points. Criticism of mixed methods research cautions the uncritical adoption of methodological paradigmatic differences (Mayoh and Onwuegbuzie, 2015). Additionally, Onghena et al., (2019, p. 466) identify feminist mixed methods descriptive case studies are used to focus on oppressed groups because of the utility of integrating "qualitative and quantitative evidence to study a certain phenomenon or test a theory with the purpose of removing or reducing oppression, and increasing respect, beneficence, and justice".

The research approach used in this thesis draws on postpositivist use of objective data triangulated with descriptive phenomenology gained from the subjective reality of survey respondents and interviewees. These are further combined with an interpretive phenomenology drawn from feminist poststructuralist researcher positionality to derive a model for conceptualising the Knitting Nannas social movement learning community of practice referred to as Nannagogy.

There is much discussion regarding the most appropriate combination of methods in order to constitute a mixed methods approach. Bazeley (2018) contends there is no universally agreed definition of mixed methods research. Most researchers agree on a combination of both qualitative and quantitative approaches, but not necessarily on how or what that combination looks like, or on how to integrate different data sources. Bazeley (ibid.) writes:

> A critical decision was not whether there were sources that could be defined somehow as qualitative or quantitative, but rather, whether a 'conversation' between the different sources and/or methods used was evident within the analysis, continuing into presentation of results and discussion of those results. (p. 7)

In this project, primary data sources include the results of an online survey instrument, direct semi-structured interviews with Nannas, and a social media analysis of public Nanna activity online. Autoethnography based on non-participatory observation reflecting on researcher learning experiences also emerged as a valuable form of data. Ellis et al. (2011, p. 273) describe autoethnography as "an approach to research and writing that seeks to describe and systematically analyse personal experience in order to understand cultural experience. A researcher uses tenets of autobiography and ethnography to do and write autoethnography".

Methodological and time triangulation were employed through use of multiple data methods from 2017 to 2020. As far as possible, validity and reliability were ensured within each data collection strategy. In this research, validity or legitimation in mixed methods research (Cohen, Manion and Morrison, 2011; Check and Schutt, 2011) was enhanced by: (1) sample integration using the same sample to enable high quality inferences from data, for example interviewees were a sub-set of the original sample being identified from the survey; (2) multiple strategies to ensure validity within each type of quantitative and qualitative data gathered; and (3) checking details from survey findings with interviewees, referring between interviewees and asking interviewees to reflect on practices of other loops, from their experience.

3.5.3   *Data collection and analysis strategies*

Prior to designing the data collection instruments, a data matrix as shown in Table 3.1 was devised, linking the research questions to the data collection instruments.

The information has been organised in a table form to enable the reader to easily see each element of the research process. This is an approach to reporting that I have used extensively in my professional work in educational evaluation and have found it to be efficient and logical, adding coherence for readers. Following this table are sections on the survey, interviews, and media analysis where each data collection instrument and related analysis strategies are explained in detail.

Table 3.1: Research project data matrix linking data collection instruments, research questions (RQs) and research objectives (ROs)

Key Research Question: **What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy?** **Research Sub-Questions**	*Data sources*			
	Literature Review	*Online survey to KNAG members*	*In-depth semi-structured Interviews*	*Social & Traditional media analysis*

Key Research Question: What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy? **Research Sub-Questions**	Data sources			
	Literature Review	*Online survey to KNAG members*	*In-depth semi-structured Interviews*	*Social & Traditional media analysis*

RQ 1 – Motivation, learner entry behaviours and identity formation
 	
Research Question 1: What have the older women learned about starting and growing their movement to 40 or so groups in just four years i.e. 2012 to 2016?
  c. What were the motivations of older women that led to establishing and joining KNAG groups?
  d. What capabilities (knowledge, skills, attitudes, and world views) did these older women bring with them that enabled their learning?
RO 1: Who are the Knitting Nannas?
  i. Investigate the profiles of women who join the Nannas and whether it is possible to identify a typical Nanna
  ii. Identify why women were attracted to joining the movement, the reasons for growth and their key learnings about this.
  iii. Explore KNAG identity to clarify essential defining features or characteristics of KNAG members.
 	
Topics included in the survey and interviews: demographic data (age, location, educational attainment, occupation/s, etc.); identity descriptors; length of involvement with KNAG; attraction to KNAG i.e. motivational interests; 'entering behaviours' i.e. prior activist involvement/s, environmental concerns, intergenerational concerns, adult learning experiences, and skills sets (awareness of strengths, capabilities).
		✔	✔	

Key Research Question: What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy? Research Sub-Questions	Data sources			
	Literature Review	*Online survey to KNAG members*	*In-depth semi-structured Interviews*	*Social & Traditional media analysis*
RQ2 - Engagement and sustained motivation **Research Question 2: What learning processes have enabled older women to sustain motivation and ongoing engagement in activism supporting the transition to low-carbon futures?** a. What role, if any, do mechanisms from adult learning theory play in the KNAG movement and how does this relate to current social movement learning theory? This includes consideration of: communities of practice; connectivism; critical feminist gerogogy; transformative environmental adult education; and situated, experiential, instrumental, transformative, emancipatory, and later-in-life learning. **RO 2: What is it that women learn through being a Knitting Nanna?** i. Identify the knowledge, skills, and attitudes that are valued and taught amongst the Knitting Nannas that contribute to their key learnings. ii. Identify the ways in which these are taught i.e. the learning processes iii. Investigate the ways in which KNAG groups create an older women's community of practice in transformative environmental adult education. Topics included in survey, interviews and social media analysis: insights about learning about how 'sit, knit, and chat, having a cuppa' as described in the "Nannafesto" which contribute to learning; the 'what' and 'how' of learning during a rally or protest; identity and role of Nannas and relationship to older women's activism, feminism, and craftivism; skills in IT, social media, and media messaging across platforms and channels; active ageing and lifelong learning; perception of reactions of non-Nannas (other protesters, police, landholders, mining workers, passers-by, and politicians)		✔	✔	✔

Key Research Question: What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy? Research Sub-Questions	Data sources			
	Literature Review	*Online survey to KNAG members*	*In-depth semi-structured Interviews*	*Social & Traditional media analysis*
RQ 3 – Implications Research Question 3: What contribution does this research into older women's environmental activist learning i.e. 'Nannagogy', make to the fields of adult learning and social movement learning? a. What are the critical success factors that have enabled older women's engagement in climate change and environmental activism? b. What recommendations are made for policy, leadership, and practical field work in researching or supporting older women in their activist journeys. **Objectives for RQ 3: What is "Nannagogy" and how can it be applied?** i. Synthesise the defining characteristics of "Nannagogy" ii. Evaluate the significance and utility of this approach to older women's environmental activist learning in the context of social movement learning theory. iii. Determine the implications for future research, public policy, and practical fieldwork.	**Synthesis of findings across all data sources**			

3.5.4   Online survey

The survey was designed to elicit both qualitative and quantitative data in answer to Research Questions 1 and 2. The purpose of the survey was to gain an overview of the movement after four years of its inception and growth. Table 3.2 describes the strategies employed in order to address specific research issues in relation to the design, conduct, and analysis of the online survey. Appendix 2 provides a copy of the survey.

Table 3.2: Online survey research strategies

Research issue	Strategy
Choice of web survey software	Two options for web survey software were canvassed. Qualtrics is a software used most often by universities. However, James Cook University did not have a software agreement for this. The other option considered was SurveyMonkey which was in use by the Faculty of Education and in which the researcher had extensive experience, over ten years. It fulfilled a range of criteria identified by Toepoel (2016) including: a user friendly interface for respondents and excellent functionality options in question design and data analysis.
Sample selection, response rate, and representation of the movement	The rationale for the online survey sample drew from non-probability theoretical sampling. The target sample size was a best guess based on a 20% response rate of an estimated population. This was the first time anyone had attempted to find who the Knitting Nannas were. It was hoped that there would be a sufficient response rate covering a range of categories and issues about KNAG learning. Speculation about the extent of participation in the movement was problematic. Advice from an original Nanna, Clare Twomey, was there may be around 40 loops, but they varied in their degree of activism and willingness to connect with the broader network. The total estimated target population in 2017 may have been between 100 to potentially 400. Not knowing the extent of the Knitting Nannas population meant that probability sampling was not the best approach and geographical location was not a control factor (Cohen, Manion and Morrison, 2013). Given this lack of confidence in the size of the total population, it was reasonable to focus on descriptive analysis. A target sample of 100 individuals with at least two from each loop was sought. It was hoped this would yield 80 to 100 respondents i.e. a sufficiently statistically significant sample from which to draw valid and reliable conclusions. Cohen and Manion (1994, pp. 89-90) consider a sample size of 30 to be a minimum for statistical analysis of a random sample that sufficiently reflects the population. After data cleansing, the resulting number of respondents was 67. They represented a range of women who had been in the movement since its inception in 2012, with a representative spread across 3 to 6 years' involvement (86%, 59). Respondents ranged in age from 45 to 84, with a majority being 50 to 74 (88%, 61). The data indicated that respondents represented both originators of loops (25%, 15 out of 59) and those who had joined an existing loop (75%, 44 out of 59). The response rate overall was 67 individuals of an unknown total number of KNAGs. Some questions had smaller response rates. Only one woman identified as Aboriginal, and 15 of the total 57 women who answered the country of birth question were born overseas. A majority of women had

post-secondary qualifications, 46 (out of the 57 who answered this question, or 80%); 27 had diplomas, degrees or graduate diplomas; 8 had postgraduate degrees.

The spread of loops was representative of the total geographical expanse of loops; and the range of originators of loops compared with those who joined over time meant that the data were statistically significant from which to draw valid and reliable conclusions about the movement in 2017.

A majority of the loops were represented – 62%, 23 of the 37 listed on the KNAG website. Most (41%, 15) were from NSW; 14% (5) from Queensland and one each from WA, ACT, and NT. There were none from the two Victorian loops. The map in Figure 3.7 shows KNAG loops in Australia (2017) based on data from loops listed on the KNAG website (https://knitting-nannas.com/nanna-loops/). The majority of loops are along the eastern seaboard of Australia. This coincides with the development of CSG extraction, where most reserves are in the Surat Basin (Queensland) and Bowen Basin (Northern Rivers Region, NSW), as represented in

Figure 3.7: Locations of KNAG loops, 2017

KNAG Loops in Australia, 2017
(Image by LJLarri, 2017 using BatchGeo)

Figure 3.8: Locations of Australia's gas resources(Source: Eastern Australian Domestic Gas Market Study, 2013, Department of Industry Energy Division, Australian Government)
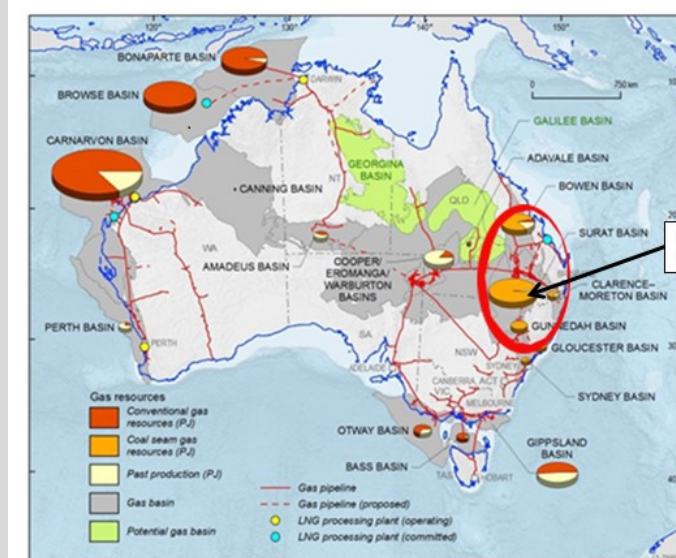
SurveyMonkey analytics showed women spent an average of thirty minutes online completing their surveys. This is an impressive length of time for online surveys. No academic research into the length of time taken to complete online surveys was located however SurveyMonkey research has found that completion times for surveys with 26-30 questions are usually nine to ten minutes. Survey abandon rates increased for surveys that took more than seven to eight minutes (Chudoba, n.d.). This did not occur with the KNAG online survey instrument and demonstrates the high degree of engagement women had in the research. The fact that a majority of women responded to email and Facebook to complete the survey via the internet shows their adaptive capacity and pre-existing capability in online technologies.

| Recruitment strategy | Strategies to increase respondent engagement emphasise the relevance and interest to participants; legitimacy and credibility of the researcher; invitations that are respectful, simple, motivating, and short; minimal reminders; and the assurance of privacy and confidentiality (Toepoel, 2016; Saleh and Bista, 2017).

Following discussion with representatives from the Lismore Loop (aka Nanna Central), who were the originators and coordinators of the movement, the researcher was advised to provide the research project |

| | information sheet (approved by JCU Human Research and Ethics Committee) and online link for distribution by Nanna Central using email and KNAG Facebook pages. It was thought that this approach would give credibility to the research and garner a better response rate than the unknown researcher contacting loops directly.

The Lismore Loop also sent two follow-up reminders when requested based on a slowing of responses, and the researcher posted additional messages to under-represented loops using Messenger, with the knowledge of Nanna Central in case they received inquiries.

The survey was launched online in early May 2017 (when it received 21 responses); June (16); July (1); August (22); October (3); and November (6). A paper-based version of the survey was made available at the Narrabri Annual Conference in August (25-27, 2017) because anecdotal feedback from loops to Nanna Central indicated some women had difficulty with their rural internet access dropping out and this was a disincentive for the less confident online users. The paper-based surveys were provided with pre-addressed envelopes. Six women completed and returned paper-based surveys. These were manually entered into SurveyMonkey. |
|---|---|
| Survey design | Following the "top-down" (Toepoel, 2016, p. 26) plan outlined in the data matrix, the survey was designed to establish a representative baseline sample of Nanna characteristics and to gather as much data as possible to answer RQs 1 and 2. This required a mix of demographic, closed and open questions, mixing quantitative and qualitative methods. Some quantitative questions had options for qualitative comments designed to assist the researcher's interpretation. Only one question had a Likert scale. This was Question 16 about importance of networking which was followed by a comment box asking for an explanation. Some questions were designed using appreciative inquiry techniques that generate data about peak experiences of value or worth in participation in a program or, in this case, a social movement (Preskill and Catsambas, 2006). Examples include: Question 13, "what has excited or surprised you most about being Knitting Nanna?"; or Question 21 "what 3 or 4 things do you value most about being a Knitting Nanna?" A question designed to generate data about how the women felt they were perceived by their immediate circle and whether this perception influenced their activism was Question 22 "what do your family and friends think about your involvement with the Knitting Nannas?"

The draft survey was reviewed by representatives from the Lismore Loop, which resulted in subsequent refinements to questions. There were three iterations of the online survey before a final version was agreed and then trialled online by three Nannas, who again provided further feedback. |

Data collection	SurveyMonkey automatically collected data and enabled manual data entry from anonymous paper-based questionnaires.
Data analysis	Prior to downloading data from SurveyMonkey, data cleansing was conducted which entailed checking all records for their uniqueness and completeness (Toepoel, 2016). Some records were found to be incomplete beyond the first few questions and therefore of no practical use, so were deleted. Other records were found to be partial duplicates or second attempts, likely to be caused by internet connections timing out and the respondent logging back in. The initial response rate was 79, after data cleansing it was 67. Quantitative and qualitative data from SurveyMonkey was then downloaded to Excel in two formats: an "all records spreadsheet" and "question summaries".

The question summaries download provided charts of quantitative data and an initial impressionistic qualitative data set used in conference presentations in 2018 and in preparation of the interview questions.

A duplicate all records Excel file was then prepared for importing into NVivo 11. This entailed, for example, coding some qualitative data from comments boxes where the body of the question was multiple choice.

An essential first step in project managing data analysis in NVivo 11 was a project concept map which assisted in determining the relationships between data themes or topics. This became the "Typology of Nannagogy" and the framework for categorising themes, as shown in X.

Elements of the typology were drawn from the literature review, researcher expertise in adult learning and field observation, adult learning theory, social movement theory, and the intersection of both. The typology has two distinct wings "the how" (the application of learning theories); and "the what" (likely anti-CSG older women's eco-activist educative capabilities). Each wing has sub-categories which were also used to generate "nodes" (themes for qualitative data coding).

The next step involved using NVivo 11 to map key concepts taken from the research aim and objectives (listed in Section 1.1.3) and the literature review (Chapter 2). Thus components of "Motivation" Figure 3.10; "Engagement" Figure 3.11Figure 3.12; "Learning"; and "Identity" Figure 3.13 were mapped and also used to generate nodes. The result was a comprehensive set of nodes.

Table 3.3: KNAG 2017 Survey data analysis plan (see the following pages) shows how survey questions were linked to answering research questions. Headings include: |

quantitative or qualitative;

objective of question – contribution to thesis findings;

data topics likely to be covered in thesis chapters.

Coding to nodes was undertaken during 2018 and 2019. The depth of qualitative data provided by respondents was impressive and somewhat overwhelming. This enabled the researcher to target more concretely the purposive sampling choices for semi-structured interviews and adapt questions to specific women's capabilities in order to fill gaps not covered by the survey data and to confirm or challenge emerging themes from the data analysis.

Matrix queries in NVivo 11 enabled combinations of data types through an in-depth interrogation of multiple qualitative data sets, cross-tabulated by loop location and length of time in the movement (Bazeley, 1999).

Some survey data were further analysed using NVivo 11 for word frequency searches. For example pre-KNAG occupations were represented by word clouds and frequency numbers were generated in NVivo 11.

The detailed KNAG survey data analysis plan follows in Table 3.3

Figure 3.9: Typology of Nannagogy
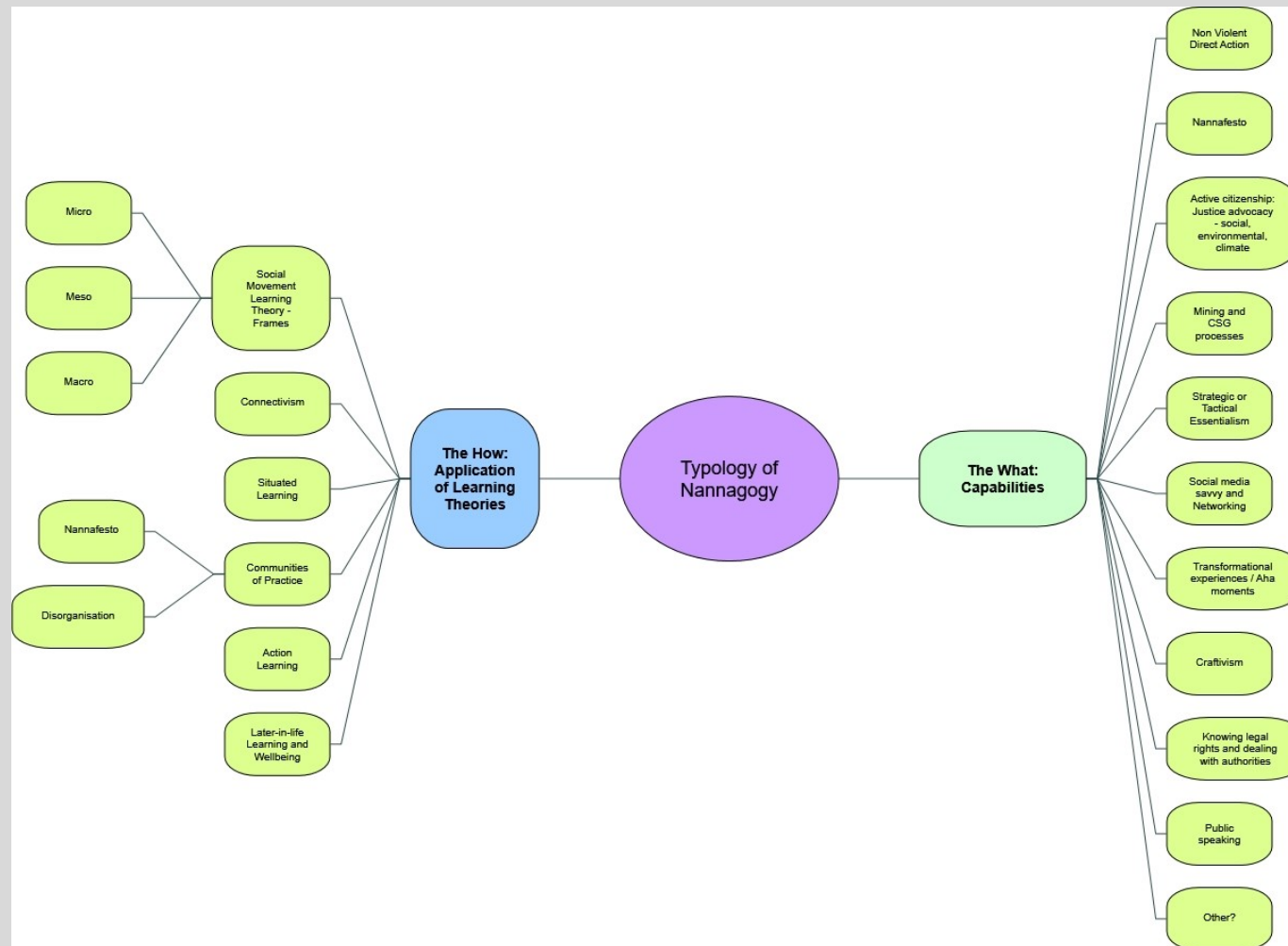
Figure 3.10: Concept map – Motivation
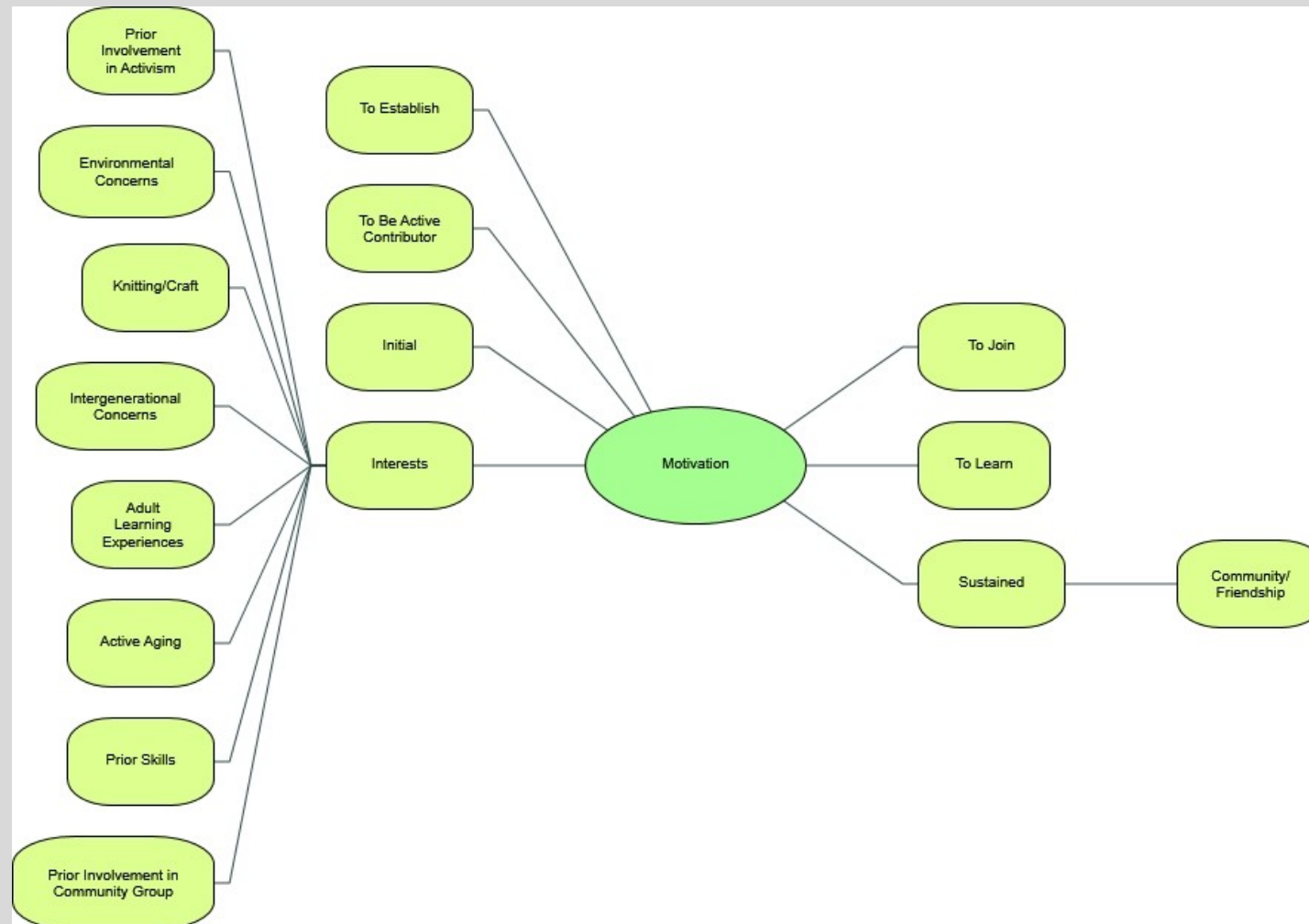
Figure 3.11: Concept map – Engagement
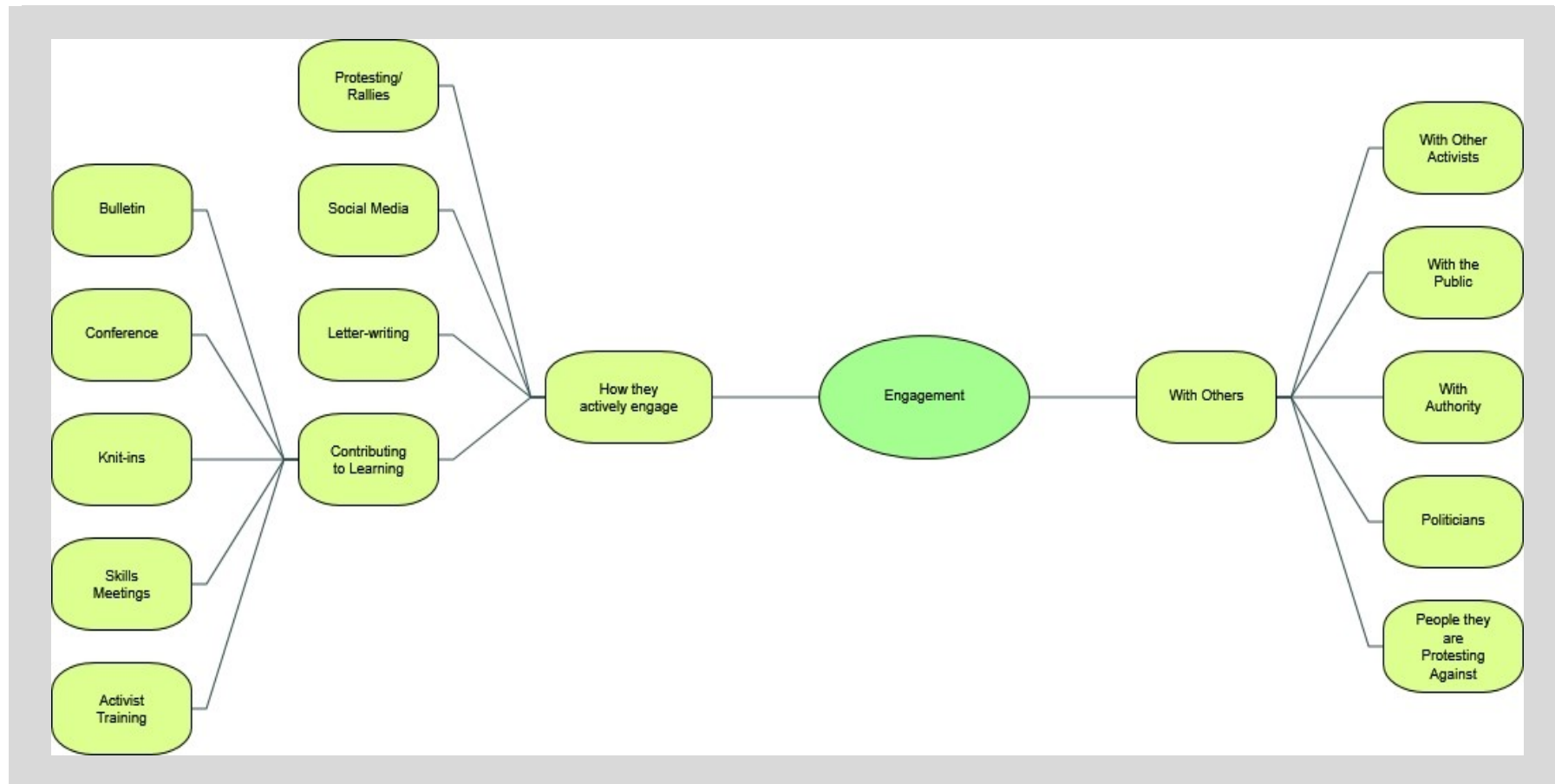
Figure 3.12: Concept map – Learning
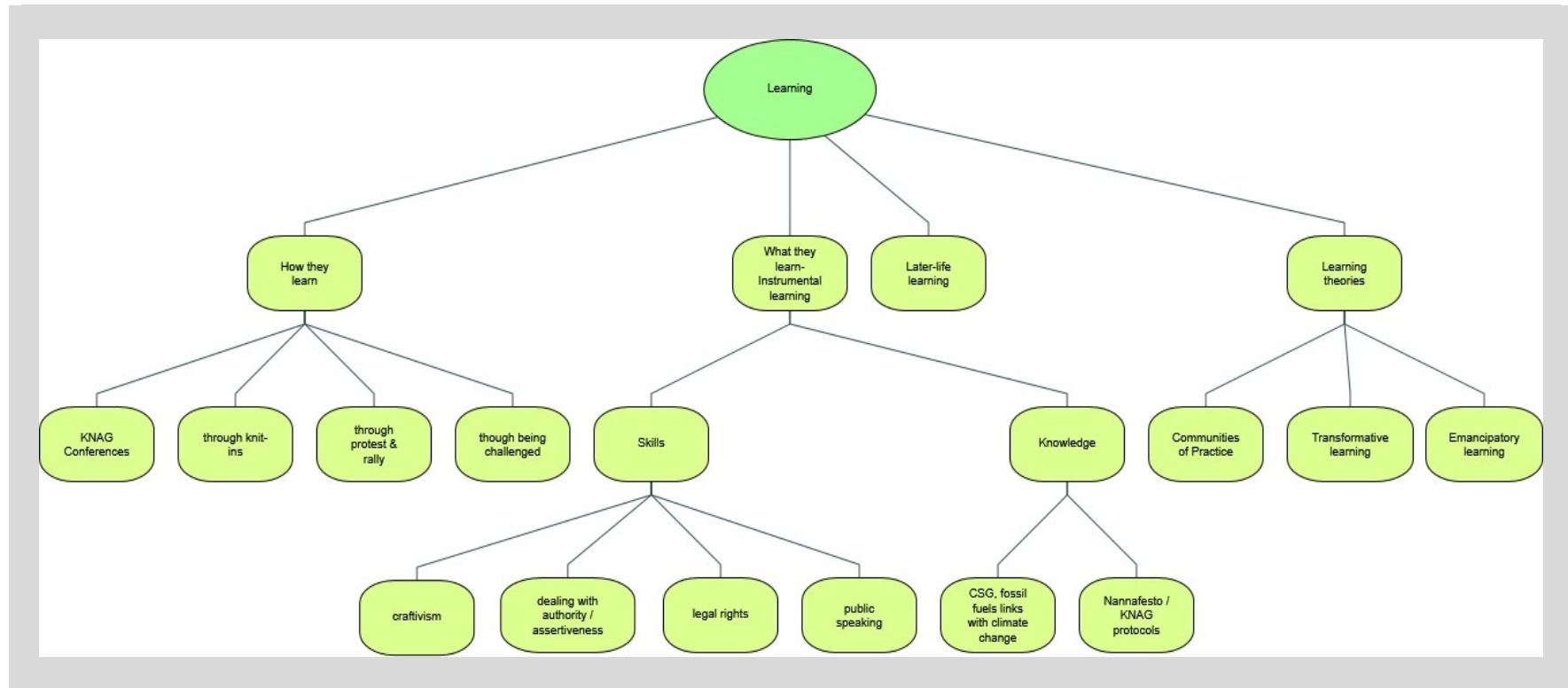
Figure 3.13: Concept map - Identity
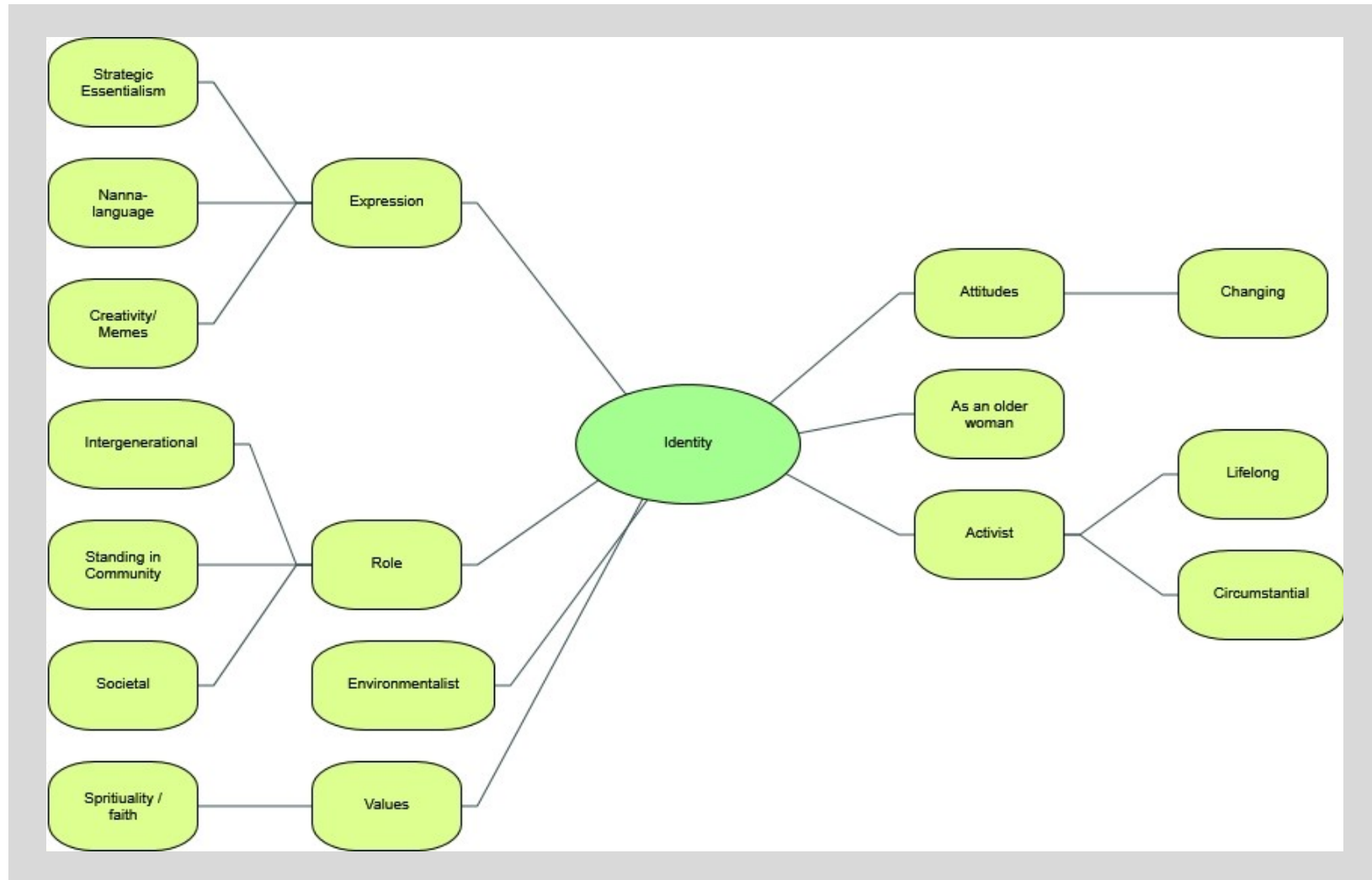
Table 3.3: KNAG 2017 Survey data analysis plan

Topics Legend:

Research Question 1:

1. KNAGing facts

Research Question 2:

2. Nannafesto, disorganisation, Nanna Way, Nannalingo
3. Craftivism
4. Strategic essentialism
5. Connecting & KNit-working

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
1. Respondent ID				Unique identifier used in text "S" = survey; Number 1-67= respondent number
2. Location: Which KNAG loop are you a member of?			1. KNAGing facts	Respondent characteristics
3. Length of membership: In what year did you join the Knitting Nannas?			1. KNAGing facts	Respondent characteristics
4. Age: Which category below includes your age?			1. KNAGing facts	Respondent characteristics
5. Are you an originator of a loop, or did you join an existing loop?			1. KNAGing facts	Motivation and mobilisation: Age is no barrier to activism

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
6. What sorts of activities have you been involved in since becoming a Knitting Nanna?			2. Nannafesto 3. Craftivism 4. Strategic essentialism 5. Connecting & KNit-working	Activist engagement
7. What experiences, if any, have you had with other groups or associations? These may or may not have been related to environmental issues. Please list the groups and briefly describe your involvement.			1. KNAGing facts 5. Connecting & KNit-working Determine existing skills set pre-KNAG	Learner entry behaviours
8. Have you ever done anything like this before?			1. KNAGing facts Determine existing skills set pre-KNAG	Learner entry behaviours
9. What motivated or inspired you to be a Knitting Nanna?			1. KNAGing facts Reason for wanting to be part of collective	Motivation and mobilisation THEORIES: Social movement theory & social movement learning theory:
10. How did you first hear				• Instrumental / micro (individual, interactive); communicative /

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
about the Knitting Nannas?			mobilisation Pre-KNAG activity	meso (frame, minimum thematic universe); and epistemic / axiological macro (culture – ideology, hegemony)
11. Have you read the Nannafesto?			2. Nannafesto	THEORIES: Social movement theory & social movement learning theory: • Instrumental / micro (individual, interactive); communicative / meso (frame, minimum thematic universe); and epistemic / axiological macro (culture–ideology, hegemony) Communities of Practice: • induction, moving from novice/periphery to centre
12. If you have read the Nannafesto, how has it influenced what you do as a member of the Knitting Nannas?			Manifestation of cultural production enabling frame alignment, shared values, convergence, solidarity, cohesion	
13. What has excited or surprised you most about being a Knitting Nanna?			2. Nannafesto 3. Craftivism 4. Strategic 5. Connecting & KNit-working	THEORIES: Social movement theory & social movement learning theory: • Instrumental / micro (individual, interactive); communicative / meso (frame, minimum thematic universe); and epistemic / axiological macro (culture – ideology, hegemony) Communities of practice: • induction, moving from novice/periphery to centre CAPABILITIES: • active citizenship • public speaking
14. What sorts of things have you learned that you didn't know before?			Likely to yield deeper knowledge of transformational learning	

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
				• craftivism • critical reflection transformational change • eco-literacy • legal rights • Nannafesto • NVDA • social media savviness • strategic essentialism
15. How have you used the knowledge you've gained as a Knitting Nanna?			2. Nannafesto Observable implementation of Nannafesto	Capabilities quantified
16. How important is it for you to network with other Knitting Nannas either in your loop or in other loops?			5. Connecting & KNit-working Social media savvy – networking & connecting Links with Q15 "I use social media"	Note: evidence of Facebook, Twitter, Instagram training – e-news Link with *Fossil Fool Bulletin*
17. What do see as the focus of your loop this year? What future directions can you see			Ideas for further learning	Capabilities

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
for your loop in the next 3 or 5 years?				
18. Thinking back, how has your life before becoming a Knitting Nanna helped in what you are now doing as a Knitting Nanna?			1. KNAGing facts 2. Nannafesto 5. Connecting & KNit-working Relates to pre-KNAG & also implementation of Nannfesto	THEORIES: Social movement theory & social movement learning theory: • Instrumental / micro (individual, interactive); communicative / meso (frame, minimum thematic universe); and epistemic / axiological macro (culture–ideology, hegemony) Communities of Practice: • induction, moving from novice/periphery to centre CAPABILITIES: • active citizenship • public speaking • craftivism • critical reflection transformational change • eco-literacy • CSG and fossil fuels • legal rights • Nannafesto • NVDA • social media savviness • strategic essentialism
19. Based on your experience of being a Knitting Nanna, what			1. KNAGing facts Ideas for further	CAPABILITIES (see early list Q.18)

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
would you like to learn more about?			learning	
20. Why do you think the KNAG movement has grown so quickly from one loop in 2012 to over 40 loops in just 4 years?			2. Nannafesto Links with Nannafesto & frame alignment	
21. What 3 or 4 things do you value most about being a Knitting Nanna?			2. Nannafesto Links with Nannafesto & frame alignment	THEORIES: Community of practice; social movement learning; later-in-life learning & wellbeing CAPABILITIES (see early list Q.18)
22. What do you your family and friends think about your involvement with the Knitting Nannas?			1. KNAGing facts	Motivation and mobilisation: frame alignment &/or influence of Nanna and their family or peers
23. What is your Indigenous status?			1. KNAGing facts	Respondent characteristics – sample validity
24. What country were you born in?			1. KNAGing facts	Respondent characteristics – sample validity
25. What is the highest level of education you have completed?			1. KNAGing facts	Respondent characteristics / capabilities
26. Please describe your			1. KNAGing facts	CAPABILITIES (see early list Q.18)

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
current and previous occupation/s, whether unpaid or paid.			5. Connecting & KNit-working Links with pre-KNAG capabilities; engagement in activism on and offline i.e. time to be active, prior skills in IT, communication, strategic planning etc.	
27. Which of these best describes you average weekly income?			1. KNAGing facts	Respondent characteristics
28. Which of the following best describes you? (employment status)			1. KNAGing facts	Respondent characteristics
29. What is your gender?			1. KNAGing facts	Data cleansing – remove males
30. If you would like to do an interview & talk to me in more detail about your experiences please enter your contact details here:			Interest in being an interviewee	Follow-up potential interviewee – data for purposive sampling
31. Thank you again for your			Opportunity for	Often useful for identifying issues with survey design or gaining

Question	Quantitative	Qualitative	Thesis findings by chapter in Part 2	Data topics likely to be covered in thesis chapters
time and thoughtfulness in completing this survey. This space is for you to comment on this survey or to add anything else you may like to tell me about being a Knitting Nanna.			respondent to comment on the survey or any other issue	additional insights

3.5.5   Semi-structured interviews

The purpose of the semi-structured interviews was to contribute more detailed data to answering Research Questions 1 and 2 by confirming and complementing findings from the online survey. Table 3.4 describes the strategies employed in order to address specific research issues in relation to the design, conduct, and analysis of the online survey.

Table 3.4: Semi-structured interviews' research strategies

Research issue	Strategy
Sample selection	Respondents from the online survey were asked (Question 30) whether they would be prepared to do an in-depth interview and 28 women volunteered. The target was between 10 and 15. As mentioned previously, the depth of qualitative data from surveys enabled very targeted purposive (criterion-based) sampling based on specific KNAG characteristics in order to fill gaps in knowledge and consider emerging themes.
	The interviewees were chosen for their location (from five different loops in two states Queensland and NSW); for their length of time in the movement and specific roles such as originator, loop member, or social media coordinator. Half the sample were women from the original loop who were able to narrate their role in the establishment or development of the first loop and explain in greater detail the processes and learnings of identity formation.
	The interviews were initially planned to be conducted within one year of the survey. An insight from the first set of interviews in 2017 was that, without being prompted, women offered for the researcher to come back with additional questions by email or online. Five of the resulting ten interviewees were followed up at different times over the ensuing three years for clarification or elaboration.
	Interviews began in July 2017 and continued intermittently during 2018, 2019 and mid-2020. This included follow-up interviews as well as more recent interviewees, enabling a small amount of longitudinal sampling and the integration of data on emerging developments as they occurred.
	Interviewees were asked to choose their own pseudonym based on a woman they admired. No significance or analysis was attached to their choice. It was seen as a novel way for the researcher to empower the women and a way of self-identification, if they chose to read it in the thesis or subsequent publications. The following is the list of interviewee characteristics and their chosen pseudonyms used in reporting findings.

	Pseudonym, date of joining KNAG, Australian state of loop location *Note: due to privacy conditions stipulated in ethics approval other details about interviewees that may make them easily identifiable are not provided.* 1. **Angie Zetland,** Member of the movement not attached to a loop, 2014, Queensland 2. **Elsie Cook,** Loop originator, 2014, Queensland 3. **Evelyn Scott,** Member first loop, 2012, NSW 4. **Vida Goldstein,** Member first loop, 2012, NSW 5. **Jessie Street,** Member first loop, 2012, NSW 6. **Anne Vann,** Loop originator, 2014, Queensland 7. **Julia Gillard,** Loop originator, 2014, NSW 8. **Rose Batty,** Member, 2015, NSW 9. **Jeanette Fitzsimons,** Member first loop, 2013, NSW 10. **Joy Hester,** First loop originator, 2012, NSW
Recruitment strategy	Women chosen for interview from those who volunteered were contacted by email and offered the follow-up interview. Details of the purpose and objectives of the research, and information about informed consent stressing confidentiality, voluntary participation and the JCU HREC approval were provided, with an informed consent form. An eleventh woman who was the originator of the Sydney Loop was also approached and, despite being initially positive to an interview, withdrew after two month of attempts to re-engage her. No other woman from the Sydney Loop had volunteered. As an alternative, women from other loops were asked to reflect on their observations of the Sydney Loop – particularly in relation to that loop's use of online media.
Interview design and conduct face-to-face and online	Interview question design was based on open-ended questions that elicit experiences of personal and movement social change within a feminist standpoint epistemology. Interviews were designed to delve deeper into specific issues as well as gathering data on topics not included in the surveys because they required extended discussion. Issues included to gain greater detail comprised: pre-KNAG learner entry behaviours; the use of social media by individual, loops and between loops; the use of craftivism in identity building; perceptions of older women's activism, feminism, and craftivism. Topics not included in the survey that were followed up by interview were: community of practice processes; educative strategies used with the general public – online and offline; transformative and emancipatory experiences ("aha" moments and insights).

A combination of methods based on researcher professional expertise was utilised. These included:

- strategic questioning (Peavey, 1994, pp. 86-104) which is empowering and is built around question types. In particular, the ones most appropriate for this case were: observation (What do you see, know, hear?), analysis (What do you think about…? What are the reasons for …? What is the relationship of x to y?), feeling (How do you feel about …? What does it feel like to …?), visioning (How would you like it to be?), change (What will it take to bring the current situation towards the ideal?), personal inventory (What would it take for you to participate in the change?) personal action (Who do you need to talk to? How can you get others to work on this?).
- appreciative inquiry (Preskill and Catsambas, 2006) - inquire (appreciating what is / peak experiences), imagine (what might be / future oriented strategies).
- transformative critical reflection (Cranton, 2002) – drawing on activating events (or disorienting dilemmas) and, through conversation, questioning assumptions, considering alternatives, and identifying epistemological and axiological transformation. Examples: What happened? How did it happen? Is this important? If so, why?

The interviews were conducted with the relational and power dynamics between the interviewee and interviewer in mind. A two-way flow was encouraged where possible. On occasions, this included the interviewer sharing experiences and shared language termed "strategic disclosure" (DeVault and Gross, 2012, p. 215). Based on experience, this technique has the added effect of relaxing the interviewee, and building mutual trust and understanding towards a co-creation of knowledge. Feminist researchers have identified the following reflexive and relational dynamics (Doucet and Mauther, 2008; DeVault and Gross, 2012):

- Non-hierarchical relations
- Empathy, rapport, and reciprocity
- Investing one's identity in the research relationship
- Aware of one another's subjective knowledges
- Collaborative meaning making

The interview questions are listed sequentially but, in reality, this order may not have been followed as each interview unfolded. If the interviewee mentioned a different topic in the context of answering a question, the researcher segued to covering the new topic. The semi-structured approach allowed for both structured and unstructured exploratory probes. The researcher's expertise in the mediated online facilitation of interviews meant that online and face-to-face interviews were equally in-depth and nuanced.

Included here is the semi-structured interview schedule.

Semi-structured interview schedule

2017-2018 Interviews

1. Introduction
   - Thank interviewee, confirm consent and agreement to be recorded, begin recording and state time, date, location;
   - Ask interviewee to state their name and age (if they are happy to disclose this);
   - Segue to interview questions by paraphrasing the purpose of the interview as a follow-up from survey data (to be referred to during the interview) and to gain a deeper understanding of the experience of the learning involved in becoming and being a Nanna.
2. Ice-breaker/s
   - What work do you now do or used to do (if retired)?
   - What previous or current activist campaigns have you been involved in?
3. Joining a loop
   - In your survey you mentioned you first heard about the Nannas by/through … can you tell me a little more about how that happened and how it felt – before? In the early stages? And now? (feeling)
4. Learning to be a Nanna
   - How did this happen – in relation to you? And in relation to other Nannas? (observation)
   - What from your previous life helped you in becoming a Nanna? (observation)
   - Is there such a thing as an expert Nanna? And a novice Nanna? Researcher explained the concept of "Community of Practice." (observation)
   - How did you / new women go from being a novice to an expert? (analysis)
   - What is the role of knitting / crafting and craftivism? What does it contribute to KNAG? (analysis)
5. Relationships within loops and between loops and implications of "disorganisation" on coordination
   - Confirm the role of interviewee in her loop: Originator? Member? Coordinator? Social media administrator? Other?
   - How do women in your loop keep in touch with one another? With women from other loops? Across the KNAG movement? With other anti-CSG campaigners, organisations and groups? – Use of social media? Email? Conferences? Knit-ins? (observation)
   - What is the relationship with the original loop, Nanna

Central? (observation)
- How do actions get decided? (analysis)

6. Older and woman-centred
    - What does it feel like to be a Knitting Nanna? (feeling)
    - Is an older women's movement important? Why? (critical reflection / transformative)
    - Do you consider yourself a feminist? Is KNAG doing feminism? Doing ecofeminism?(critical reflection / transformative)

7. Educative function
    - What is it that you really want others to understand? (visioning, imagine – what might be)
    - What are some of the best ways you've found to help people have "aha" realisations? (analysis and critical reflection)

8. Activist experiences of conscientisation / transformation / emancipation
    - What motivates, activates, or engages you in your activism as a Knitting Nanna? Why do you say this? (discovery – appreciating what is, critical reflection)
    - Have you had any experiences you can describe where you've been: Radicalised? Confronted? Or disillusioned? (feeling)
    - As a result of these experiences how do you now see things / understand power? (critical reflection, visioning, imagine – what might be)
    - Do you now see yourself as an environmental activist (take into account previous activism and whether it was eco-activist) now? Before KNAG? Because of KNAG?… and how do you feel about this? (inquire – appreciating what is, critical reflection)

9. Commitment to environmental activism
    - Do you think you'll ever be able to be successful, or as one Nanna said, "defeat the Beast"? (visioning, imagine – what might be)
    - In your view, what or who is "the Beast"? (analysis)
    - What might it take to do this? (change, personal action)
    - Where does your energy come from? (personal inventory)

10. Closing
    - We've talked a lot and I've asked a lot, thank you for being so generous with your time and insights, I really appreciate it.
    - Are there any things you thought we'd talk about that we didn't that you would now like to talk about? (non-hierarchical, collaborative meaning making)

	• What if anything would you like to ask me? (reciprocity)
	2019 – 2020 Interviews
	These interviews were designed to cover topics not previously discussed or to revisit topics to see if there was any longitudinal change. Less structured and more open-ended than those previously conducted, these interviews focused on specific topics including:

	• Loop and KNAG movement habits in using social media – purposes, building capability, digital divide, building community, role of social media / email / internet in women's lives, usefulness of social media in giving voice to KNAGs and strengthening KNAG as a social movement, link with #MeToo.
	 • Changes in the movement over time and observations of other loops in comparison to your loop.
	 • Disseminating knowledge about fossil fuels industry.
	 • Collaborative meaning making:
	      ○ The ongoing role of the Nannafesto in guiding practice combined with Nanna Way and disorganisation
	      ○ Viewing craftivism as being "crafty" and KNAGs as a feminist project
	      ○ Using strategic essentialism to change attitudes about fossil fuels
	      ○ Significance of being a KNAG in relation to well-ageing
	      ○ KNAG identity formation: The development of the knit-in, development and writing of the Nannafesto, role of the Nanna Way, role of strategic essentialism, establishing the Nanna identity online, inclusivity and First Nations women
	      ○ Most critical skills for being a Nanna.

Data collection	Interviews were conducted face-to-face and online. Face-to-face interviews were recorded and videoed. Online interviews were conducted initially using Skype because this was a technology the Nannas were already familiar with. Evear software plug-in enabled video and audio capture. As women became more familiar with Zoom, this was used due to its improved sound and visual quality. The average length of interviews was from 1.5 to 2 hours.
Transcription and Data analysis	Budget considerations meant that online transcription technologies leveraging off advances in speech recognition software were the most affordable. Initially the NVivo 11 transcription tool was employed, in 2019, but this was found to be unreliable and time-consuming due to corrections required to many misinterpreted words. The user interface was also cumbersome and unwieldy.

In 2020, Sonix became a leading contender in online transcription and proved to be a far more accurate, user friendly and economical tool. The remainder of interviews were transcribed using Sonix and some earlier interviews were re-transcribed for greater accuracy.

In order to use time efficiently, textual thematic analysis based on NVivo 11 nodes was conducted concurrently with the accuracy of transcription being checked and analytical and critical comments were added to the MS Word transcriptions. This was streamlined by a feature in Sonix which enables notes. Emergent themes were added as required.

3.5.6   *Social and traditional media data*

The purpose of media analysis was to address Research Question 2 in relation to how KNAG learned their activism and connectivism through using Web 2.0 (social media) tools in combination with traditional media. Thematic content analysis began with posts on Facebook which was the most used KNAG social media platform. This led to following threads of a sample of themes through connections with traditional media such as news services on television, paper-based, and digital editions. Many paper-based news services also have digital editions. Table 3.5 describes the strategies employed in order to address specific research issues in relation to the analysis of social and traditional media data.

Table 3.5: Social and traditional media data research strategies

Research issue	Strategy
Sample selection	Five KNAG loops were chosen for in-depth consideration of their social media posts and comments. Included were: the original KNAG Lismore Loop which functions as the "lighthouse" and key coordination loop; the Sydney Loop as an example of a metropolitan city-based network with a weekly presence in the Sydney CBD; and the Illawarra, Gloucester and Far North Queensland Loops as examples of newer groups who have developed their own approach, taking up both local and broader eco-activist actions.
Recruitment strategy	The KNAG movement was informed that data from Facebook posts would be collected and anonymised during researcher updates to KNAG annual conferences. These have typically attracted the participation of between 60 to 80 women. The conference members were asked if they had any concerns and none were raised. Formal permission for social media analysis is not technically required because the material is in the public domain. However, it was ethically important to be transparent and have a collaborative relationship with the women. In a discussion of informed consent about "netnography", Robert Kozinets (2015, pp. 140 – 142) identifies the accessing of past interactions on a public site as requiring less concern in terms of consent for this reason. Nevertheless he encourages a preference for gaining consent when using direct quotes. Kozinets advises using Elizabeth Buchanan's (2006) approach of informed consent as an "inductive process" whereby consent is sought from an individual where a specific quote is to be used. An alternative to gaining consent was to anonymise all quotes. This was preferred since comments from the online audience, not only the Nannas, were used as data.
Data collection	Facebook was used as a primary data source since survey and interview findings emphasised that KNAGs used this and email the most. As it was already in the public domain, it was also more accessible than loop group emails. This was a small scale exploratory sample based on a humanist approach that was to follow threads rather than use data mining (Kozinets, 2015). Key word searches of sample loop Facebook pages were undertaken. Examples of key words chosen because they referred to KNAG activities included: "vigil", "disorganisation", "climate change", "#MeToo", or names of locations such as "Bentley", or "Chinchilla" – both sites of contestation.

	In February 2021 a Facebook search of all active loops was conducted to determine the degree of KNAG online visibility. Data were collected in MS Excel on the numbers of loops with a Facebook page; loop name; date the Facebook page began; location; and number of members or followers.
Data analysis	The content analysis of social media in the public domain from 2012 to 2020 focused on Facebook posts. Collection and analysis concentrated on triangulating findings (confirming or challenging) from surveys and interviews. This included examples of KNAG performative activism which aimed at stimulating the engagement of online audiences as a vehicle for informal adult learning within social movement mobilisation. The analysis followed threads through social and traditional media to determine the degree of networking and connectivism being undertaken. Postings were reviewed and examples chosen and saved in Facebook collections. Three examples are provided here. These concern training, identity, and vigils.

Training
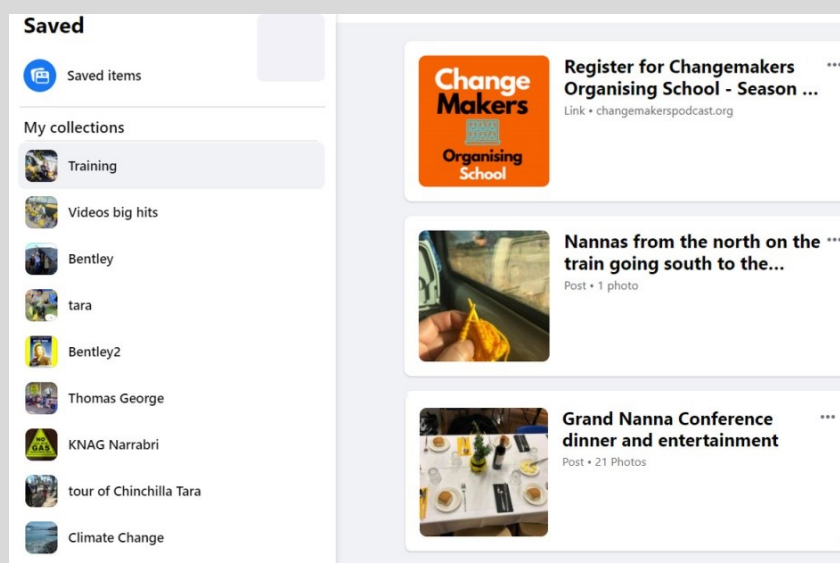
Identity

Saved

Saved items

My collections

Nanna identity

FNQ Nanna Dreaming post

MeToo2

Working in coalition

Disorganisation

Raging Grannies

vigils

Iso activities

Call the cops! It's the Knitting Nannas! A little dispirited...
Post • 1 photo

Nannas, just a little reminder of our philosophy, our raiso...
Post

How do you plead? GUILTY!
Video • Knitting Nannas Against Gas Lismore

Vigils

Saved

vigils

Iso activities

Nanna Identity

Lock the Gate Alliance

Environmental issues

Nanna power

welcome new loop

Anti KNAGs

MeToo

People's Climate Assembly 2020

Training2

Training

COLD NANNAS TONIGHT: The Knitting Nannas are bunked...
Video • Lock The Gate Alliance

Gloucester Vigil site up and running again ... Pop in and...
Post • 2 Photos

View from the vigil site this afternoon. Protect Gloucester.
Post • 1 photo

Sitting at vigil while GRL meets upstairs. NO ROCKY...
Post • 1 photo

Some themes were searched in other anti-CSG groups' Facebook postings to determine the nature of cross-posting between KNAG and their alliance partners such as Lock the Gate (a farmer-based anti-CSG activist organisation) or environmental non-government organisations such as the Wilderness Society or the Australian Conservation Foundation. In those cases, the text search used was "knitting nannas". Where posting revealed the use of a news media organisation, these links were also followed. Excel spreadsheets were used to record the dates; topic; loops involved; theme relevant to research questions; online audience response i.e. "clicktivism" (likes, comments, shares, views).
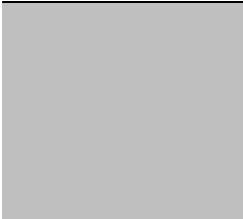
An analysis was undertaken of online audience comments for some KNAG actions that attracted significant responses. Comments were copied into MS Word, the extraneous non-text data deleted and the text files imported into NVivo 11 for word frequency searches, represented by word clouds and frequency numbers generated in NVivo 11.

Part 2: Findings

Overview

Part 2 presents findings related to the data collected through surveys, interviews, social media analyses and my autoethnographic account. Part 2 comprises five chapters. In the first chapter (Chapter 4), the first research question is answered:

RQ1: What have the older women learned about starting and growing their movement to 40 or so groups in just four years, from 2012 to 2016?

The next three chapters (Chapters 5, 6, and 7) deal with different themes to respond to the second research question:

RQ2: What learning processes have enabled older women to sustain motivation and ongoing engagement in activism supporting the transition to a low-carbon future?

These Chapters 4, 5, 6, and 7 include findings presented in terms of four themes so as to arrive at the defining characteristics of Nannagogy. These sections, in this order, concern the following themes: (1) learning through starting the movement; (2) organisational learning to structure the movement; (3) learning through using craftivism; and (4) digital and media literacy learning in order to disseminate environmental activist information.

In the next chapter (Chapter 8), the third research question is addressed:

RQ3: What contribution does this research into older women's transformative environmental adult education, 'Nannagogy', make to the fields of adult learning and social movement learning?

Throughout each chapter of the findings the reader will see summary statements of empirical facts that emerged from the data collected. These are referred to as "Findings" and are numbered. Each chapter ends with a "Summary" which presents a concise synthesis of all discussion points.

Findings refer to data analysis based on the set of criteria distilled from the literature review (see Figure 2.2). The criteria identify elements of critical feminist gerogogy (or

educational gerontology), motivation for engagement in older adult learning, transformative environmental adult education, and craftivism.

Chapter 4 *"KNAGing facts: Who are the Nannas and what motivates them?"* deals with Research Question 1. It explores the Nannas' motivation, learner entry behaviours and identity formation. I present my historical account of the KNAG movement in order to understand what motivated inception of the movement. Then three theoretical concepts are combined in an analysis of why women joined up and how their skills and prior experiences contributed valuable preconditions for environmental activist learning in the context of being a KNAG. Two of these concepts have theoretical foundations, which supports the theoretical strength of the current research. These concepts are: entry learner behaviours (from formal education theory), frame alignment and identity formation (from social movement theory), and the challenges of ageist sexism as an ongoing driving force.

Chapters 5, 6 and 7 focus on answering Research Question 2. This question investigates engagement and sustained motivation. Following a mixed methods approach, the findings from the data are combined from various sources in each section. In Chapter 5 *The "Nannafesto" and the "Nanna Way": Organisation for a learning disorganisation,* the adoption of identity and organisational processes that established the movement and enabled its growth are explained. In Chapter 6 *"Viva La Nannalution": Using craftivism to transform crisis into social movement learning*, addresses the question of what craftivism contributes as a form of non-violent direct action and positions and explores crafting strategy within the context of materialist ecofeminism.

Finally, in Chapter 7 *"KN-IT-working": using social media for learning and empowerment,* I draw together KNAG's use of social media as a tool for networking within and between loops (groups) and promoting their learning, along with that of their followers. Networking within and between loops is also critical to cohesion within the movement. The internet provides a means of empowerment through connective action that supports the mobilisation of women for collective action.

To reiterate, in all sections, data sources have been integrated where possible in order to complement or extend one another to achieve Bazeley's (2018) concept of a conversation and relatedness between data (mentioned previously in Section 3.5.2). Since this research is

the first to consider how the Nannas learn this has required a descriptive approach which includes visual evidence to support textual description and analysis.

Threaded throughout each section points are made highlighting how findings provide evidence for the Nanna's learning processes which are encapsulated in the concept of Nannagogy. In the same way that theories of education segment learner needs and styles by age and stage, I initially coined the portmanteau of Nannagogy to differentiate KNAG learning processes from any other established and formalised learning systems such as pedagogy (childhood teaching and learning in schooling). andragogy (adult teaching and learning, such as vocational or higher education) and learning later in life (post-retirement learning, for example University of the Third Age). Through the research, I developed this conceptual segmentation of KNAG learning processes to focus on gender and identity in combining 'Nanna' (older woman) with 'agogy' ('learning' but literally from the Greek 'I lead'). Nannagogy is thus a concept of older women's learning which is explored as a hypothetical construct. In this research, Nannagogy is defined as a learning system for a specific form of social movement learning praxis that honours the wisdom and experience of older women. Nannagogy is built on the extensive pre-movement skills sets of the women. This and the various other sections of the findings add richness to the meaning of this construct.

I have researched how the Nannas have learned their activism. Their own analogy of crafting is very much at the heart of their learning and also of their identity in becoming and being KNAG. This hybrid form of informal adult learning processes draws on many concepts: situated experiential learning; instrumental, transformative, emancipatory learning; and digital age connectivism. These are situated within a geographically dispersed CoP. Their primary form of KNAG activism is the knit-in. Knit-ins are an alternative to formalised meetings and comprise opportunities for emergent, collaborative and, often, transformative thinking. Sitting and knitting outside a politician's or mining company's office or during blockades affords women time with one another as they talk through their ideas, while being productive with their hands. This leads to identity formation and growth of the KNAG movement.

Through their CoP, the Nannas adapted their pre-existing capabilities to new situations and devised a framework. This framework comprises agreed guiding principles as stated in their "Nannafesto", a set of cultural practices referred to as the "Nanna Way", and an organisational form they proudly call a "Disorganisation".

Chapter 4.   KNAGing facts: Who are the Nannas and what motivates them?

4.1   Introduction

In this and the following sections of Chapter 4, each finding is introduced, listed, and then explained.

The Nannas have grown from one loop (group) in 2012 to around 40 to date. They are now acknowledged as a valuable force in the anti-fracking movement to stop the devastation of land and water resources. Climate activist blogger, Amy Huva (2019), described them as "novel" and "uniquely appealing and effective" in the context of the power in grassroots movements, stating:

> We are continually surprised by the creativity that emerges when very different people start working together. Who would have anticipated that the Knitting Nannas Against Gas would spring up suddenly to become a uniquely appealing and effective action group? The beauty of a grassroots movement is the novelty that springs from diversity.

Nanna Vida (pseudonym[3]), one of the women interviewed from the original loop and a participant in the Gasfield Free Northern Rivers (GFNR) non-violent direct action (NVDA) action group has observed the KNAG movement's growth. She reported having been told many times how important the KNAG have been to anti-CSG successes, telling me people often say, "one of the best things to come out of the coal seam gas fight other than Lock the Gate has been Knitting Nannas Against Gas". Lock the Gate, a farmer-based anti-CSG activist organisation, was instrumental in contributing to the establishment of the GFNR Alliance and became a strong ally of the KNAG.

What Amy Huva (quoted earlier) could not explain is how and why the Nannas seemed to suddenly emerge. In this first section of findings, the focus is on what motivated the formation and expansion of KNAG and why this is relevant to understanding their learning processes. Motivation is an emotional precursor that sets up the intention for engagement in learning contextualising and influencing learning (Christenson et al., 2012). Learner entry

behaviour describes the knowledge, skills, attitudes, motivation for learning and learner style preferences of the learner before entering an instructional setting (Ireri and Omwenga, 2014). In the context of SML, the instructional setting is the "situated site of protest" (Ollis and Hamel-Green, 2015, p. 218) that is, the roadside, blockade, or footpath.

The following two questions (from Section 1.1.4 Table 1.1) were asked about KNAG learner entry behaviour:

a) What were the motivations of older women that led to establishing and joining KNAG groups?

b) What capabilities (knowledge, skills, attitudes, and world views) did these older women bring with them that enabled their learning?

The concepts of frame alignment and identity formation from social movement theory (discussed in Chapter 2.1.2) can explain how the movement attracted women who were already positioned as motivated to join. Della Porta and Diani explain frame alignment as "a basic precondition for success" in mobilising people into social movements (2006, pp. 82-84). Snow et al., (2014, p. 36) emphasise the "well-documented role that framing plays in mobilisation". Framing is "an ongoing ever-changing and dynamic process" (ibid, p. 38) connecting individuals' cultural values, beliefs, and interests with the objectives of the movement.

The construction of meaning by individuals through interactions with one another is how we make 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" (ibid.). In the case of the KNAG, their formation indicates individuals were already aligned and mobilised within the broader anti-CSG movement and they broke ranks to be able to create a form of activism that suited their interests and needs. In the next section, how this happened is described.

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[3] Pseudonyms are used for all interviewees. See Section 3.5.5 for an explanation of the choice of pseudonyms and a list of interviewees purposively sampled.

4.2   The KNAG creation story: formation, emergence

The establishment and growth of the KNAG movement occurred as a subgroup of the Australian anti-CSG movement in response to the real threats posed by the loss of farmland and degradation of natural resources in regional and rural communities. The KNAG creation story has been told and retold within the movement as part of the enculturation process of becoming and being a Nanna. I have heard it told at KNAG annual conferences and observed it being repeated in conversation between the women as they chat during their knit-ins when I sat with them as part of this research.

> *Finding RQ1.1:*   *Older women were motivated and mobilised to protest CSG mining as part of the regional Gasfield Free Northern Rivers alliance. Ageism and sexism motivated older women to seek their own alternative forms of activism. This resulted in their "knit-in" – a productive version of the non-violent sit-in protest.*

Women were initially brought together by the threat of CSG mining in the Northern Rivers Region of New South Wales, Australia in mid-2012. Communities across the region were galvanising to oppose the mining company Metgasco. According to Kia and Ricketts (2018, p. 50), an alliance of autonomous action groups formed the GFNR Alliance which they describe as:

> … an unincorporated entity with no constitution, no formal membership, and no formal office bearers. Nevertheless, GFNR supported the emergence of a very large, complex and adaptable regional social movement, in concert with a tightly focused political campaign. Although loosely organised, GFNR achieved coherence through fluid performative leadership and constantly evolving structural constraints.

The town of Lismore was the epicentre of the GFNR Alliance. After a 700 strong public meeting on 1 March, 2012, a follow-up meeting facilitated the creation of project-based working groups. Around eight concerned older women joined one of the GFNR action groups that focused on NVDA. The women, who had not previously known one another, were motivated to join the NVDA group because training and planning for NVDA actions was offered.

One survey respondent indicated she experienced some frustration about a seeming lack of action:

> I attended an anti-CSG meeting in Lismore on 1 March, 2012. Two weeks later I joined the Non-Violent Direct Action Group, attended their training and ordinary meetings, a lot of talk but didn't lead to much action. (S. 50)

Nanna Joy, one of the original women who formed KNAG and participated in the NVDA action group, explained the NVDA group was composed of around 25 people with a core group of left-leaning men from the North Eastern Forest Alliance (NEFA)[4] and The Greens political party. Half of the group were non-aligned. There were some women in their 30's and 40's and also some very strong male figures. The group had weekly meetings and the older women began recognising some animosity from the some of the men.

Nanna Joy noted a stereotyping of older women as frail and of diminished importance (this stereotyping is discussed previously in Section 2.1.1.2). Key words emphasise a lack of agency, lowered expectations of innovation and brain functioning, and diminishment by being pigeonholed as "sweet little old ladies". This detailed quote is provided so the reader can appreciate the tone of indignity felt by Nanna Joy, still evident after 7 years:

> … 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!

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[4] The North East Forest Alliance (NEFA) is a volunteer forest conservation group based in the NSW North Coast region. It was established in 1989 with the aims of protecting

The soon to become KNAG felt undervalued, undermined, and ignored. They realised that their efforts to use their own initiative were not welcome and the ageist sexism they experienced created the environment for them to support one another. Undeterred, they kept participating in the NVDA group, learning new skills and beginning their own activities. Nanna Joy went on to explain how the women reacted to the denigration. They went for a coffee to talk amongst themselves in order to understand this disorienting dilemma of mixed messages whereby they were effectively being relegated to support roles (referred to as reproductive work in Section 2.1.4) rather than being seen as valued activists.

Nanna Joy described how the older women critically reflected, for the first time as a group, about the dynamics of oppression they were encountering. They devised strategies to continue their affiliation with the NVDA group, which they perceived as beneficial and necessary in maintaining a profile in the GFNR Alliance. They had not expected left-leaning men to be both sexist and ageist. This was a moment of conscientisation (described in Section 2.1.2.3) that harks back to feminist consciousness raising groups of the 1970's and 1980's. It set the tone for the core values of the KNAG movement – a determination to be activists not relegated to insubstantial support roles with confidence in their own judgement not to ask permission (from men or others) before acting. It was also the first step towards social learning in a community of practice (defined in Section 2.2.6):

> I think there was a meeting where some of the men from the Greens and NEFA kind of picked on us, you know. We were doing things on our own initiative; I think that was one of the biggest things. And so it was particularly targeted, especially targeted towards the women who had shown the most initiative. So after the meeting, we went downstairs, had a coffee and it was just like, 'what the fuck just happened there?' I guess that happened within the couple of months leading up to the start of the Nannas. We kept going to the NVDA after that and tended to sit in a group and support each other. (Nanna Joy)

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rainforest, old growth forest, wilderness and threatened species. See
https://www.nefa.org.au

These women were highly motivated to take meaningful action. Not wanting to waste time fighting for equality, they side-stepped the issue and banded together, eager to make a start. This was a pivotal moment of transformative learning that led to emancipatory decision-making. Two of the women, Lindy Scott and Clare Twomey, began touring the Metgasco sites and when they noticed a waste pond and earth moving equipment at Shannon Brook, they realised that exploratory wells were being established there. They decided to undertake a form of 'guerrilla surveillance' of Metgasco truck movements (Ngara Institute, 2018). Knowing they would be in position for some time, on 8 June, 2012, they took their chairs, a thermos of tea, and knitting to pass the time productively. The location was the verge of Pollock's Road, in Shannon Brook, about 15 minutes' drive west of Casino (see Figure 4.1).

A significant moment in learning about identity formation seems to have occurred in parallel with disenfranchisement from the GFNR NVDA group – the process of trying different identities before settling on one. Initially this group of women cast themselves as fearless "elder Jane Bonds". They then realised the subversive and humorous potential of playfully using the stereotype they had originally railed against. The persona of little old ladies stealthily knitting appealed to their collective sense of humour. At this stage, they did not know that the Canadian Raging Grannies (see Section 2.1.3) had made the same choice some twenty-five years before. This is how Nanna Joy explained the experience:

> At the same time that was happening, a few of us went and toured all the gas wells. And that's when we saw Shannon Brook. That's what kind of initiated us, watching Shannon Brook. Well, we had lots of fun playing with the word Nanna. And also we were pushing ourselves to the other activists as being kind of like fearless old ladies. Because we first started this as a surveillance group, we were pushing the thing that we were little old Jane Bonds … we had spoken about the Knitting Nannas before as a stealth kind of group. I guess it was a bit of a joke amongst us. So we decided to take our knitting and our cups of tea.

Initially, knitting was a way of productively spending time but quickly became a way of expressing a form of environmental activism in which older women could engage (Larri and Whitehouse, 2019, pp. 29-30). As Liz Stops, also a founding member, reported: "The name

… was purposefully devised. 'knitting' and 'Nannas' are words that immediately conjure a nostalgic image of older women exuding trust and love" (2014, p. 10). "Nanna-ness" is a form of strategic or tactical essentialism that communicates identity and purpose with great clarity. Collectively, the Northern Rivers women began to refer to themselves as a "determination of Nannas," drawing inspiration from Les Tricoteuses (Stops, 2014 p. 8). Twomey is quoted as saying "We're like the iron fist inside the velvet glove, we sit and we knit and we bear witness" (Northern Star, 28 June, 2012).

The first anniversary date was celebrated and documented on the Knitting Nannas Against Gas Facebook Facebook page, with the comments like this one from 6 June, 2014 "Shenanigans this weekend! Happy Nannaversary" (Figure 4.1). Women had begun to see themselves as part of a revolution which they referred to as "Viva La Nannalution".

Figure 4.1: The first knit-in – Composite picture because there were only two women, Clare Twomey and Lindy Scott at Pollock's Road, Shannon Brook, 8 June, 2012 (Photo: Clare Twomey, reproduced with permission. This first appeared on Facebook 16 June, 2013 celebrating the first "Nannaversary").

Finding RQ1.2: **The Nannas were acknowledged by the media as an identifiable group and established their CoP within 20 days after distancing themselves from the GFNR Alliance structure. They created their signature tactics such as "knit-ins" and "knot the gate" in this time. They gained expertise in non-violent direct action tactics through semi-structured instrumental learning of "mockades" and blockades and situated experiential activist learning.**

Even though angered by their treatment in the NVDA group, the women continued going to meetings because they still wanted to learn the skills of strategising and using non-violent means for protest. They were also mindful not to intentionally constitute a disruptive element within the cohesive GFNR Alliance, as it was gaining social and political momentum. After the first action, other women were motivated to join the roadside surveillance and shared what they had seen (see Figure 4.2)

Figure 4.2: Nannas are go! 20 June 2012, Knitting Nannas Against Gas Facebook

The women reported back to the NVDA group about the excavation of CSG wastewater holding ponds (confirmed by Nanna Joy). Just 12 days later on 20 June, 2012, protesters peacefully blockaded the site for the first time. The Nannas documented their presence with their very first Facebook post on the same day proclaiming "Nannas are go!" with 20 likes, two comments and one share showing that a core group was already forming[5] (Figure 4.2). Six women are shown sitting comfortably on their folding chairs, one with her travel mug. They work on their knitting with focus. A Lock the Gate sign rests on the grass and other protesters and placards are evident. Apart from their knitting, the women are not easily

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[5] Using the Facebook analytics freely available it is not possible to determine how soon after the post appeared the responses of likes, comments and shares occurred.

identifiable as KNAG. Their signature yellow and black berets and Knitting Nanna banners were not yet created. The action was recorded in the *Northern Star* (NSW) local press and picked up by other regional papers such as the *Queensland Times*, and the statewide *Daily Telegraph*. This first protest was described with a timeline of daily events (Harlum, 2012):

Wednesday (June 20): Davey Bob Ramsay arrested after chaining himself to a bulldozer.

Thursday: Protesters shovelled dirt back into the pond.

Friday: Revealed: Metgasco directed to draw down water levels in ponds.

Sunday: Folk duo *The Sons of Summer* entertained protesters.

Monday: Workers entered site and resumed work on the pond.

Yesterday: Protest ended, hailed a success by organisers.

Today: NSW Greens Member of the Legislative Council (NSW Parliament) Cate Faerhmann to visit site.

The online Northern Rivers news service, the *EchoNETDAILY*, reported this action as a success with Ramsey being supported by 60 peaceful protesters angry that Metgasco was constructing a new wastewater pond. Five KNAG are named as part of the action, having held a knit-in at Metgasco's Casino offices the day before. The mining company had been fined for unlawfully releasing toxic water into the Casino municipal sewerage system. Legal academic and local NVDA activism educator, Aiden Ricketts ("Lock the dozer action … ", 2012) is reported as saying:

The day went very well, it was well organised and disciplined. The group maintained confidentiality with the action despite Facebook and all the other things that can go wrong … There was a lock on person with a single arrest for an effective action. The police liaison went well, the police are relaxed and there have been no flared tempers … This day is like training in its own way.

Expert NVDA activists such as Ricketts enable less experienced activists to learn NVDA strategies, combining rehearsal exercises with practical experience at the frontline. Nanna Joy described it as the culmination of practice blockades (mockades) organised by Ricketts and other members of the NVDA group.

This was situated experiential activist learning in which the Nannas were instrumental participants. It was a planned and coordinated protest skills building exercise involving the implementation of tactics and strategies learned through pre-event training and role play and then consolidated with on-the-job learning. In the development of KNAG it was a pivotal event of environmental activism and celebrated as such. Through this action, KNAG were seen by other activists and politicians. The event was a catalyst for establishing a social media presence and gaining recognition in the local press.

By the end of June 2012, the Northern Rivers Nannas had formed as the first Knitting Nannas Against Gas loop. They had broadened the locations of their "Nannalution knit-in" to include the Lismore produce markets and on the pavement outside the office of Thomas George (National Party Member for Lismore). This form of action became a regular strategy for all loops, which indicates the transference of skill development through social learning occurring in the developing KNAG CoP. Twomey provided the photo in Figure 4.3; a similar one appeared in the *Northern Star* on 28 June, 2012 under the title *No gas nannas* with the caption 'IN STITCHES: Four of the Knitting Nannas staging a knit-in outside Thomas George's office on Tuesday ("No gas nannas ", *Northern Star,* 28 June, 2012). The Nannas are shown standing and knitting. At this point they had a banner but no other identification as yet. In summary, it took only 20 days, from 8 to 28 June, for the movement to emerge from the concept of roadside surveillance to adoption of the Knitting Nannas identity as an identifiable group in their own right given recognition in the local media.

Figure 4.3: The First Knitting Nannas knit-in outside a politician's office – local Lismore Member of Parliament Thomas George, 28 June 2012 Photo: Clare Twomey, reproduced with permission.

This series of events offers the evidence that the women were forming a CoP within 20 days of the group's inception through informal experiential learning about public order laws, NVDA and media engagement. Some of the learning was provided by external experts auspiced from the NVDA action group, much of it was an organic process of critical reflection that happened as women sat in their groups knitting and "yarning" (chatting) with one another. Nanna Joy described how they came to create one of their signature tactics, "knot the gate"- a play on the "lock the gate" slogan from the Lock the Gate Alliance (a driving force in Australia's anti-CSG movement who used yellow and black as colours of danger). As Nanna Joy explained to me:

> I think the thing … with craft is that when you get women sitting together with busy hands they come up with the most brilliant ideas. So there were a few things that merged together as the Knitting Nannas. We kept doing our surveillance of these well sites, some of them were tailings ponds, some of them were where they kept all of their spare equipment, things like that. Yes, so we'd go around to those and we'd start putting the yellow triangle on the gates out of wool … which we called "knot the gate".

> A lot of it is we're sitting around knitting and I guess you call it brainstorming, but, you know, we were just talking about what we were doing and having a lot of a lot of

fun with it, and we did a lot of word play on lock the gate and knot the gate came up. So the next stage was to do the triangle across the gates, that we are locking the gate in a way. So, they [Metgasco] did know we were here as soon as they went to get on the site. They would see that and it probably took them a while to work it out. It wouldn't have been too long [to work it out] because we started at Thomas George's office around that time, too.

Finding RQ1.3: *Identity formation took around 18 months to stabilise. This was an organic creative process resulting from yarning (peer group conversation) stimulated by sitting and knitting.*

By January 2014, within around 18 months, the women had taken on a strong visual identity with a form of uniform that combined any variation of clothing and accessories in yellow and black, with other improvisations according to each woman's personal preference. According to Nanna Joy, the decision-making process around uniform identity was part of creative discussions (yarning) during knit-ins. KNAG chose yellow and black as a way of showing solidarity with the Lock the Gate Alliance. The women also later added red to be inclusive of Australia's First Nations people who use red, yellow and black in their flag. This can be seen in the 13 November, 2014 Facebook post "Needling our MP Thomas George yet again". Some women wear the signature knitted yellow and black beret, harkening back to Les Tricoteuses and their liberty caps. The KNAG uniform incorporates yellow and black in any configuration. Women combine pinafores, aprons, dresses, T-shirts and yellow knitting needles (shown in Figure 4.4, Facebook, 13 November 2014).

In 2019, for an International Women's Day action outside NSW Parliament House, the Nannas added a suffragette inspired sash with the words "No water no life" which they continue to wear (see Figure 4.4, 2020 Facebook post). The women built their identity through collaborative learning in their CoP simultaneously with building their identities as environmental activists. Creating and employing the KNAG identity indicates a transformative experience whereby the women express their membership of the learning community and the movement.

Figure 4.4: Two examples of the KNAG uniform (Source: Facebook, fair use)

Facebook post 13 November, 2014
"Needling our MP Thomas"

Facebook post 15 October, 2020 Lismore
Loop members during anti-CSG roadside
protest
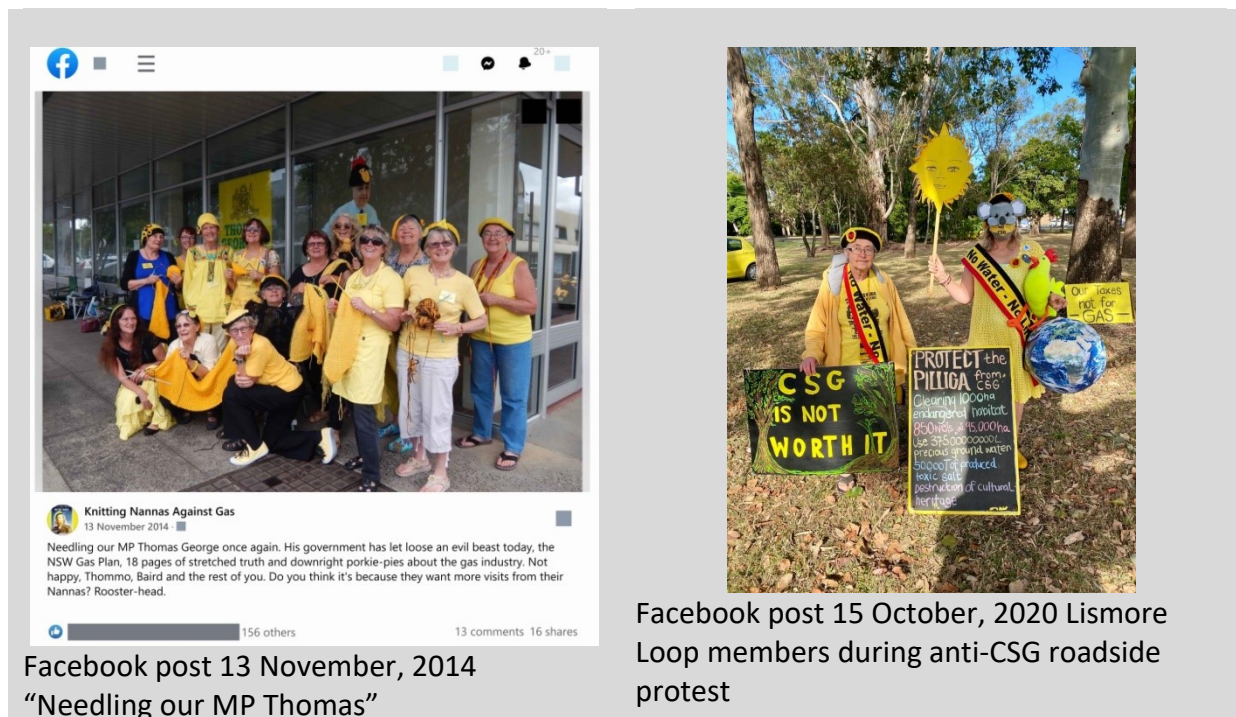
4.3   Casting on: growing the movement with more loops

This section discusses how and why one group of Knitting Nannas in the Northern Rivers developed into a movement of many loops (groups) across Australia. Research into entry learner behaviour identified the characteristics of the women that enabled their participation: their activist motivations, demographics, backgrounds, skills, and capabilities.

The motivational drivers for women's engagement in KNAG were a pre-existing concern for the environment, a commitment to anti-fracking activism, the rapid emergence of an appealing form of older women's social action, the intention of a purposeful retirement, and the ability to use one's professional skills, whether retired or not. The intrinsic nature of older adult, activist motivation is a combination of personal values related to the relevance and worth of real world situations combined with seeking change for social and environmental improvement. The attraction of challenging the double jeopardy situation of ageism and sexism that older women encounter also drew women into the movement (see Section 2.1.2.2 on critical feminist gerogogy). A qualitative analysis of responses to the question, "what motivated you to join the Nannas?" identified three key themes: (1) wanting to be part of anti-CSG campaigning; (2) already being concerned for the environment; and

(3) attracted to an older woman-centred movement. Knitting or other forms of crafting were not mentioned as motivators but rather, as a useful skill which, as it turns out from survey data, a number of women did not have. Quite a number of Nannas learned to knit and crotchet after joining the KNAG.

Figure 4.5 is a quantitative representation of the qualitative survey data coded into ten themes using NVivo 11.

Figure 4.5: Survey data Q9 What motivated or inspired you to be a Knitting Nanna? Coded analysis in NVivo 11
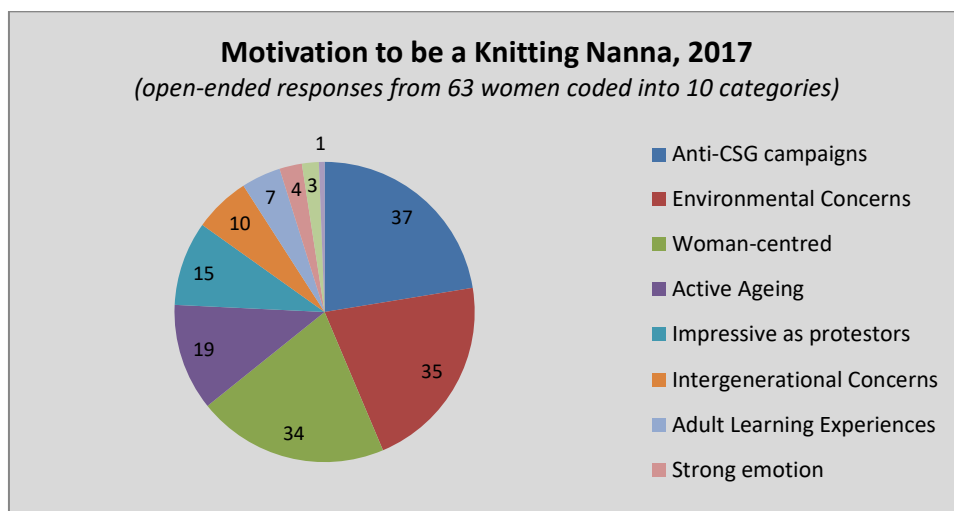
Survey data showed that women joined KNAG because they were already drawn to protesting against CSG and saw this as part of their broader concerns for protecting the environment. Witnessing the Knitting Nannas in action was the most common way other women found out about KNAG (Survey data Q10: How did you first hear about the Knitting Nannas? n= 39) mostly at protests, blockades, anti-CSG meetings, awareness raising film nights, and market stalls.

Finding RQ1.4: *As with the women who initiated KNAG, the main motivational drivers for women joining were intrinsic. These included: a pre-existing interest or commitment to anti-fracking activism combined with an appealing form of older women's non-confrontational social action. A further contributing factor was the intention of a purposeful retirement. Knitting or other forms of crafting were not motivators for joining the group. Confirming that age is no barrier to activism, new loops were formed by women aged between 60 and 80. These are located along the*

Australian eastern seaboard, coinciding with the development of CSG extraction or linked to other local environmental issues.

The majority of loops are located along the eastern seaboard of Australia, coincident with the recent developments of coal seam gas extraction. Table 4.1 was generated as a matrix query in NVivo 11. It compares survey data for loop locations with the year they began, the age of originators, and a timeline of anti-CSG activism. The creation of a new loop can be directly linked to a location targeted for fracking or an environmental issue, as in the cases of Illawarra (which has focused on the effects of long-wall coal mining on Sydney and the Illawarra's water catchment) and Bellingen (due to contamination of the Bellingen River).

Age is no barrier to activism, with women in their 70's being the catalysts of KNAG loops. Half of the women who started loops were aged between 60 and 80. Most of these loop founding women were either retired or not looking for work (n=5), or in part-time employment (n=4); only four were in full-time employment; there was no data for the remaining four.

Table 4.1: Loops by year of inception and ages of originators who responded to the KNAG survey (n=18 out of 67) Data matrix query in NVivo linked to timeline of local catalyst environmental issues

Loop	Year loop began	Age range of originators and employment status R=retired; NE=not employed not looking for paid work; P/t=part-time employed; F/t=full-time employed; nd= no data	Timeline of anti-CSG campaigns or local environmental issues likely to have contributed to formation of KNAG loops.
			March 2011: Hundreds protest in Sydney against CSG on the NSW North Coast [1] October 2011: Metgasco operations experience first opposition in Northern Rivers through formation of Kyogle Group Against Gas and 500 people march in Kyogle [2]
Lismore, NSW	2012	75-79 years (R) 50-54 years (NE)	Early 2012: Locality-based groups begin and regional organisation emerges – Gasfield Free Northern Rivers emerges with deployment of the 'gasfield free community strategy'; community mobilisation; local capacity building (social movement and direct action training); website; and strategic networking. Lock the Gate collaborates with GFNR. [2] March 2012: in Lismore 700 people gather for public meeting and form urban-based action group with sub-
Grafton, NSW	2012	55-59 years (P/t)	
Illawarra, NSW	2012	70-74 years (R)	
Canberra, ACT	2012	50-54 years (F/t)	
Alice Springs, NT	2012	60-64 years (nd)	

Loop	Year loop began	Age range of originators and employment status R=retired; NE=not employed not looking for paid work; P/t=part-time employed; F/t=full-time employed; nd= no data	Timeline of anti-CSG campaigns or local environmental issues likely to have contributed to formation of KNAG loops.
			groups organising fundraisers and rallies. [2] May 2012: Lismore rally of 7,000 people [3] June 2012: Shannon Brook protests (west of Lismore near Casino) [4] December 2012-January 2013: Glenugie protests (south of Grafton) [4]
Mid-North Coast 'Downstream', NSW	2013	50-54 years (NE)	January – February 2013: Doubtful Creek protests (north-west of Lismore) [4]
Gloucester, NSW	2014	50-54 years (P/t) 70-74 years (nd)	January-May 2014: Bentley blockades (north-west of Lismore). Metgasco withdraws and in December 2015 shareholders accept NSW government buyback offer. [4]
Great Lakes, NSW	2014	60-64 years (nd)	August 2014: Gloucester residents with other Mid-North Coast supporters blockade proposed site of AGL fracking project; they continue regular protests and marches in Gloucester and at AGL site and Sydney office. AGL finally withdraws in 2016. [5]
Far North, Qld	2014	50-54 years (F/t)	November 2013: Concerns over potential Cape York development. [6] November 2014: Concern about fracking in Far North Queensland prompts Douglas Shire Council (Port Douglas, Daintree and Mossman) to pass a complete ban on any future CSG projects. [6]
New England / north-west NSW	2014 / 2015	65-69 years (P/t) 65-69 years (P/t) 65-69 years (nd)	March 2014: Santos CSG project in the Pilliga reported as first confirmed event of aquifer contamination in Australia. Raises lack of trust in CSG mining companies. CSG exploration has been in the Pilliga since 1998. [7]
Canberra, ACT[12]	2015	50-54 years (F/t)	November 2015: Indigenous leaders from NT Watarrka (Kings Canyon) National Park (near Uluru) meet with Federal Minister for Environment, Greg Hunt, in Parliament House, Canberra to protest fracking exploration and seek ban.[8]
Bellingen, NSW	2015	65-69 years (NE)	February 2015: Bellinger River shows signs of toxicity downstream and endemic Georges' turtles found to be sick and blind. [9]
Western Downs, Qld	2015	55-59 years (R)	October 2015: Chinchilla farmer George Bender suicides after fighting fracking for 10 years. [10]
Perth, WA	2016	55-59 years (F/t)	July 2016: Community concern about fracking in WA's south-west (which includes Perth) leads to calls for bans.[11]

Source: KNAG All records data for NVivo 11 IMPORT OK 24Sept.xls
Notes:
https://www.news.com.au/breaking-news/hundreds-protest-against-gas-mine/news-story/a96aeff45f462fa16ee5fecc9bf550eb
Ricketts (2013)
https://www.echo.net.au/2012/05/rally-calls-for-gas-free-region/KNAG and
https://www.northernstar.com.au/news/the-rise-and-fall-of-metgasco/2906610/
Nanna Evelyn (pseudonym) interview
https://www.newcastleherald.com.au/story/2492047/gloucester-residents-protest-agl-coal-seam-gas-project-photos/#slide=0 and https://www.abc.net.au/news/2016-02-04/gas-giant-agl-pulls-out-of-gloucester-csg-project/7138784
https://www.abc.net.au/news/rural/2013-11-28/cape-york-csg-concern/5122322?site=Darwin and
http://www.abc.net.au/local/stories/2014/11/05/4122003.htm
https://nwprotectionadvocacy.com/a-short-history-of-fracking-in-the-pilliga-forest/ and
https://www.smh.com.au/environment/santos-coal-seam-gas-project-contaminates-aquifer-20140307-34csb.html
https://www.abc.net.au/news/2015-11-24/kings-canyon-traditional-owners-seek-emergency-heritage-listing/6969036
https://www.abc.net.au/local/stories/2015/02/25/4186594.htm
https://www.theguardian.com/australia-news/2015/oct/28/george-benders-widow-attacks-mining-lobby-for-claim-his-death-was-hijacked and https://www.humansandnature.org/contaminated-life
https://www.abc.net.au/news/2016-07-10/labor-mps-call-for-ban-on-fracking-in-was-south-west/7584514
Note that there are two dates for the origin of the Canberra ACT Loop because the first loop did not have enough members and was resurrected, to form a loop for a second time in 2015. (Nanna Joy, Interview)

Nanna Evelyn, who was a member of the first loop in NSW, joined KNAG having initially seen them when she was part of local anti-CSG protests at Shannon Brook ponds in 2012 and having heard how well respected they were even at that early stage. She remembers feeling comfortable with their effective, non-confrontational approach that aligned with her values. She was seeking a calm approach to voicing her concerns and she did not want to be typecast as an angry ecoterrorist. Evelyn had recently retired from a job where she had experienced depression due to workplace bullying and harassment, and she was fatigued by the thought of any aggression. In this extract from interview she uses the words "more aligned and comfortable":

> [It] was after that when [partner] went up to Queensland with a lot of the local Nannas, who had only just gotten together. When he came back, he basically told me all the stories of what was going on up there and how the Nannas were just so well respected. Yeah, it's like, okay, I'll join the Nannas … being a young activist they just call you ecoterrorists and all those other words they'd sort of come up with when people started getting active about coal seam gas and coal and forestry etc. I just felt like I didn't want to be a part of a very loud and angry group of people who, you

know. I've got no problem with people protesting, but when they get aggressive and just abusive, I just didn't want to take part in that. So Nannas were an option that I felt much more aligned with and comfortable with and I thought I could get my voice heard in a much more calm way.

In response to the threat of CSG, new loops were formed across the Northern Rivers. The second loop formed at Grafton coinciding with nearby protests against Metgasco at Glenugie. Women gave many reasons why they started new loops. The main one was the non-confrontational and celebrated Nanna-ness of the KNAG, who gained popularity in the region.

This extract from Respondent S.61 encapsulates these values of frame alignment with the importance of meeting "amazing" women with whom she hoped to build longstanding friendships. Other respondents also referred to valuing this aspect of "sisterhood":

> The Grafton Loop was the second loop formed. I think people see that KNAG is a way to 'protest' that is not confronting to you. Obviously some people want to be a Nanna because they see the popularity of the Nannahood. My kids thought I was crazy at first, now they love it. My partner is very supportive. My dear old mum still thinks I'm going to get arrested. Some of my friends say they could never do it. KNAG is great. It has given me the opportunity to meet some amazing women who I'm sure I'll be friends with for a very long time.

The desire to be an effective activist against CSG and its impacts on climate was a strong motivator for Nannas, as expressed by S.13, "I believe it is one of the most effective non-violent protests ever. I am strongly against CSG and concerned about climate change".

Finding RQ1.5:   Pre-existing frame alignment involving a strong emotional commitment to protecting environmental values for future generations or intergenerational climate justice. This is the motivating force for KNAG membership, rather than an interest in knitting or crafting. Age and gender were contributing factors in frame alignment. The KNAG CoP category of desired knowledge, skills and attitudes or "domain of competence" was defined as "an older woman's way of protesting". Core values the women adopted were: being

non-confrontational, visible and determined, appreciating that change takes time and patience, learning about the issues through the social processes of sharing and talking, taking time to develop and maintain friendships, recognising the strength that comes from being part of a group, being productive and creative while protesting by crafting, having fun by adopting humorous performative strategic essentialist identity, and sharing stories of bearing witness to the toxic effects of CSG.

The KNAG adoption of an eccentric uniform and humorous performative activism, strategically using the Knitting Nanna essentialist identity, has generated sustained community engagement with their activism. When AGL (originally the Australian Gas Light company, but now known only by its initials) was prospecting for CSG in the Northern Rivers region around the town of Gloucester the community began their protests. Nannas from other loops joined in support which, impressed other women and led to the development of the Gloucester loop. As Respondent S.40 reported, she was impressed by one of the Nannas knowledge of fracking and became interested in their form of knitting NVDA protest:

> One of the women, who sat with us regularly at the vigil during our stand against AGL, turned up one day dressed in yellow and black and brought her knitting. I had a lot of respect for her understanding of the situation so I listened to what she had to say about the KNAG. I liked what I heard! My kind of protest! Non-confrontational.

Similarly to S.40, some women were already engaged in fighting fracking at some level. Respondent S.61 said, "with my involvement in the Glenugie blockade and Gasfield Free Northern River, I met the Lismore Nannas". Some of them had also heard about the Nannas from friends (n=20) and only a few through social media such as Facebook (n=12). Respondent S.46 heard about the Nannas "from friends who went to the Bentley blockade and from social media".

Later joiners were inspired by hearing stories from the original KNAG who toured the Tara, Dalby and Chinchilla gas fields in south-east Queensland in August, 2012, through an organisation called Bridging the Divide. Nanna Joy was on that tour and described the experience as "a turning point, making me even more determined to fight fracking". They

learned of children suffering the effects of living close to gas wells: nose bleeds and skin rashes. The social movement tactic of bearing witness by tapping into intense emotions engendered by these firsthand accounts (della Porta and Diani 2006, pp. 176-178) was used to share narratives of landscapes transformed by industrialisation, of contaminated water polluting valuable natural resources, of increased unemployment following the initial phase of infrastructure build, and of once cohesive communities irrevocably divided. The impact of these stories made joining KNAG even more compelling as women learned from one another and began to question the motives of governments that would allow environmental degradation and human health deterioration to occur.

The following quote from Respondent S.31 describes a transformative shift in thinking. This involved the realisation that democratic processes have been subverted and that government is no longer perceived as acting for people's interests, but rather for pecuniary gain:

> [I joined KNAG because of…] the need to protect the environment from destruction, realisation of the danger of CSG wells near Casino, reinforced by experiences of Chinchilla and Tara farmers. The total ignor-ance (as in ignoring safety and the wishes of the people) of our government, in favour of out and out greed.

The culture with which KNAG was founded recognised that age should not be a barrier to being an activist. Resisting ageist sexism, as is the case of KNAG, is a motivational factor for participation. The specific form of NVDA that KNAG use fits pragmatically and gracefully with ageing women's capacities. Respondent S.27 indicated that many women see this as empowering and effective:

> I liked that it is a woman's way of protesting: non-confrontational, talking patiently to people, being visible and determined, understanding that change takes as long as it takes, cementing friendships, knitting useful stuff and being creative, learning more about the issues, talking and sharing. There is strength in being part of a group.

Finding RQ1.6:   *KNAG's use of the social movement tactic of bearing witness, by*
             sharing narratives of lived experiences from field trips to CSG mining locations,
             combined with their adoption of a culture of older, wiser and caring woman, their

"Nanna-ness", gave credibility to KNAG and offered an added attraction for newcomers. This confirms the KNAG CoP domain of activist competence, which includes bearing witness, an element of social movement theory (SMT) combined with the credibility of the Nanna as older, wiser, and grandmotherly.

Finding RQ1.7:   KNAG work in coalition with other anti-fracking and climate justice activists and add their numbers to strengthen impact, which encourages women to join the movement. This confirms the KNAG CoP domain of activist competence, which includes appreciating and deploying the logic of numbers, another construct borrowed from SMT.

Being able to add numbers of people and their visibility to the cause was a motivation and an activist skill established early in KNAG's activities and this skill continues to be used. Della Porta and Diani (2006), in their analysis of social movement theory, refer to this as the logic of numbers. Activists are more visible when they combine forces in displays of strength. This is further discussed in Section 5.5 Figure 5.6 as the "three Nanna rule". The Gloucester AGL protests began in August 2014, with locals of all ages engaged in the battle. In solidarity with her community, S.47 chose the Nanna identity for her preferred form of protest:

We were blockading to stop AGL's CSG project at Gloucester. I wasn't prepared to lock on, but liked the idea of knitting while sitting there, and it also made a statement saying you were there to support those who were taking direct action.

Being retired and older is an opportunity to choose how to spend one's time, freed from the responsibilities of employment and family commitments – care giving, child rearing, home maker roles (referred to as reproductive work in Section 2.1.4). Nannas in this study ranged in age from 45 to 84, the majority were 50 to 74 (88%, n=61, Survey data Q4: Age category) and typically over half were retired (54%, n=30, out of 56 responses). Retirement, either not being in paid employment or having part-time work, enabled women to have the time for their activism.

Respondent S.2 saw this participation as being able to be actively involved and contributing in a meaningful way. Of importance to her was the enjoyment of being

supported by "like-minded women", while she had an intrinsic motivation of wanting to contribute meaningfully to society:

> [The KNAG movement has grown quickly because of …] the interest and concern, particularly with older KNAG. They have retired and now have the time and support from other like-minded women. The KNAG come along and whammo! That's how we can do our bit.

Older women protesting with other older women sends, a strong visual image of concern for future generations. The Nannas connect with intergenerational climate justice through their actions. This accords with the intrinsic motivation more prevalent in older learners and the empowerment sought by critical feminist gerogogy (outlined in Section 2.1.2.2) Respondent S.21 said her concern for future generations was her motivation. The way in which "KNAG-ing" (as the Nannas refer to their activism) aligns with her worldview is further evidence of frame alignment:

> We have more time than most people today, and we have seen the effects of poorly planned decisions regarding the environment etc. We can clearly see what is happening to our planet and have a very strong sense and need to protect our grandchildren. We try and keep the planet in some sort of healthy state for all future generations.

Being a KNAG is power shifting. Nannas claim that the act of being in a group of old women sitting and knitting defuses situations where tensions and aggression emerge. Respondent S.7 provides an example of this use of strategic essentialism to de-escalate tensions. This is consistent with the literature (Ricketts, 2012; della Porta and Diani, 2006) on NVDA as a powerful tactic engendering loyalty shifts, "sitting with knitting gear is incredibly calming when the police are aggressive. Older women are together, seemingly 'harmless' but insistent." As previously mentioned in Section 2.1.4, Canada's Raging Grannies had comparable experiences and used similar tactics, unbeknown to KNAG (Nanna Angie, involved in KNAG since 2014, interview 15 July, 2017).

Women mentioned feeling dignified, braver and surprised at their emerging fearlessness. Respondent S.53 commented she noticed "just how brave I can be" while Respondent S.17 described this feeling as, "the creative spirit and bravery". Respondent S.21

considered the KNAG identity was "a way of protesting with dignity, standing with other strong fearless women in a non-violent, yet very effective manner".

A sense of achievement and popularity by using non-threatening humour and lightheartedness adds to the existing intrinsic motivational condition (see Wlodkowski and Ginsberg, 2017). A strong sense of camaraderie was developed through "sisterhood", deploying the logic of numbers, and the added effect of developing friendships. KNAGing, according to Respondent S.56:

> … gives opportunity to continue campaigns through a lighthearted platform. It gives friendship and support to woman working for the same outcomes. It encourages others to be brave, strength in numbers. It is a popular movement that has caught people's eye. It is effective.

KNAG's recognition of their growing bravery indicates the learning experiences of on-the-job activism are challenging and the KNAG CoP provides a supportive and inclusive learning environment. This combines the motivational conditions for engagement of older learners with the characteristics of critical feminist gerogogy outlined in Section 2.1.8. Respondent S.17 described a positive camaraderie as dedication and determination to work together to overcome problems, saying she valued, "how friendly and dedicated they are … the ongoing positiveness, no matter how large the problem".

Finding RQ1.8:   Once they became involved, women discovered a collective creativity that engenders positivity in overcoming the challenges of activism, and ageing. The KNAG CoP provides a supportive and inclusive learning environment, which is consistent with motivational conditions identified by Wlodkowski and Ginsberg (2017). It also aligns with critical feminist gerogogy, as KNAG draw on the extensive life experience of older women by engaging in a liberating, collective, negotiated learning enterprise (Findsen and Formosa, 2011).

Confirming the principles of critical feminist gerogogy (as discussed in the literature review Section 2.1.2.2), a strong sense of meaningful active ageing was important for many. Respondent S.26 described the knit-in tactic as, "great fun and an effective way" of showing concerns. Respondent S.55 was relieved to find a way of drawing on her extensive life

experience post-retirement by engaging in a liberating, collective, and enjoyable negotiated learning enterprise within KNAG. For her, the determination to not let physical limitations constrain involvement in a purposeful retirement was important, as also was being able to use her professional skills:

> I've always been involved in social justice issues as a result of being a teacher of adults. It's helped me come to terms with retirement. I have worthwhile causes and feel passionate about making a difference. Didn't think I'd be able to make much of a difference when I stopped working. Nannas have the time, the passion and the staying power because their families have grown and they no longer have work pressures to deal with.

The social aspect of being welcomed and connected to other women through being visible and vocal added a further positive dimension. This was expressed by Respondent S.54 who stated that what she valued most in joining the KNAG was, "the spirit of the groups I've met. Openness, creativity, fun, determination, stamina, and caring for one another." This harks back to the instrumental importance of inclusivity. The data strongly suggest Nannas have discovered a collective creativity that engenders positivity in overcoming both the challenges of activism and of ageing.

> *Finding RQ1.9:   A majority of Nannas were circumstantial activists and novice campaigners who overcame their lack of activist experience, encouraged by realising that being part of KNAG made them feel empowered, fearless, brave, and determined.*

In the final analysis, the appeal of knitting or crafting was definitely minor compared to the need to mobilise based on one's pre-existing frame alignment. Over half the women (55% (36 of 65)) reported never having participated in public activism before (Survey data Q.8). They came to activism accidentally as novice campaigners faced with the imminent threat of CSG; their orientation is often termed "not in my backyard" (NIMBY), or "circumstantial activism" (Ollis 2012; Ollis and Hamel-Green, 2015, Ollis 2020). Faced with the prospect of CSG in their own regions, they were galvanised into action. Their determination to fight fracking helped many women to overcome their lack of experience in

social movement activism. Seeing and talking to other older women who were visible and vocal, participating in the NVDA knit-in inspired and gave women courage. When they joined the KNAG, they found a form of activism that was intrinsically motivating. It met their interests and passions for environmental intergenerational justice in ways that were inclusive, fun and engaging.

4.4   Family and friends' support of KNAG

In this section, which looks at an aspect of RQ1 the notion is examined whether the attitudes of family and friends had any bearing on women's motivation to become and continue as a Knitting Nanna.

After taking the first steps to create or join loops, women experienced a range of reactions to their activism from their family and friends, who were not uniform in their support. Respondent S.67 summed up this breadth of opinion, "some are confused, some think I'm nuts, some really admire me". Similarly, Respondent S.45 said, "it varies ... from being supportive to having Facebook friends block me as they don't want to hear".

> *Finding RQ1.10:   Women's motivation to join KNAG was not influenced by the views of their significant others. Where positive views and active support was forthcoming, it was appreciated. Where negativity was experienced, this did not deter these women's activism.*

Despite this disparate range of sentiments, overall, women received positive feedback from some parts of their relationship networks. "Supportive" or "support" were the most frequently used words (n=26) when women described how their family and friends reacted to their involvement with the Nannas. Family members (such as fathers, mothers, husbands or partners, daughters, sons, and grandchildren) were mentioned as either being wholeheartedly supportive (admire, proud) or less supportive (interested, amused). The frequency for the top nine words ranged from "supportive" (n=26) to amused (n=4) as Figure 4.6.

Figure 4.6: Word cloud generated in NVivo 11 from responses to what family and friends think about the woman's involvement with the Knitting Nannas (question 22).

Q22 Word Frequency Query Results – NVivo (n=54)	
Word	Count
supportive / support	26
family	15
love / loves	11
proud	8
interested / interest / interesting	6
admire / admiring	5
husband	5
amused / amusement	4
daughter / daughters	4
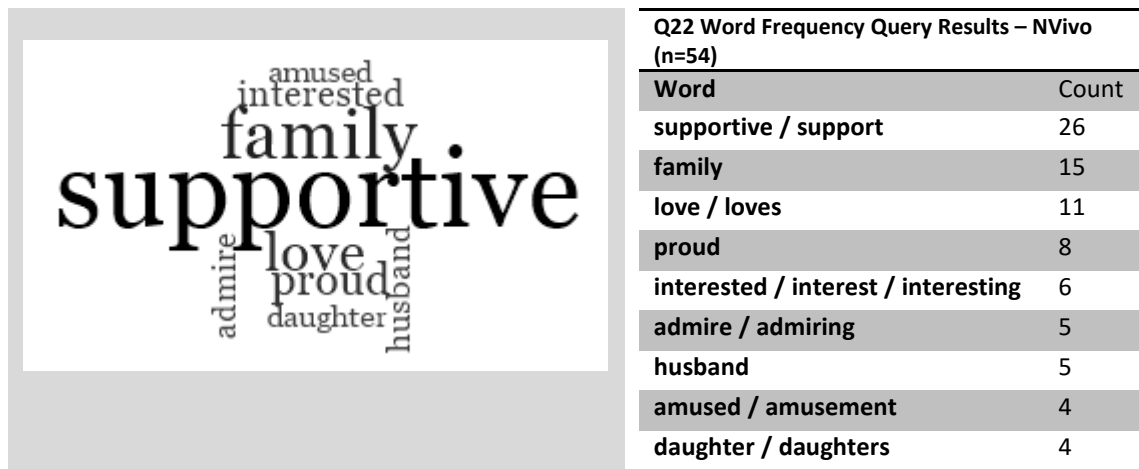
Respondent S.31 said:

> One daughter and one son are very proud, the other two just support me. My partner is right behind me, and either joins me in events, or stays at home to mind my bush block and little doggies while I am away at events such as the KNAG conference, etc. Friends all support me and cheer me on.

Respondent S.50 said she is most heartened by her granddaughter, "her biggest fan" whom she feels is politically astute. She hinted at her future active citizenship:

> My daughter was originally embarrassed, warning me not to get arrested, but eventually she became very supportive, but she's not politically motivated in any way. My granddaughter has been my biggest fan, standing alongside me at many gatherings. At the age of 10, she has a much greater knowledge of politics than her mum, which bodes well for her future. My friends have been really supportive and one became a KNAG herself. Others attend our fundraising events, and my two sisters have shown no interest at all.

Women overcame their husband's hesitancy by enlisting their help, and recognised their children held varying attitudes. Respondent S.28 said:

> My husband helps out as a 'roadie' so he comes along to most things that we do. He has never been involved in anything like this before and is still rather hesitant. My

children range in feeling very proud of what I do down to not being sure if I am being too radical.

Respondent S.59 described her friend's pride and joyful notoriety in knowing someone who had been brave enough to lock themselves to a piece of heavy machinery in order to prevent further work, "they are supportive proud and happy about it all. When I was arrested for locking on at the Pilliga they bragged about it everywhere". (This is an action not lightly taken, using a U-shaped bicycle lock around one's neck attached so that a blow-torch is needed to detach the protester.)

The most unequivocally encouraging descriptions were reports of families and friends who expressed pride in knowing someone who is a KNAG and an anti-CSG activist. This orientation thereby bolsters strong frame alignment (della Porta and Diani, 2006; Snow et al., 2014) for the fight against CSG. An example was Respondent S.17, "they think it is wonderful and are proud that they know someone who is out there voicing their concerns". Women received positive reinforcement through acknowledgement of their tactics and achievements from their friends and relatives. Respondent S.16 said, "they acknowledge our success and appreciate our persistence; they support our goals and love our stories and methods". Friends of S. 45 "admire the Knitting Nannas efforts to bring about awareness". Respondent S.55 said, "my family are delighted and follow the Knitting Nannas and what they do. I've moved here from [interstate] so my friends there are delighted and know that I'm doing something I really love. They enjoy getting photos and updates". Respondent S.61 said, "my kids thought I was crazy at first, now they love it. My partner is very supportive. My dear old mum still thinks I'm going to get arrested. Some of my friends say they could never do it." Respondent S.54 sensed that her family were "freaked by non-violent direct action" but this has not deterred her.

Nannas' families and friends have learned about the negative effects of CSG through their relatives' or friends' involvement. Through these networks and through KNAG, learning occurs for the Nanna and her family. Social movement learning refers to learning by those inside the movement as well as those outside as a result of collective raised awareness (Hall and Clover, 2005). Respondent S.60 considered her children's learning:

I think at times they think I am stark raving mad … the more I have investigated

issues, given my thoughts, and then unfortunately watched some of those

predictions come true (Australia's energy price gouging), the more they are listening,

they are changing. My teenage children are now getting it … from being slightly

embarrassed I think they are understanding now why I am doing it.

Respondent S.60 acknowledged that learning about the issues made her and her family

re-evaluate some of their previous financial decisions:

I had shares in many of these companies I am now going up against and I have

pushed my family to disinvest from them. At the start I think they thought I was mad

... now they don't! We are now all on a learning curve, from younger to older

generations and, just quietly, I think they are proud of what we are doing.

Respondent S.36 experienced her family's shift from amusement to encouragement, "at

first there was amusement, then with consistent nagging, a change of attitude and

encouragement, on their part". Some Nannas experienced hostility or condescension in the

form of mild denigration such as "most just nod and smile" (S.4) or "they thought it was a

harmless activity" (S.19), or being called "looney" (S.57) and "a little crazy" (S.58).

Binary framing around gender was also a theme, as Respondent S.9 wrote, "my father is

pleased I've joined a knitting group because my mother was a very good knitter!"

Respondent S. 52 said:

The menfolk are a little less tolerant than the womenfolk. My husband and two sons

(in their 20's) support me but aren't too interested in WHAT I actually do. So I just

have that part of my life as mine. It doesn't bother me. In fact, I think it's healthy for

people to be free to do what is important to them and for others.

The attitudes of friends and family ranged from admiration and encouragement to

benign hostility and denigration. This indicates the novelty and challenges faced by early

KNAG in stepping out from invisibility and voicelessness. The camaraderie they found in the

CoP empowered them to get on with their activist lives and, in the least supportive

environments, they chose to interpret the negativity as a form of freedom to express their

authentic selves.

4.5   Prior life experiences and skills that contribute to being a KNAG

In this section, the degree to which women's previous life experiences influence their capability to become activists is assessed.

In determining the skills and capabilities with which the women entered the KNAG CoP, different aspects of adult life such as professional work, community volunteering, or domestic roles were considered, in terms of learner entry behaviour. As mentioned earlier, learner entry behaviour describes the learner's knowledge, skills, attitudes, motivation for learning, and learning style preferences before entering an instructional setting (Ireri and Omwenga, 2014). The concept has been utilised in this research to identify the women's capabilities, prior to joining KNAG, as enabling predispositions to successful environmental activism. In this section, survey findings are combined. These constitute findings about women's life experiences before entering KNAG in relation to their occupations, whether paid or unpaid (Question 26); involvement in groups or associations (Question 7); and reflections on skills that have helped in what they are doing as Nannas (Question 18).

> *Finding RQ1.11:   Women came to KNAG with an extensive skills set drawn from mostly stereotypically female occupations, much of which was easily transferable to activism. Their combined capabilities were located in organising, planning, coordinating, managing, creating, performing publicly, and crafting. Many had been involved in ecological activities and environmentalism and were assumed to have a degree of environmental and ecological literacy. Many had a degree of digital information systems literacy and some were social media savvy. Whilst few Nannas had a background as activist feminists they had an awareness of sexism in their everyday lives that attracted them to the KNAG. What they lacked were NVDA strategies, specific knowledge of CSG, and understandings of hegemonic power relations within extractive industries and government.*

The majority of women described their previous occupations by focusing on paid work. Only two respondents mentioned domestic unpaid work, even though the survey question was purposely non-specific. It was clear many had moved through a range of roles, in up to five different paid career positions. There were examples of pathways within the same or

related occupations as well as seemingly unrelated jobs. The most prevalent were stereotypically female occupations such as teachers, nurses and other health professionals, secretaries, and office administrators. As women's careers progressed, many had moved into more managerial roles. Some women had run their own businesses. The variety and diversity of jobs held was extensive, as shown in the word cloud in Figure 4.7:. Many women were very involved in volunteering in their local communities as local rural fire fighters, as conservationists in Landcare[6] and local environmental groups, and as board members and/or activists in local not-for-profit organisations. Underscoring these occupations were skills in computer competence and a degree of digital literacy. These women had been through the digital revolution in their workplaces during the 1980's, 90's and 2000's. Many were farm-based home-makers responsible for computer-based financial and general record keeping and involved in computer-based decision-making information systems (Mackrell et al., 2009, p. 2). A small number, seven, had used social media (see Figure 4.9).

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[6] Landcare is an Australian government supported volunteer organisation. Landcare Australia is a national not-for-profit organisation established more than 30 years ago that links farmers and conservationists focusing on natural resource management. It supports over 6,000 groups and 100,000+ volunteers with landcare projects that involve sustainable land management practices and environmental conservation. Corporate partners contribute financial and in-kind support as well (see http://landcareaustralia.org.au)

Figure 4.7: Word cloud generated in NVivo from women's descriptions of current and previous occupations whether paid or unpaid Question 26 (n=57).

Finding RQ1.12:   Activist skills are not well defined. The field would benefit from the development of domains of activist competencies and identifiable prerequisite capabilities. Further post-doctoral research is proposed to investigate a fuller activist behaviour entering skills set applicable to older women in which both domestic household and care work are integrated with visible work in paid or community-based volunteerism.

In coding the occupational data, it was necessary to identify precursor and transferable skills useful for environmental activism. This exposed an unexpected knowledge gap. As Martin and Coy (2017, p. 518) stated, "few activist skills are well defined." and many of the diverse skills required for social activism have parallels in occupations such as "bookkeeping, computer programming, fundraising, policy development, writing, communication and marketing, event coordination, and meeting facilitation." Additional skills listed included lobbying, planning, recruitment, public speaking, non-violent direct action, and strategic thinking, which are often referred to as "interpretive skills" or "reading the strategic situation" (ibid, pp. 518-519).

Skills mapping, adapted from curriculum development processes, was employed in the development of an activist skills checklist. An initial skills checklist was devised by analysing

training resources from two activist organisations, Amnesty International and Extinction Rebellion. These were combined with the principles of transformative environmental adult education (outlined in Section 2.1.2.3). Appendix 3 provides the results comparing these three sources. Additional data were included based on field observations of Nannas' capabilities and follow-up emails of Nanna interviewees who were invited to state their opinions about they considered the most critical skills for KNAG. These can be summarised as ecological and environmental literacy, NVDA, IT skills, learning dispositions of empowerment, creativity and humour. Nanna Evelyn replied:

> … for me it would have to be (i) an absolute commitment to protect our natural environment and have compassion for our fellow human beings, and (ii) a willingness and caring capacity to enjoy each other's company whilst participating in confronting and hostile actions.

Nanna Vida's list was:

- A passion and deep love for the natural world and protecting it

- Kindness, patience, empathy (amongst Nannas too!)

- Never reply whilst angry. Think about the process, get back to you later. Know when to walk away.

- IT skills!! Getting the message out on social media platforms is essential but many Nannas are L platers, which leaves many missed opportunities

- Empower and lift up others, don't denigrate for your own power. Sadly, it happens. Foster each individual's own attributes and the skills they bring.

- Creative skills of some kind are helpful and a sense of humour is essential!

The final skills checklist was a synthesis that included 25 domains listed in Figure 4.8. This skills set was applied to the data with the knowledge that it has opened up a new line of post-doctoral enquiry likely to involve consultation and validation against other similar activist groups.

Figure 4.8: Environmental activist learner skill set domains used in coding KNAG entering behaviours, learning through being a KNAG, and ideas for further learning.

1. Adult learning processes and critical reflection

2. Advocacy

3. Bearing witness

4. Creativity and entrepreneurship

5. Ecological literacy, environmentalism, climate change activism

6. Effective communications, confidence in public speaking, written and verbal communication

7. Enculturation into the movement's values and behaviours (Nannafesto, the Creation Story)

8. Engaging and negotiating with police, politicians, and the media

9. Facilitation, networking, community engagement

10. Humour

11. Intergenerational justice

12. Leadership

13. Member well-being, safety, legal rights

14. New social movement experience

15. NVDA activist tactics and strategies

16. Old social movement experience

17. Performative public actions – music making, street theatre

18. Planning and coordination

19. Political and power awareness

20. Resilience

21. Social media use, messaging, networking

22. Strategic or tactical essentialism

23. Strategic thinking and critical reflection

24. Team organisation and working in groups

25. Visual communication, graphics making, craftivism

Survey data were coded to the domains of the activist skills set. Three areas of data were coded. The first was learner entry behaviours, which relied on responses to Questions 7, 18 and 26 dealing with Nannas' prior involvement with other groups or organisations; how life experiences before being a Nanna have helped; and current and previous occupations, whether paid or unpaid. The second area drew on responses to Question 14 about what the respondent had learned so far. The third area from Question 19 asked what each respondent would like to learn more about. See See Figure 4.9, Figure 4.10 and Figure 4.11.

Figure 4.9: Chart analysis of KNAG activist entry skills, 2017 (combination of Survey questions 7, 18, 26, n=60, 53, 57)
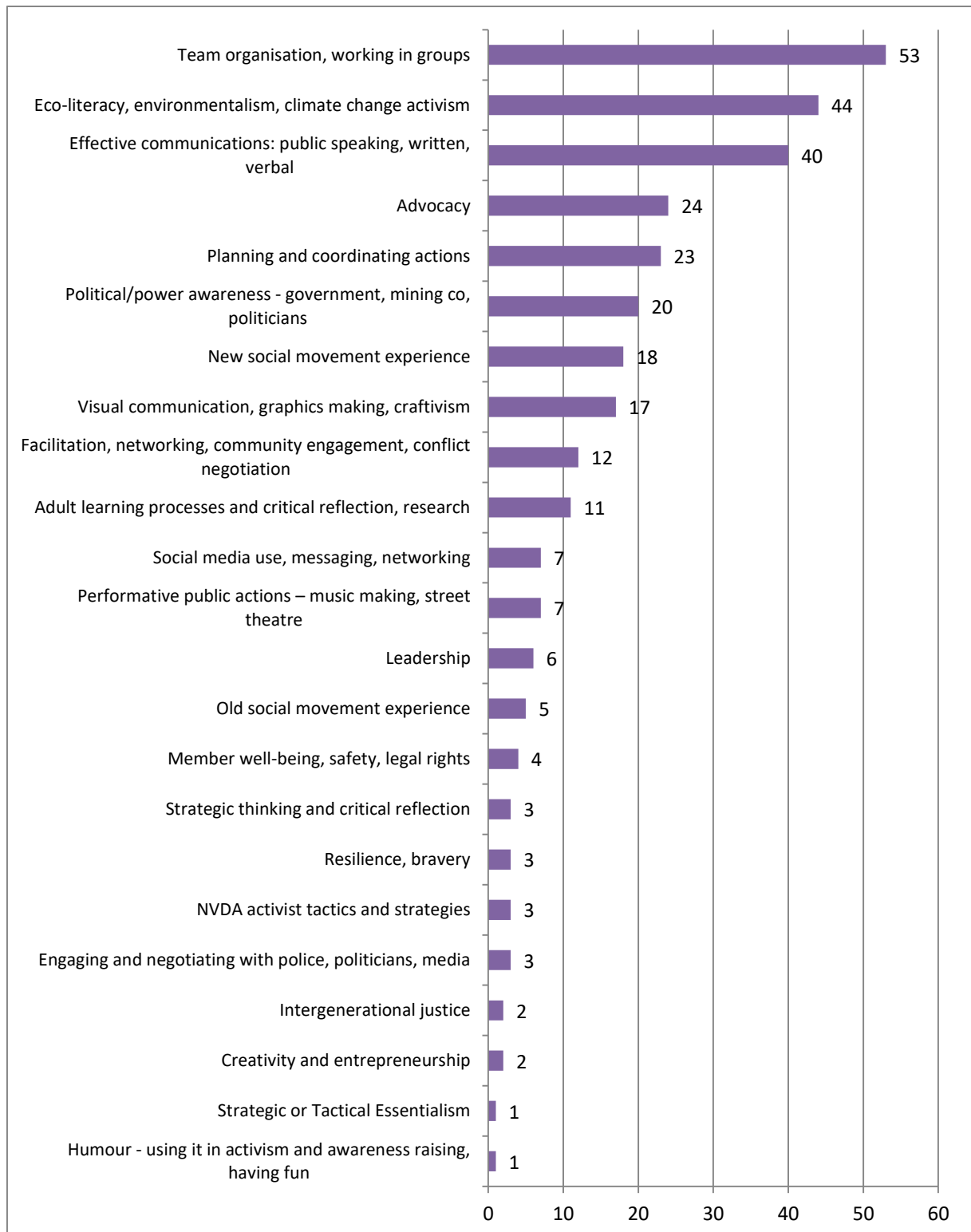
Women entered KNAG with a significant skills set drawn from their work and life experiences that included:

- skills in organising and working in teams or groups often in community-based volunteer work or in paid positions (53, 96%);
- ecological literacy, environmentalism and climate change activism (44, 80%) only 15 mentioned actual activism involving protest actions; and
- effective communications skills (40, 73%).

Many women had been in advocacy roles (24, 44%) and had experience of planning and coordinating projects which would equip them for organising actions (23, 42%). Additionally, around a third (18, 33%) of the women had experience in new social movements such as environmental, peace, nuclear free, human rights, and local community development actions. Five (9%) women had expertise as union activists (which have been referred to as old social movements, dealing with workers' class struggles for equity) through their professional associations. Over a third of the women had worked in government or positions where they learned the nature of power dynamics and political processes (20, 36%). Just under a third of the cohort (17, 31%) was skilled in creative arts, being graphic artists and crafters of some description (knitting, crotchet, sewing, and a range of other creative mediums).

I drew on my professional experience in public sector management job evaluation and recruitment processes to infer capabilities: understanding of adult learning processes, advocacy, ecological and environmental literacy, involvement in new or old social movements, team and organisational skills. Below are two examples of coding from respondents' career pathways where the respondent's judgement of their skills assisted coding.

In the first example, Respondent S.45's described her pathway as a teacher, then a worker in social and correctional services, and finally a council gardener, where she linked each of these to a skill useful in activism. In coding these, "teaching" was identified as "effective communications"; "gardening" as relating to "ecological literacy and environmentalism"; "women's refuge worker" as skills in recognising "differential power dynamics"; "probation and parole officer" as "research and critical thinking" skills:

> [I have been a] primary school teacher, probation and parole officer, refuge worker,
> council gardener, literacy and numeracy teacher in a maximum security correction
> centre, and volunteer teacher in [a SE Asian country]. I was a teacher ... that assists
> me with expression in the written word. I was a council gardener, I see nature's
> mechanics. I worked at a women's refuge in [city], so I've seen disempowerment. I've
> been a probation and parole officer, so I research and try and come to logical
> assertions. [I have been involved in campaigns to] save forest in a local anti-
> clearfelling group, refugee support in camps and community, a no amalgamation for
> [local] council group, many more ... when I feel the injustice ... I do something.

In the second example, Respondent S10 sums up her extensive experience in health services management, having begun as a psychiatric nurse, then becoming a nurse educator and deputy director of nursing. She stated she draws on her steadfast determination to achieve improvements in workplaces to give her the staying power and perseverance for anti-CSG campaigning. She also listed her extensive volunteer work, demonstrating a commitment for collective social action. Skills and capabilities embodied in this description were coded as advocacy, effective communications, leadership, political and power awareness, resilience and bravery, and team and organisational skills:

> I was a registered psychiatric nurse and worked as a nurse educator in many settings.
> Also worked in administration. During my last 18 years of employment I worked in
> aged care as a deputy director of nursing. In my employment areas I was determined
> and steadfast to make improvements despite sometimes overwhelming odds. Not
> much different really to staying resolute about stopping CSG mining in the Northern
> Rivers. [I have volunteered with] [local] Animal Aid - fostering of animals, fundraising
> and as secretary of the organisation, Animal Rights Rescue [doing] fundraising, 'Wrap
> With Love' - knitting squares to make blankets, Donations for domestic violence
> survivors and their children, assistance to the homeless through fundraising, and
> donating items.

This next example is from a KNAG who considered her "before" life as a housewife "fairly sheltered." Respondent S.65 undervalued her expertise which turns out to be significant. She gained her environmental knowledge from her upbringing as a farmer's

daughter and from volunteering in Landcare. She then described having been active in her community for many years as a volunteer fighting bushfires and managing the local community centre. Anti-CSG activism was new to her but her volunteering shows she has strong local networks and a sense of active citizenship. Her passion and commitment to the sustainability of land and community emboldened her to learn and use NDVA tactics to confront the "invading mining company". This Nanna's skills were coded as community engagement and ecological land management. In her response she acknowledged how much she has learned already in the movement and eagerly intends learning more, including Indigenous knowledge and understanding:

> My life before was fairly sheltered. [I was] previously a housewife, then divorced. Being able to knit and crochet may have helped [me in being a KNAG], but this is all out of my range of experience. Being a farmer's daughter probably instilled appreciation of the land, and being in Landcare previously engendered a feeling of outrage at what our government is doing to this land. I volunteer with our community centre and have been the secretary for over 14 years; and the local NSW Rural Fire Service Brigade. [Being a Nanna, I have learned] many things: how CSG mining affects the land/farmers, non-violent direct action - how to stand in front of an invading mining company, Indigenous knowledge, much more - I already knew how to knit, crochet and read a map (to get to obscure protest sites!) [I would like to learn] more Indigenous knowledge and understanding.

Respondent S.65's words are indicative of the consistent devaluing of women's domestic and unpaid work, which was an issue first raised by nineteenth century social reformers and taken up by second wave feminism in the 1970's and 80's (Daniels, 1987, p. 404). Strategies to revalue women's work included the 1980's NSW government report and booklet *Occupation: Housewife* (New South Wales Women's Advisory Council, 1980). The term "housewife" was reframed in terms of an occupation in order to help women who may never have been in the paid workforce, or who may have been out of employment during their child rearing years to see themselves as having transferable skills and able to justifiably apply for jobs. The booklet began with a pseudo job advertisement reproduced in the table below (Table 4.2) which is useful for indicating the range of skills identified.

Table 4.2: Excerpt from "Occupation: Housewife" NSW Women's Advisory Council, Sydney, 1980

Position Vacant: HOUSEWIFE

Applications are invited for the position of manager of a lively team of four demanding individuals of differing needs and personalities. The successful applicant will be required to perform and co-ordinate the following functions: companion, counsellor, financial manager, buying officer, teacher, nurse, chef, nutritionist, decorator, cleaner, driver, child care supervisor, social secretary and recreation officer.

Qualifications: Applicants must have unlimited drive and the strongest sense of responsibility if they are to succeed in this job. They must be independent and self-motivated, and be able to work in isolation and without supervision. They must be skilled in the management of people of all ages. They must be able to work under stress, for long periods of time if necessary. They must have flexibility to perform a number of conflicting tasks at the one time without tiring. They must have the adaptability to handle all new developments in the life of the team, including emergencies and serious crises. They must be able to communicate on a range of issues with people of all ages, including public servants, school teachers, doctors, dentists, tradespeople, businesspeople, teenagers and children. They must be competent in the practical skills listed above. They must be healthy, creative, active and outgoing, to encourage the physical and social development of the team members. They must have imagination, sensitivity, warmth, love and understanding, since they are responsible for the mental and emotional well-being of the team.

Hours of work: All waking hours and a 24-hour shift when necessary.

Pay: No salary or wage. Allowances by arrangement, from time to time, with the income-earning member of the team. The successful applicant may be required to hold a second job, in addition to the one advertised here.

Benefits: No guaranteed holidays. No guaranteed sick leave, maternity leave or long service leave. No guaranteed life or accident insurance. No worker's compensation. No superannuation.

Despite KNAG not mentioning their skills developed through home contexts, in this research it is recognised that the women had gained these skills. This position is justified by referring to the 1987 work of Arlene Kaplan Daniels (in Sarah Allen et al., 2008, p. 22) who describes women's work in the home as being "difficult to see because it is private, personalised, customised, and involves processes of continual monitoring, specialised catering, restocking, improvising, adapting, tailoring, and persistent effort and skill". Canadian sociologist and equity studies academic, Margrit Eichler (2008), redefines and integrates housework and carework into "household work" defined as, "the sum of all physical, mental, emotional and spiritual tasks that are performed for one's own or someone else's household and that maintain the daily life of those for whom one has responsibility". Eichler identified 41 different work skills.

A gap not covered in the survey data was the question of whether the women considered themselves to be feminists or ecofeminists. This was able to be followed up in interviews. None of my interviewees knew about ecofeminism. Very few Nannas had been feminist activists during the "second wave" feminism of the 1970's and '80's. Despite this, interviewees considered most Nannas were aware of counteracting sexism in their daily lives which is referred to as "everyday feminism" seeing one's life through a "gendered lens" with a feminist awareness in one's everyday activity (Schuster, 2017, p. 651). An example was Nanna Rose who described her awakening as a feminist through her lived experience. She went to an all girls' school that "inculcated in us that there was no question women are equal to men. Anything you want to do, you can do." Assuming "the rest of the world was like that," she studied physics at university and was shocked to be one of only five other women in a course of over two hundred. On completion, she was the only woman to gain interviews because she had a gender-neutral first name. She said "so I was getting interviews and my fellow female cohort was not. But then when I showed up, literally, the faces dropped. Well it was very hard." Even though Rose read feminist literature in the 1970's such as Germaine Greer's *The Female Eunuch* and writings by American Feminists which she thought was "good stuff" she had not been an activist until joining the Nannas. Reflecting on feminism in her loop, Rose was certain they saw themselves as feminists,

> … but not the sort of academic feminist who had read the feminist writings from the 1970's and 80's or who would have been marching in International Women's Day marches in the 80s. I don't think any of them would deny being feminist. I'd be surprised if they did. I don't think there's any formal feminist background in our loop either, but the offline conversation is definitely feminist. I don't think any of them would have joined any feminist groups or had any formal interaction with academic feminism yet.

In a similar vein expressing everyday feminism, Nanna Jeanette had no hesitation in claiming to be a feminist having been an activist in the 1970's and 80's. Now as an older woman she felt her way of being was feminist but not foremost in her thinking. Jeanette described this as "internalised" expecting that society has changed sufficiently for women's equal rights to be the norm. She said "it's not something at the forefront of what I'm doing,

but I just take for granted that we women have rights to be what we want to be." She added that demeaning and ignoring older women due to ageist sexism was a loss to society,

> Women do have some different ways of approaching things, which I think is really valuable and still underrated. I mean, I know a lot of politicians and company executives, they just think, oh, a bunch of silly old ladies. It's very disrespectful and it certainly is kind of antifeminist.

Both invisible and visible work has contributed to women entering KNAG with considerable skills easily transferable to activism. Women came to KNAG with an extensive skills set predominantly located in organising, planning, coordinating, managing, creating, performing in public, and crafting. Nanna Rose described to me the range of women's skills in her loop:

> 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.

The survey data indicated that women perceived gaps in their learner entry behaviours, in skills which were only learned once they joined the KNAG. Women acknowledged they had lacked and then learned more specific content knowledge of CSG processes and effects (20, 37%). This and other learnings are shown in Figure 4.10. 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 S.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.

Only three women mentioned having NVDA skills before joining KNAG, an additional five identified having learned these as Nannas. 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 Rose, who joined a KNAG loop in NSW in 2015, had done her training with Frontline Action on Coal during the anti-Adani campaign in Queensland which she described as having "left the biggest impression and has had lasting value". 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, who was a member of the first loop, had been 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."

Figure 4.10: Chart analysis of KNAG learnings, 2017 (Survey question 14 n=54)
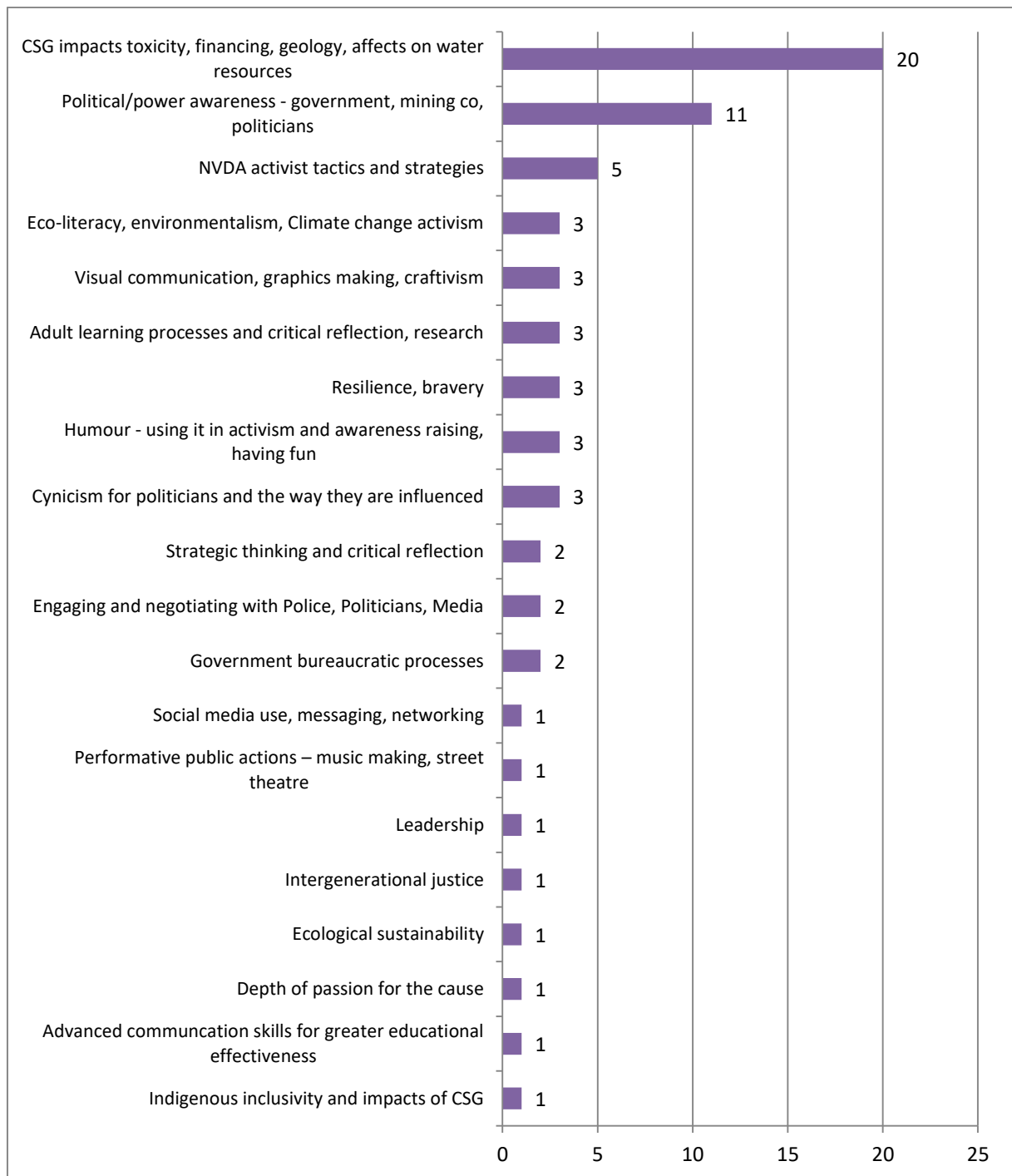
Survey respondents indicated a broad range of skills they still wanted to learn in order to create more impact in achieving social change. One example is Respondent S.43 who wanted to learn, "the best areas to campaign to have a real impact in helping to bring about change". Others wanted strategies to be more effective communicators and skilled in social

media. Nanna Vida included IT skills in her must have list, wryly saying "getting the message out on social media platforms is essential but many Nannas are L platers, which leaves many missed opportunities".

Figure 4.11: Chart analysis of KNAG desired further learning, 2017 (Question 19, n=48)
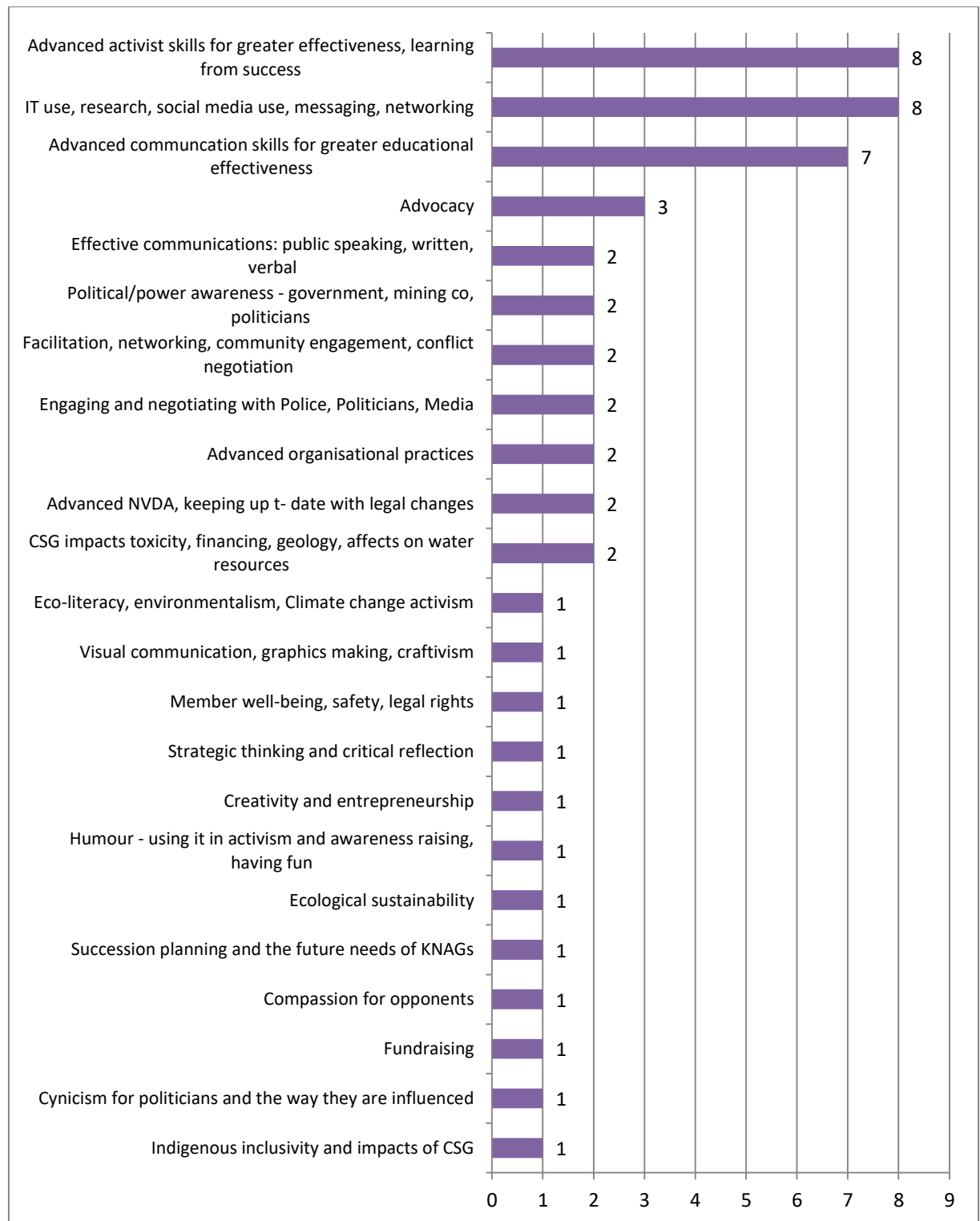
4.6   Summary

In this chapter, RQ1 has been answered. The chapter included evidence and analysis related to social movement theory about what the KNAG learned about starting and growing their movement by looking at their motivations, the capabilities they brought, and the skills they still had to learn. Loud and clear through the data are the voices of older women who recognise their strengths, born of significant life experiences. Not only have these women had the time to become active KNAGs (due to many being retired or semi-retired). They also care deeply about the issues involved in fracking and fossil fuels and wanted to learn more. 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. They were strongly intrinsically motivated.

The findings established individual women exhibited pre-existing frame alignment with the anti-CSG cause. On the whole, women had not known about ecofeminism nor had they previously been feminist activists but considered themselves everyday feminists aware of the effects of sexism in their daily lives. They were mobilised by the anti-fracking cause and searching for NVDA strategies for their environmental activism. Whilst many women had been involved in environmental groups and had gained ecological literacy they had not been protestors. This made them mostly circumstantial activists who sought out the expert help offered through the CoP within the GFNR Alliance. The KNAG identity began with women's innovation being thwarted in the NVDA action group CoP.

Refusing to be defined or confined by male activists who considered themselves experts, the women drew on their own collective expertise. This led to breaking away from ageist sexism while still maintaining collaborative links with the GFNR movement, in order to take ongoing meaningful and useful action. By drawing on their prior skills, gained through occupational and life experiences, they began learning activism on the job.

The strategy of surveillance, coupled with the practice of productive sit-ins 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.

Chapter 5.   The "Nannafesto" and the "Nanna Way": Organisation for a learning disorganisation

5.1   Introduction

In the previous chapter, findings were presented to answer Research Question 1. The initial motivations for learning activism through starting and growing the KNAG movement were detailed. Extensive pre-KNAG capabilities were found to be transferable to the older women's anti-fracking environmental new social movement (ENSM) context. Ageist sexism caused women to establish their own CoP within the broader Gasfield Free Northern Rivers Alliance (GFNR). They found a specialisation in giving voice and strategy to the demographic of older women.

This chapter is the first of three to address Research Question 2 about the learning processes that enabled the older women to sustain their motivation and ongoing engagement in anti-fracking activism.

This chapter comprises an investigation into how the KNAG learned to define and sustain their organisational structure. This was an essential next step in movement formation, expanding from the original group through dissemination of the KNAG identity. Critical to this process was knowledge production by the KNAG CoP (see Niesz et al., 2018, in Section 2.2.6) which was necessary for embodying KNAG's organisational principles. The specific knowledges created were the "Nannafesto", "disorganisation", the "Nanna Way", to "Nannafy", the "Nannalingo", and the "Nannuals" (or annual conferences).

The Nannafesto is a text used by the KNAG CoP as an organisational tool guiding the social learning processes, actions and activities of individuals and loop members. The movement refers to its structure as a disorganisation, meaning it is not legally constituted as the Nannas prefer a non-hierarchical distributed collective-style leadership model with semi-autonomous groups. The Nanna Way is an informal unwritten code of conduct. In this chapter there is also a discussion concerning the KNAG's playful adoption of a uniform which they refer to as Nannafying, the use of Nannalingo which is specific language, and the Nannuals which are regularly occurring conferences. Each of these artefacts is investigated through the mechanism of the CoP and social movement learning processes.

Finding RQ2.1.   Engagement in the movement involves adherence to the Nannafesto, disorganisation, and the Nanna Way. This is achieved by women learning from original "elder status" Nannas through mentoring and induction processes involving participating in knit-ins and other loop actions. These informal learning processes focus on instrumental skills learning (NVDA and knowledge of CSG), interpretive learning that achieves identity construction or change, and critical learning to achieve cultural-ideological change. Activities include: reading and reflecting on the content of the Nannafesto, identifying individual preferences for the Nanna identity and its expression within the brand, upskilling in the relevant evidence to be able to talk knowledgeably about CSG and related environmental issues, and reflecting on the implications for the self and group of the movement's structure which is a non-hierarchical autonomous network of groups, neither controlled or funded others.

Finding RQ2.2.   KNAG and its constitutive sub-groups have created an older women's CoP in environmental activism that exemplifies the principles of transformative environmental adult education and transformative learning for sustainability by combining a variety of social learning experiences consistent with the capabilities, interests, and needs of older women learners.

5.2   The Nannafesto

Creating the Nannafesto involved a mix of interpretive meta-cognitive and emancipatory epistemic learning processes (discussed previously in Section 2.2.7). The interpretive meta-cognitive level focused on constructing a new identity, shifting from the individual to the group to become the KNAG movement. Emancipatory epistemic learning achieved a cultural-ideological shift by reframing the Nannas' collective experience to realise the hegemonic differential power dynamics. These women understood they were older women affected by ageist sexism and, as anti-fracking protesters, they came to comprehend intimately the insidious economic and political control of fossil fuel industries which were preventing decarbonisation, even in the face of current and future climate change.

The Nannafesto, an obvious and humorous wordplay on "manifesto", is a gendered declarative document advancing the KNAG's core attitudes, actions and strategies (Munro, 2019). Written during the first six months, the Nannafesto was the inspiration of women yarning with one another as they sat in their public knit-ins. Nanna Joy's description to me of the process as a yarning circle resonates with my critical reflection of situated experiential transformative learning, similar to action learning sets incorporating collaborative and creative problem-solving and using brainstorming (see Sections 2.2.3 and 2.2.7). The original Nanna group included around eight women, the recommended optimum size for effective action learning sets (McGill and Beaty, 2001). Collaborative construction of an emerging identity occurred through the social process of knit-in conversations. Initially women saw themselves as environmental-spy surveillance operatives, whom they cast as older female versions of James Bond, dubbed "Jill Bonds". The end product of their identity deliberations was the seemingly charming and defiantly nagging or needling grandmother guided by the Nannafesto. The formula for their activism and learning is stated in the Nannafesto as "sit, knit, plot, have a yarn and a cuppa, and bear witness." Nanna Joy described to me her surprise at the creativity of ideas generated by communicating with one another, and the fun involved in her first experiences of the nascent loop:

> We would just sit around in a circle and knit and come up with these amazing ideas. And we just bounced off each other. It was us talking amongst us ourselves … we had lots of fun playing with the word Nanna. I think it was quite early … I came up with using the word Nannafesto just because it fits.

Experiences such as these indicate Wlodkowski and Ginsberg's (2017, pp. 87-100) high level motivation in learning referred to as "flow" which engenders sustained engagement.

Finding RQ2.3.   *The Nannafesto is a powerful tool for maintaining identity, cohesion, and inspiring creative action. It engenders inclusivity and promotes the use of humour and non-confrontational means in social movement educational activism that is likely to encourage conversion to the anti-fracking cause. Through adherence to the Nannafesto, older women are encouraged to be active learners and to engender learning in others, thus evidencing the definition of SML (Hall et al., 2006) as having*

these two targets of learning. The Nannafesto embodies materialist
ecofeminist positionality by connecting the unsustainable use of natural
resources with a logic of destruction, war, rape, greed, and a lack of caring
for future generations. By adhering to the Nannafesto, KNAG engage in
transformative environmental adult education, combining skill
development in ecological and environmental literacy, activism, and
transformative learning dispositions, and thus triggering emancipatory
shifts in worldviews.

5.2.1   Analysis of the Nannafesto

A carefully worded document, the Nannafesto resonated with a majority of the survey respondents. KNAG adhere to their Nannafesto in many ways by: regularly referring to it for guidance in helping determine their actions; using it as a form of induction; and relying on it to publicly state their purpose on their website, Facebook pages, and at actions. Survey data showed the majority (73%, 44 out of 60 respondents) of women had read the Nannafesto and explained how they found it relevant.

An interpretive analysis of the components of the Nannafesto is provided in Figure 5.1. In this analysis, the definition of environmental SML taken from Hall et al. (2006 p. 18) is used. They define environmental SML as "transformative environmental adult education" which combines three elements: (1) ecological and environmental literacy (recovery of a sense of place, recognition of the importance of biodiversity, and reconnection with nature); (2) activist skills (acting and resisting, building alliances and relationships, learning skills, and recognition of historical struggles and resistance); and (3) learning dispositions (valuing messiness in learning, understanding relations of power, and transformative or emancipatory learning). Added to this is a focus on the ideals of democracy and sustainability expressed by Clover et al. (2012, p. 10): "learning and teaching for a more just, equitable, equal, healthy and sustainable world". This can also be expressed as "transformative learning for sustainability" (TLfS) which also aims for emancipatory shifts in "values, mind-sets, worldviews and identity to trigger shifts in behaviours and practice in individual and societal transformational learning" (Reidy et al., 2018, p. 26).

Figure 5.1: The Nannafesto analysed as guiding principles (bold) with interpretative analysis (in italics)

The Nannafesto: Knit The Dream

The title establishes that these women are collaborating in crafting a positive future.

We acknowledge the Traditional Custodians of this land, their connection to country, and recognise that this always was, and always will be Aboriginal land.

This is an expression of moving towards a more just society by including ecological and environmental literacy, specifically to First Nations people. In Australia this introductory statement is called an "Acknowledgment to Country" in recognition of the pre-colonial settlement of around 60,000 years by First Nations people. It was added to the Nannafesto after around six years and mirrors the growing acceptance in Australian culture of reconciliation with our First Nations people. It has become common practice to begin meetings and events with similar statements. "Caring for Country" is the Australian First Nations term for the custodianship of land and sea.

We peacefully and productively protest against the destruction of our land, air, and water by corporations and/or individuals who seek profit and personal gain from the short-sighted and greedy plunder of our natural resources.

With terms such as "destruction", "profit", "greed", and "plunder," this statement reflects the emancipatory thinking and values embedded in transformative environmental adult education, transformative learning for sustainability, and ecofeminist activism.

"Peaceful and productive protest" refers to the adoption of NVDA practices and the determination for any KNAG action to be productive in some way. This takes the most obvious form of knitting or other crafting. Less obvious is the informal education of others about environmental issues associated with extractive fossil fuel industries. This also takes place while crafting and through social media.

We support energy generation from renewable sources, and sustainable use of our

other natural resources.

> *This represents the Nannas' ambit claim for sustainable development that casts KNAG as environmental activists. It also intimates development of ecological and environmental literacy skills as they Nannas are able to explain why renewable energy and sustainable resource use are justifiable.*

We 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.

> *This is a restating of the KNAG NVDA primary strategy of knit-ins, a basic KNAG activist skill taught through the KNAG CoP which fits well with older women's capabilities and sensibilities. It is also a reference to the Aboriginal custom of yarning defined by Carlson and Frazer (2018, p. 43) as a practice consisting of "storytelling within a respectful and deeply democratic space, where each participant takes turns in speaking, and in which the direction of discussion may meander, fixate, or take divergent and creative lines of flight." Yarning has been linked with conscientisation, and the development of critical consciousness (Frazer 2018, p. 47). It has similarities with action learning and feminist conscious-raising.*

> *Bearing witness is an activist skill considered a key strategy of social movements (della Porta and Diani, 2006) which can take on extreme actions of civil disobedience, but in the hands of KNAG it is more likely to be symbolic messaging such as a vigil outside mining company offices or field trip to CSG gas wells.*

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!)

> *This statement is an extension of the KNAG environmental activist ethos that includes intergenerational climate justice and develops the need for ecological and environmental literacy learning.*

The Knitting Nannas' aims are to bring attention to the issues surrounding unsustainable resource exploitation; to show the people, the media, the politicians, and the exploiters just how far from radical the "extremists" who oppose their practices are; to

entertain and inform the public and to bring new supporters to the movement.

KNAG learning dispositions for both themselves and others are defined here. KNAG are cast as mainstream thereby authoritative informal educators of sustainable development and active citizenship. Their methods include educative performative activism that is informative, entertaining and able to engage greater numbers of people. The reasoning being, if grandmothers can inform as a form of protest, anyone can. The form of protest is focused on learning within the movement and engendering learning in others, thus evidencing the definition of SML (Hall et al., 2006) as having these two targets of learning.

We aim to make protests and blockades safe, to support people to assert their right to protest assertively and without personal and physical danger.

Supporting other activists is an activist skill that the KNAG CoP fosters. Through a routine called "Nanna Care," they empower others to safely exercise their democratic right to protest against injustices. Other protesters are given sunscreen, water, and emotional support. The elderly or disabled are helped so they can participate equally. For example, Sydney KNAG women made sure they were present with octogenarian World War 2 and Kokoda Trail veteran, Bill Ryan, whenever he needed wheelchair support, including buddying up with him when he sat across coal transport railway tracks.

We want to make sure that our servants, the politicians, represent our democratic wishes and know they are accountable – to us. We are very happy to remind them of this – often. We represent many who cannot make it out to protests – the elderly, the ill, the infirm, people with young children and workers.

The KNAG CoP explicitly validates learning dispositions that encourage conscientisation and emancipatory thinking. Their Nannas' claim to represent the many is an activist skill learned as a tactic to add numbers to protests (della Porta and Diani, 2006).

This part of the Nannafesto expresses generosity and inclusivity which magnifies the KNAG's moral reach. It challenges politicians whom KNAG feel do not represent

the will of the people. It puts people on notice that KNAG are willing to challenge the political class when they act undemocratically. KNAG frame this as challenging unjust laws using the popular quote, "when injustice becomes law, resistance becomes duty".

During the course of this research two state governments increased the penalties for anti-CSG protesters in legislation that could see Nannas fined and jailed for their NVDA protests.

We gather evidence-based research, multimedia and publications. KNAG use this information to help safe, effective protesting by groups and individuals that actively work to protect our communities.

The KNAG CoP promotes ecological and environmental literacy through understanding scientific data affecting biodiversity. Using evidence-based research makes this explicit and ensures KNAG are seen as a credible, reliable and honest source of information. This cuts across the confusion and disinformation that has dogged the Australian political messaging often referred to as "the Energy Wars" and described previously in Section 1.2.1).

We provide financial, practical and physical resources to assist community groups to abide by Non-Violent Direct Action guidelines in their protest activities, ensuring that physical and emotional support are available during peaceful protests and blockades.

This reminds KNAG that they are bound by NVDA in their actions and they support other protesters to also use this approach because peaceful protest is the core value of the movement and an activist skill they develop and refine.

KNAG is not affiliated with any political party – we annoy all politicians equally!

This final rejoinder is a claim for independence from organisations which may seek to impose their influence on the Nannas. It is fundamental to the KNAG CoP as a value enshrined in the concept of disorganisation. Aimed at political parties, it equally harks back to the independence the women sought from the oppression of ageist sexism.

5.2.2   Adherence to the Nannafesto

Nannafesto is an immediately engaging term. Much of how the Nannas present themselves and the work they do is designed to be sincere, joyful, and catchy. This has emerged from their experience of the energy generated through group creativity, which they admit has made their protesting fun by reducing tedium. Nannas are not shy in sharing their wit and satire in public. Not only is it engaging but it is also more educationally sound when trying to gain an audience's attention (Branagan, 2007). Nanna Joy explained to me, "it attracts people in and then they will listen to you. So the Nannafesto has got a catchy name, but the document itself is serious".

Putting the Nannafesto into practice, interpreting it through everyday activist experience has enabled Nannas to define their boundaries (individually and collectively) and allowed them the flexibility to develop organically.

> *Finding RQ2.4.   Nannas use the Nannafesto in many ways to learn their environmental activism and as a reference point for cohesive collective KNAG identity. Novice Nannas and new loops are inducted into the KNAG CoP by being asked to read, discuss, and interpret the meanings embedded in the Nannafesto related to KNAG activities. By doing this they are able to engage in personal transformation, finding their agentic activist identity as a KNAG. Loops regularly critically evaluate ideas for actions and social media curation against criteria in the Nannafesto and they use it as inspiration for performative activism such as rap songs. The Nannafesto is used strategically during protest actions as a public statement of intent explaining why the Nannas are present.*

Consulting the Nannafesto in order to clarify tactics when planning actions is interpretive level learning constituted by dialogic problem-solving and critical reflection. Nanna Anne, who was the originator of a Queensland Loop in 2014, emphatically explained the centrality of the Nannafesto, "adhering to the Nannafesto is fundamental. People who come and don't fit in, who don't want to cooperate with the Nannafesto, that's the only

rule". The Nannafesto is in the back of Nannas' minds as they meet, plan, and take action. This requires commitment. During interviews I heard how many loops regularly refer to it. Nanna Evelyn said it "helps to keep people on track". Nanna Jeanette described the effect of reading it out when they have meetings as a focal point of discussion:

> We always have someone read the Nannafesto at the beginning of every meeting just to keep us focused on that. I think it's really valuable to do that. It brings us to a focal point and then we continue on with our meeting. It's nice to keep it fresh in your mind.

When there is lack of agreement in decision-making, Nanna Jessie explained the Nannafesto is often used as the arbiter, "… if we find ourselves having trouble coming to how to deal with a particular issue, we do particularly look back at the Nannafesto and say this will be a valid approach".

A number of women experienced transformative learning when they realised the ways in which the Nannafesto confirmed their worldviews. Frame alignment (della Porta and Diani, 2006) assists the growth of a movement and is evident in Nannas' recognition that the Nannafesto fits their existing belief systems and therefore seems common sense. Respondent S.7 became more motivated to be vocal in raising awareness of environmental destruction caused by mining companies, "it inspires me to continue standing up and speaking out about the environmental destruction by mining - in particular CSG - and about corruption". Respondent S.8 considered that it helped her understand NVDA and this was consistent with her worldview "… the Nannafesto is a great document for NVDA and for living your life". Other survey respondents confirmed this view about the Nannafesto aligning with their value systems. For example, Respondent S.50 agreed with the Nannafesto, stating "consequently I haven't had to change any of my ideas or behaviour". Respondent S.10 added "I think it has just cemented our 'core values' and goals". Respondent S.32 expressed this feeling as a heartfelt politic with a cheeky twist about challenging politicians, "it attunes with my heart and I like bothering politicians :) [smiley symbol]". Respondent S.24 described NVDA as her existing belief system and saw it as "protest with integrity".

The knit-in NVDA formula of peaceful and productive protesting appealed to many of the women, as Respondent S.47 stated :

> The concept of peacefully protesting while doing something productive was very alluring. Our local loop makes blankets for refugees, beanies for the homeless, outfits for "fish and chip" babies in Africa[7], and we have knitted baby blankets and clothing for stillborn babies.

There are three identifiable aspects of learning involved in the knit-in: (1) instrumental skill development through learning the knit-in form of NVDA, (2) interpretive learning through visible identity transformation as a KNAG, (3) communicative learning by intentional micropolitical acts of kindness performed in public models as a culture of care and actionable practices for others to reflect on.

Being aware of their impact as role models is a conscious act of seeking to transform the observer into an "activist". By doing this, KNAG assert that anyone can be an activist. Not satisfied with their own conscientisation, Nannas seek to empower others to be environmental activists. Nanna Julia, who was an originator of a NSW Loop, talked to me about the importance of setting an example to others about what an older women's movement can achieve. She said:

> An older women's movement is important to me because I'm an older woman, I think probably, yes. Because when you're older, like the majority of Nannas are retired, they have more time to be able to devote to it. But it's also setting an example for other people, and younger people to follow.

A characteristic of Nannagogy is older women learning to become environmental activists and older women setting an example and using their communication skills to educate others to have the same insights. This is consistent with the Hall et al.'s (2006) definition of SML (discussed previously in Section 2.2.7) where learning is bi-directional within the movement and involves also engaging others outside the movement. Survey data show Knitting Nannas use the knowledge they have gained to raise awareness by talking to

friends and family (96%, n=55) and to strangers when they are out and about (89%, n=51). A third of respondents had become public speakers, giving presentations to groups of people (33%, n=19). The women actively use social media (79%, n=45) to communicate about anti-fracking issues and activities.

Survey data represented in Figure 5.2 shows the range of activities KNAG undertake. The majority of Nannas surveyed had taken part in KNAG knit-ins in public places such as outside offices of politicians or mining companies (97%, n=63). They had joined actions with other environmental groups (92%, n=60), used Facebook and Twitter to educate others about coal seam gas, fracking and environmental issues (82%, n=53), and used social media to connect with other KNAG members (77%, n=50). Over half the women surveyed attended KNAG annual conferences (60%, n=39), created art or crafted graphics or objects (58%, n= 38), participated in blockades to prevent mining or environmental damage (54%, n=35), and contributed to KNAG fundraiser events (52%, n=34). Five women (8%) reported 'locking on' to gates or machinery to prevent removal at protests and being arrested (see Figure 5.2).

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[7] "Fish and chip babies" refers to new born African babies from poor villages sent home wrapped in newspaper to keep them warm, like a fish and chip pack. Fish n' Chips Baby Vests: Rotary e-Club NextGen, Australia (rotarynews.info)

Figure 5.2: Chart activities of KNAG, 2017 (n=65)
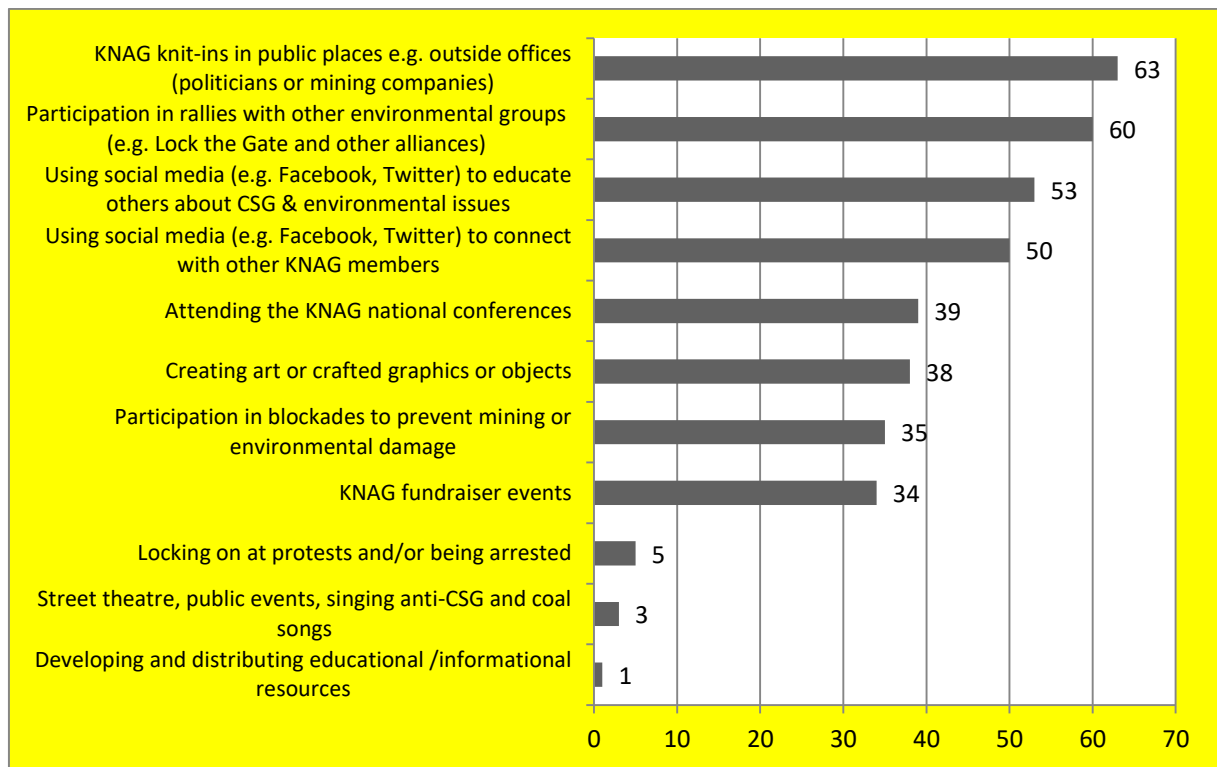
Nannas consciously hone their educative skills and are not deterred by abuse. In the following quote Nanna Julia showed her determination to challenge people's views with rational evidence-based information. She confirmed her adherence to the Nannafesto with purposeful determination for informal education. The knit-in is more than the formula "sit, knit, plot, yarn, have a cuppa, bear witness …" it has also become a way to "… facilitate learning." The knit-in is a manifestation of both the KNAG CoP and, metaphorically, the KNAG Community College:

> I think that most of us are very aware of our role. It's not just a protest role, it's not just a caring role, because I believe originally a lot of the work of the Nannas in the Northern Rivers was to support the ones that were locking on. But it is also education. Yeah, the role of us is to educate people about why we feel the way we feel. It's not just an irrational "oh, toilet up in the air, I'm a greenie" or, as I was once called at one of the local parks when I was holding a placard ... I'm not just "a fucking greenie maggot." I can explain to you why I think it's wrong. Yeah. Now you tell me why it's right.

Nanna Julia's most successful teaching and learning strategy has been to engage in conversation with passers-by using immediacy, relevance, and simplicity. Having established credibility and interest, she offers information sheets so that learning can continue and to offer a way of stimulating personal responsibility for learning more. This is similar to Donna Haraway's concept of engendering response-able adults (Haraway, 2016). Here Nanna Julia described this approach:

> We're doing it for the future of the planet, but it's too large. You have to bring it down to something that has more immediate meaning. If we say "we're saving the planet", people say, "Oh yeah, good luck!" [It's better to say we're] trying to ensure clean air, clean water. It's easier for people initially to start thinking about those things and understand.

> Well, it's explaining why you don't believe in coal seam gas. We have information sheets and we've got folders that have information about why fracking is bad, why coal dust is bad, the health effects, so that those are things they can initially think about.

The word cloud based on survey data in 2017 (Figure 5.3) shows that what Nannas have learned through their activities has primarily been about mining, CSG, politicians and government. Nannas report having learned "just how powerful a non-violent direct action group can be; and a lot more about how self-serving and absolutely untrustworthy some politicians are" (Respondent S.10); "how low some businesses and politicians will go for the sake of such little return and the disregard they have for the future, the environment and where we grow our food" (Respondent S.32); and "how corrupt governments and corporations can be and the knowledge of lies and cover-ups within parts of the media" (Respondent S.43). These are examples of transformative reframing. This is also known as conscientisation which leads to understanding the hegemonic social and cultural forces affecting their movement, such as the way in which Australian politics has been influenced by mining companies.

Figure 5.3: Word cloud generated by NVivo 11 using survey data – What women learned that they didn't know before, 2017

The Nannafesto is a mechanism for maintaining a cohesive collective identity across all loops. Understanding this and choosing to adhere to the Nannafesto is part of the KNAG CoP induction and enculturation process, the first step in a novice Nanna's transformative learning. Respondent S.65 mentioned using the Nannafesto "to introduce our new members to what we are about". Nanna Julia described to me how her loop ask women who are interested in becoming a KNAG to first "read the Nannafesto because that it is the reason for us being there … it really boils down to the simple phrase, it's for the kiddies - clean air, clean water, and saving the land so they have something." Julia explained that she emphasises to new Nannas the importance of being a credible source of information and wanting to break through misinformation by only disseminating evidence-based knowledge:

> People come along and have sat with us. Once they understand what it's all about, they make sure they get the knowledge to get involved. And so that's one of the really important things to stress, too. When we talk about knowledge, when we talk about passing that on, it's really, really important that what we tell people is 101 percent right. Yeah. And we try very, very hard to make sure that when we say something, it is the truth.

Knowing that their information is credible gives Nannas the strength to share their knowledge and this gives them hope. According to Respondent S.59, "sharing the hope we can build on, when we know and act on that knowledge."

New loops have often been supported to understand the KNAG activist identity using an induction process based on interpreting the Nannafesto to suit local conditions. Nanna Evelyn from the originating loop described how she would check in by phone or Skype over an initial start-up phase. She said, "if anyone wants to create a new loop, what we do now is we give them, like, a three month apprenticeship and they have to understand the Nannafesto and [discuss how they will] abide by it".

As women integrate the KNAG identity making it their own, they learn to value the power and authority this gives them. Respondent S.64 was the initiator and sole member of one loop at the time of survey. Rather than waiting for other local women to join her, she used her membership of the movement and the guidance afforded by the Nannafesto to support her anti-fracking activism:

> It provides a valuable reminder as to the importance of non-violent, direct action performed with humour and integrity. The simple ideals are those which all members of society can relate to and not feel intimidated by. As the sole KNAG – [Loop] member, I can now speak/write/act publicly as a member of an Australia-wide organisation, rather than just as a single concerned local resident.

Similarly, Respondent S.67 agreed that "by keeping to the Nannafesto, there is a cohesive narrative about our activities. The [Loop name] takes the Nannafesto with us and we read it out aloud at meetings when forming new loops and give it out to interested women". Respondent S.65 from another loop confirmed this, "we read part of it at each KNAG meeting to remind us what we are doing, and to underline the feeling of solidarity".

The Nannafesto has been used to increase women's confidence in public speaking. Nanna Anne regularly asked the quieter Nannas in her loop to read the Nannafesto at knit-ins. She also encouraged the practice of publicly reading the Nannafesto at actions as a proclamation informing protagonists and other stakeholders about the nature of their protest, "anywhere that we go, even when we were recently in the Galilee, the first thing we do is we read the Nannafesto to the people that were involved. So they know what this group stands for" (Nanna Anne, Interview).

This last example is the most confrontational use of the Nannafesto. Nanna Anne explained how this has the effect of giving the women courage by speaking in public from

the position of their KNAG identity. The observers, who are often security guards, police, or mine workers and their executives, may wonder at this somewhat comedic act which is another example of a provocation or disorienting dilemma, akin to a soft version of the intimidating Māori Haka. After the reading, things become serious when the women get to work knitting-in and bearing witness. In the case of the Galilee reading, this also involved protecting younger protesters who had locked themselves across a train track reserved for transporting coal.

The Nannafesto stimulates ongoing critical reflection towards emancipatory thinking. Respondent S.4 appreciated clarification of the movement's core issues, "the Nannafesto reminds me of focusing on the important issues that matter to KNAG. I understand and appreciate the sentiment and truths that are evident when reading the Nannafesto at every meeting". Respondent S.52 recognised the Nannafesto gave her the imprimatur to challenge hegemonic power structures through acknowledging Indigenous rights and undermining the control which mining companies appear to have over governments. She also felt empowered by being encouraged to be inclusive, creative, and humorous in group decision-making processes:

> To empower and include other women in decisions, actions, and group planning. Respect for our traditional custodians and the important role we all play on the earth. To lobby and constantly seek creative, cheeky ways to undo the greedy fossil fuel companies that control our governments and pollute our planet.

Women appreciated the added power that independence from an affiliation with political parties gave them which Respondent S.9 called "pester power," and which in the KNAG lexicon is referred to as "pollivanting," defined as "gallivanting around annoying politicians".

Intergenerational climate justice is a strong motivation for many Nannas who appreciate its inclusion in the Nannafesto. An example is given Respondent S.47 who wrote in her survey response "the Nannafesto also highlights that we do what we do to protect the land, air, and water for the future". In this spirit, KNAG add their numbers to protests by working in alliance with like-minded groups and organisations. This requires drawing on pre-existing networking and planning skills. For example, KNAG loops have been present at the student

School Strike4Climate rallies across Australia and the Sydney "Time2Choose" rally (24 March, 2018) supporting the transition from fossil fuels which drew approximately 10,000 people from a multiplicity of environmental groups including KNAG, LTG, Indigenous Gomeroi Nation, 350.org, Stop Adani, the Wilderness Society, Frontline Action on Coal, Nature NSW, Farmers for Climate Action, and more. Participation in collective actions such as these reveal the culmination of conscientisation (transformative learning) that gives impetus to emancipatory expressions of grassroots power.

The Nannafesto guides social media curatorial administration. It has helped loops to refine their policies online. Nanna Rose, a loop Facebook administrator, told me how she conferred with other loop members when women posted topics that were considered outside the scope of what Nannas do. Nanna Rose would then "kindly ask them to go and review the Nannafesto" and reflect on whether their posting was consistent. After one situation, the loop clarified their policy and according to Rose determined that topics should be "about protecting the future", and related to "environmental issues and those with fossil fuels" which included local issues of "offshore seismic testing in the coal seam mines and anything that's threatening water supplies".

Using Nanna Jeannette's words, the Nannafesto is generally seen by KNAG as "incredibly useful," encapsulating so much that it functions as guiding principles. Nanna Jeanette considered it to be "a brilliant piece of work". Only a few women were dismissive or critical of the Nannafesto. Respondent S.18 disliked the coercive group reading, "we were forced to recite it in unison at two meetings" and Respondent S.19 wrote "it made me want to leave the group".

Loops reinterpret the Nannafesto in many creative ways, which effectively sustains motivation and promotes loop cohesion through a fun opportunity for shared experiences. Some loops have devised rap poetry, others parody songs, satirical slogans and street theatre, all of which they perform and video record as content for uploading to social media. One captivating and popular example is the "Illawarra Knitting Nannas Against Greed - Stop CSG Nanna Rap" Illawarra Knitting Nannas Against Greed, Facebook, 15 May, 2017).

This online video continues to gain attention and at the time of writing had received 19,000 views, 52 comments, and 205 likes. The rap begins with the words in displayed in

Figure 5.4, explaining how knitting goes hand in hand with anti-CSG protesting by framing NVDA as a viable and "tough" form of activism (I-KNAG Facebook, 15 May, 2017). Loop members are dressed in their identity colours, yellow, black, and red. Flexing their muscles in front of anti-CSG protest placards and wearing T-shirts with slogans such as "Don't frack with me," they are shown jabbing angrily and forcefully in unison with their knitting needles crossed in defiance, demonstrating their ability to "needle" politicians and mining companies to make them listen.

Satirical but serious in its message, the popularity of this video means the Nannas are reaching people and at the very least raising curiosity. Comments were received from women and men. One comment was from a woman in Scotland who asked permission to use the video in her International Women's Day presentation, another comment came from a woman who identified as a Raging Granny from Massachusetts. Many of the ideas in the text are drawn from the Nannafesto.

Figure 5.4: Excerpt from Illawarra Knitting Nannas Against Greed's The Stop CSG Nanna Rap

Tell me why you knit why you really really knit
(It's bad/ It's bad/ Get tough)
I'll tell you why I knit why I really really knit
Coz coal seam gas mining needs redefining
Leaking wells and health worries coz of mining
Water contaminated, environment abused
Wells so close to homes who knows what has oozed
Global warming, climate change the planet's had enough
It's time for every one of us to stand up and be tough
So bad, (So bad, So bad) be tough (Be Tough, Be Tough, Be Tough)
The earth is raped and pillaged, wide roads score the land
Machines flatten all by company command
Destruction of habitat, shelter food and shade
Complete devastation, the environment betrayed
It's bad, (It's Bad, It's Bad) get tough (Get Tough, Get Tough, Get Tough)
So you ask us why we knit why we really really knit
It's very clear the planet's had enough
It's time for every one of us to stand up and be tough
(Be Tough/ Be Tough/ Stand Up and Be Tough, It's Bad, It's Baaaad)

5.3   Disorganisational learning

The Nannas are not a formal organisation, rather they position themselves as a "disorganisation", indicating their internal learning processes take the place of any formal organisational structure. Respondent S.35 characterised this as spontaneous when she wrote "we are a growing movement and we all work organically together in an unplanned way."

In consciously avoiding incorporation as a legal entity, they claim greater freedom to be "cheeky" and only answerable to themselves as explained in a July 3, 2018 post on their Facebook page, Knitting Nannas Against Gas:

> Facebook wants our ABN. ABN? A bothersome Nanna? Awful bottom noises? A bloody nuisance? Assuming bankers notice? Abysmal boring names? Auntie's being naughty? Authoritarian bastards naked? Send us your ABNs. We'll send the best to Facebook and the ATO. NB. The Nannas are a disorganisation. We are not incorporated. It gives us the freedom to be cheeky, and we are only answerable to ourselves.
>
> (excerpt from Larri and Whitehouse, 2019, p. 30)

Finding RQ2.5.   The KNAG CoP conforms to the description of a NESM being
an unincorporated, non-hierarchical network of autonomous
interdependent groups. Some members from the first loop of Nannas, which
is referred to as Nanna Central, were consulted by other loops for their
expertise and the wisdom borne of experience. This strengthens the
justification for the application of CoP to this case study. Participation in the
disorganisation involves critical learning about operating in non-
hierarchical ways and a paradigm shift for many older women that is
transformative and liberating. It is likely that most women have never
experienced this style of structure before.

The concept of disorganisation was devised early by the original group of Nannas. Nannas Joy and Vida explained the intention was to avoid constraints or obligations from regulation which would take up valuable time better used for activism. Joy emphasised the need to be "free agents" making it "clear if people gave us money, they were giving us money and they weren't doing it as a tax dodge". Facebook posts emphasised the dynamics of an ENSM (Newlands, 2018) by regularly defining the disorganisation as being integrated through the Nannafesto, with a no strings attached network of autonomous interdependent groups, not beholden to outside influences, and therefore flexible in working with whomever and however they want:

> Once in a while, we revisit the Nannafesto, and we remind ourselves who and what
> we are. The Knitting Nannas are a disorganisation, a network of autonomous groups
> that are funded and controlled by NO-ONE else. We support each other and
> communities who invite us to visit them and help support them. We are NOT an NGO
> (non-government organisation) and we are proud to keep our independence so we
> can work how and where we want to. We raise all our own funds. We are fiercely
> non-party political (we annoy all politicians equally). As a disorganisation, we do not
> take donations that rely on tax benefits. If you want to give us money, fair enough.
> No strings. (Knitting Nannas Against Gas, Facebook, 2 May, 2017)

Disorganisation does not mean the lack of structure, nor does it mean the lack of conflict. Conflict occurs in any organisation. Nanna Vida described compared her

experiences of the KNAG with her membership of a hierarchical organisation, the Country Women's Association (CWA). In her view, these shared similarities because an organisational structure does not protect members from interpersonal dynamics that lead to conflict:

> There really is not much difference between the two because there are still interpersonal issues that arise between women and conflicts occur whether there are hard and fast rules or not … when I compare the two I don't think the organised, strictly controlled one has any more greater success than the disorganised one. [In the CWA] it's like there are hard and fast rules; they're too hard and fast. In fact, the CWA is so strict it's hilarious and I crack up. The same interpersonal, especially female, dynamics come into play here [in the KNAG]. I think everyone just has to work that out. You just have to work it out the best way you can. If you care enough, you'll stay and work it through and if it's too hard for you, you might have to break away.

Interviewees were reluctant to discuss internal disagreements out of a sense of loyalty to the movement. However, two survey respondents mentioned unresolved conflicts within loops that led to them leaving. Nanna Joy mentioned tensions that arose in the first five years when some women wanted to incorporate and get charitable status. This led to much discussion and explanation of the importance of not being bound to anyone. Disorganisation is not mentioned in the Nannafesto and was therefore more open to challenge and controversy in the early years of the movement. In the context of ageist sexism in which the women began working together, it makes sense that this would be a strongly protected position. Nanna Evelyn described how she had worked hard to develop an ethos of learning how to resolve conflicts in loops and had suggested a code of conduct:

> The Nannafesto is what basically we operate from. We're never going to diverge from that. And that is the thing that pulls the Nannas in, in the first place. So if we can stick with that and if there's any conflict at all, then as a group, we need to sit down and talk about it. And there have been a few instances [in 2016] where we've been able to do that and then get on with things.

Nanna Anne saw the nature of the disorganisation as non-hierarchical, in opposition to what she called a "paternalistic construct". Echoing other Nannas' descriptions that emphasise freeing up women to take action, she said:

> We don't have say, four working groups, and we'll call one media. Well the Nannas don't do that, we don't set up constructs, we go. I just instinctively knew that this was the movement for me because it had no hierarchy, it had no patriarchy, it had none of all that stuff.

Disorganisation is designed to give women the imprimatur to freely give as much or as little time to the movement for whatever reason. Respondent S.28 had been a lifelong activist and preferred the informality of KNAG, stating "[I] love that there is no formal registration … would not belong if that were to happen." Encouraging and empowering women to speak up and speak out whilst having fun is also considered paramount, as Nanna Vida demonstrated:

> … trying to keep it loose because it's important. It's a hard little fabric of system, this disorganisation, to sort of keep going okay, because we don't want a whole lot of red tape. We don't want anyone to feel they can't speak up about things and we want it to be still fun to be in. So without a lot of red tape, you just turn up and if you don't turn up or you can't - just pull back you shouldn't have to feel compelled.

The KNAG interpretation of disorganisation contributes to sustaining motivation by breaking free from potentially oppressive hierarchies. Nanna Jeanette spoke about the benefits to her of a non-hierarchical, flexible, unstructured, and cooperative culture. She added this afforded a sense of freedom that she valued because it was in tune with her energy levels as she aged. Going to meetings or actions is optional. Her access to social media meant she maintained her connection with the activities of her loop. Jeannette did not feel judged, but rather, accepted and included. Being able to determine her preferences for ongoing engagement and commitment was motivating, as she explained:

> There's no structure and no hierarchy, there's no membership, there are no elections. It's just that we come together and do stuff and then we go off and do our own thing and we just choose to keep coming together, choose to keep actions rolling just because we want to, not because we have to, and I really like that. I think

it suits our age group, too, because sometimes you get tired, more than we did when we were younger. We just need a break and then it sort of just works really well, even though it's so unstructured and intentionally disorganised. Yeah, it does. It's never chaotic, but it's always cooperative. I think it's great … I still feel really involved because of the social media contact. So yeah, I don't feel isolated but I am a bit geographically isolated out here.

The themes of compatibility with active ageing and the freedom to choose preferred ways of protesting were reiterated by Nanna Elsie, a lifelong activist and Queensland-based loop originator involved since 2014. Elsie was motivated by the KNAG's use of strategic essentialism, embodied in "Nannahood" and the ethos of inclusivity:

Who argues with a Nanna? It's just so brilliant! It's so clever. I also like the idea, as another Nanna said to me, you could be you could be 80 years old and bedridden, and you can still be a Knitting Nanna because you can still go online and do stuff. So you don't have to be out in the streets running around. If you don't want to be, you can if you want to be ... and there's the peaceful element to it - the calm, the peaceful supportive, the nurturing … and you don't have to knit. But I am a Nanna. I like the freedom of the Nannas. If you follow the Nannafesto, you can't do anything wrong.

There are no leaders. However there is a convention of consulting more experienced Nannas and seeing them as elders. I observed at conferences that the original core group is often affectionately referred to as Nanna Central in recognition of their ongoing coordination role. This was certainly how Nanna Anne felt as she described the elder status she afforded the original Nannas and the way she regularly checked in with them to discuss her loop's plans, "well we respect them [the original Nannas] almost like our elders and because I've worked with Indigenous people, I give that respect to elders". This strengthens the applicability of the notion and praxis of the CoP to this case study: with KNAG, expertise is acknowledged, this includes wisdom borne of experience.

Finding RQ2.6.   Learning to embrace a disorganisation involves a paradigm shift. Coming to terms with the KNAG interpretation of disorganisation is a provocative disorienting dilemma for novice Nannas that causes

transformative and liberating learning opportunities as women are encouraged to create their agentic environmental activist KNAG identity.

Learning to be a Nanna includes participating in a non-hierarchical, non-directive movement. Not all women who are attracted to KNAG feel comfortable with this or appreciate the agency it affords. The autonomy of the Loop was attractive to Nanna Anne who considered "the consensus-based decision model to be a patriarchal construct that can go so horribly pear-shaped." She explained that some women are confused when they realise there are no official leaders and no stipulation to ask for permission to do things as long as it is within the terms of the Nannafesto. She observed that women are "so socialised they do not know how to operate outside a hierarchical system, they do not get it. They come to the Nannas and they don't survive because they're so confused when we tell them we're all the boss."

The obvious question here is: what does it mean if we're all the boss? By combining other interviewee data, I have ascertained that this means women are expected to find their agentic activist selves through the freedom afforded by disorganisation. A Nanna's actions are legitimate when she is acting within the construct of the KNAG CoP culture. Proving that someone's actions are within this domain seems to be an ongoing process involving collaborative discussions and reaching agreed positions on a case by case basis.

Disorganisation confronts and confounds those who ascribe to the status quo where unincorporated organisations are not considered to be legitimate. This is, in itself, a disorienting dilemma for some new Nannas. It causes an element of cognitive dissonance and likely to be one of the first transformative opportunities a novice KNAG encounters. It challenges women to speak their truth about their interests and passions. In the context of anti-CSG campaigning, this often involves rage fuelled by injustice at seeing children with rashes, nose bleeds, breathing difficulties, and translucent skin due to the toxic effects CSG fugitive gases. Nanna Anne's further explanation to me helped to clarify this, "the Nannas give you the permission … If I'm not doing something about this then I get depressed and worried and if ever I start feeling that way I do something". Through learning to embrace a disorganisation the KNAG have created a transformative emancipatory learning environment.

Occasionally non-Nannas do not understand why KNAG are unincorporated. This is a learning opportunity that stimulates paradigm shifting. In 2014 on the central Knitting Nannas Against Gas Facebook a woman asked, "nannas, are you a registered charitable organisation? Your loops could do with some infrastructure, tables chairs, pamphlets, etc. You are growing quickly and I applaud you. Congratulations. PEOPLE POWER". KNAG answered, "we are a disorganisation. We don't want to register … because it interferes with our autonomy/anarchy and our firm belief that we only answer to ourselves. We do have lots of stuff, but it's more about getting Nannas out there" (Knitting Nannas Against Gas, Facebook, 30 August, 2014). Undeterred, two months later the same woman asked whether they were registered yet. KNAG replied, "no, we would have to be an organisation to do that, and we are happy to remain a disorganisation, that way no-one can tell us what to do" (Knitting Nannas Against Gas, Facebook, 11 October, 2014).

Creating an environment where women feel their skills and ideas are valued, and encouraging quiet women to speak up is integral to the success of KNAG. Disorganisation empowers women to be creative and assertive. Each loop is encouraged to develop their own approach. Nanna Joy, a member of Nanna Central, expressed how delighted she was that "each loop has its own personality, which is the mingling of all of the personalities of the women. So they do things in a slightly different way within the Nanna umbrella and they're often firing and they don't need our permission."

Nanna Vida observed how women gained confidence as a result of this enabling culture. Vida's quote emphasises the KNAG CoP values of activism that is cheeky, creative and fun:

> … a lot of the loops run themselves, you know, so long as they meet the Nannafesto. But every loop has their little ups and downs. I know that because you know, you get a whole lot of women together and strong minded women, you're going to have differing opinions about things. So it's really important that everyone is careful with that. I'm sure they are because when you see a lot of them first start out [they are] pretty quiet. Then after a while you see them saying things. And then you go out and you can see them gaining confidence and learning about it and asking each other things, making memes and cheeky things.

An example of the disorganisational learning paradigm shift which empowers women came from Nanna Anne about planning an awareness raising film night for her Far North Queensland (FNQ) community. Like the originating loop, the newly formed FNQ loop had to challenge their colleague male activists' ageist sexism. This was necessary to be able to engage in the sorts of environmental activism they felt would change attitudes about the environmental and human impacts of CSG extraction and fossil fuels. Anne's narrative also emphasises the vigilance and determination of KNAG to fulfill their Nannafesto:

> [I heard that] one of these fellows rang the other leader of the Cairns group and said "can you keep her down there. We don't want the Knitting Nannas up here." So I rang him and I said "I'd like you to hang up the phone. And when you're done can you ring the other one and tell him to get stuffed? He's not the boss, he's a self-appointed leader."

> There's this sense of entitlement, it seems to me, that white old fellas get, and this idea that they're running a democratic process where they're the boss. They've got the underlings around them, and so when I go up and this fellow says "you shouldn't call yourself the Far North KNAG", I go, "why ever not?" "Because of the "FN-KNAG" connotation[8]" and I said "well, how's about this, pet – you don't get a say. I'm very aware of what the FN-KNAG are, as are every Nanna signed up to the FN-KNAG and you don't get a say."

> I'm really happy to collaborate and work with them but, no, [not when they try to take over] and for me it's all around the matriarchy because the patriarchy is destroying the planet.

Male environmental activists needed a second challenge about learning not to attempt to intimidate or control Nannas, which finally convinced them. The narrative shows that KNAG are happy to form alliances and collaborate to build a critical mass but will not countenance control. Nanna Anne framed her objections as a fundamental power struggle between patriarchy and matriarchy:

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[8] In Australian slang "FN" or "effing" is short for "fucking".

I thought it was so fantastic because I'd organised a meeting with the new landholder up here where we've stopped the coal seam gas. We had this extraordinary experience where I set up the meeting. There was some freehold land, he's a multi, multi-millionaire and I had a senator lined up. So I told the Cairns Stop CSG mob, who we cooperate and work with closely. Then I get this phone call from this guy from Mossman. He says "hello! It's such and such. I'm very disappointed". I said well "why sorry?" Let's call him Bob. He said "well you didn't tell ME about the meeting with the senator or the new landholder!" and I said "how's about this, Bob, how's about you get fucked, you hang up the phone, you ring me back and you apologise and you ask me if you can come to the meeting because you still haven't got the fact that you're not the boss of us. You're a self-appointed leader. There has been no democratic process. So on your bike and ring me back and apologise." I won't have it. I won't tolerate it because it's about the patriarchy being "matriarchy out" and they just have this assumption of power!

Finding RQ2.7. ***Women learn the benefits and challenges of working at their activism in a non-hierarchical network of autonomous groups. Disorganisation enables autonomous decision-making about preferred modus operandi and loop naming. Intra loop organisational protocols vary – some have regular meetings and knit-ins, others connect via email or Messenger to decide on actions. Loop instigators often act as coordinators and liaise with other loops via Facebook and email. Loops choose their involvement with local, regional, state, national, and international alliance partners on a case by case basis.***

Numerous interviewees confirmed there is no stipulation on how often women meet or what they choose to do as long as what they do is within scope of the Nannafesto. As a result of their mode of disorganisation, loops are autonomous and find their preferred organisational protocols or modus operandi. My observations of the movement at conferences, field trips and by following loops on Facebook indicate a range of ways that determine each loop's operational dynamics. Often the loop instigator or instigators acts as coordinator/s of regular communications and institutes actions. The Lismore Loop meets

fortnightly as well as conducting weekly knit-ins outside their local federal politician's office. The Sydney Loop is visible weekly on Friday mid-mornings in the busy thoroughfare of Martin Place (Sydney CBD). The Illawarra KNAG are connected via email at least fortnightly and see one another at actions which are often part of a regional alliance with other environmental groups. Since COVID-19 restrictions, many loops have learned how to use Zoom for their meetings and to participate in a plethora of anti-fracking meetings and training workshops.

Loop contact persons often alert Nanna Central and other loops to their activities via Facebook or emails about "anything that's going on," according to Nanna Evelyn. They regularly place posts recording, reporting or inviting participation so that everyone can stay in touch with all loops. The use of information communication technologies is dealt with in more detail in Section 7.4.

Another aspect of disorganisational learning is the social process of choosing loop names. The range of approaches indicates a consideration of identity within the larger movement and also fluidity. For example, Nanna Central has varied the KNAG website header, which was originally "Knitting Nannas Against Gas" to add "Greed" and now, simply, "the Knitting Nannas". This shift was explained by Nannas Joy and Evelyn who said that the original core group were representative of the Northern Rivers region and were named the Northern Rivers Knitting Nannas Against Gas. In 2018 this morphed into the Lismore Loop and the decision was made to keep a website as a focal point for the whole movement, now titled "the Knitting Nannas". The women decided that this was how they were known as a brand and the original impetus of fighting fracking had broadened to fossil fuels, old forest logging, promoting renewable energy, and potentially, other environmental issues.

Within the Knitting Nanna brand, other loops have had similar naming debates. KNAG is the accepted acronym for the movement. It is broadly enjoyed for its reminder that "nagging" and "needling" are purposeful tactics. Within the acronym there is some variation, with some preferring to use "Greed" over "Gas" as a more all-encompassing term for the target of their activism. The rationale is that the ongoing use of fossil fuels in direct contradiction of climate science is the result of greed on the part of mining companies and

governments. A secondary consideration is the unintended double meaning of "gas" as "farts" which draws undesired derision about older women.

Naming variations include locations, some form of inclusivity and focus, and the potential for acronym humour. Examples are: Knitting Nannas Armidale Group – KNAG NENW & Friends, Knitting Nannas of Toolangi, Gloucester Knitting Nannas, Knitting Nannas Hunter Loop, Knitting Nannas Against Greed – Great Lakes, Far North KNAG (FN-KNAG), Illawarra Knitting Nannas Against Greed (I-KNAG), Portland Knitting Nannas Against Gas Fields, Knitting Nannas & Friends For Freedom From Fossil Fuels, Canberra, Sydney Knitting Nannas And Friends, and Albury Wodonga Knitting Nannas for Renewables. There are also KNAG groups in the UK and USA such as Nanashire, Frack Free Knitting Nanas Lancashire UK, and Knitting Nannas of Virginia (USA).

5.4   The Nanna Way

The Nanna Way is an informal unwritten code of conduct that supplements the Nannafesto. Like the Nannafesto, it is humorous and catchy. The main tenet of the Nanna Way is to consider whether the matter at hand will ensure sustainability of the movement by passing on core cultural practices. It is maintained as an oral cultural tradition that emerged out of disruptive conflict in the early years (briefly referred to in the preceding section) which was threatening to undermine core organisational principles. The Nanna Way's purpose is to help loops in the praxis of decision-making and internal conflict resolution processes.

Finding RQ2.8.   The Nanna Way is an informal unwritten code of conduct devised within the first four years to clarify praxis by avoiding divisive conflict. It supplements the Nannafesto and disorganisation as an enculturation strategy in the KNAG CoP by incorporating role modelling, mentorship, and critical reflection on KNAG identity. Reference to the Nanna Way guides internal loop dynamics as women explore creatively fostering skills in cooperation, conflict resolution, and negotiation. The Nanna Way engenders a disposition of caring about and for one another and for the sustainability of the movement.

None of the Nannas interviewed would freely discuss the dynamics of the interpersonal issues that prompted instigating the Nanna Way. Explanations given to me were that they did not want internal dynamics to be publicly known and potentially split the movement. Three examples were mentioned but not described in detail. These were: taking individual action at a blockade without prior agreement, representing the movement to the media without status as a "spokesnanna", and insisting on legal incorporation and charitable status. More often than not, interviewees from other loops side-stepped the issue. For example, Nanna Rose said, "no, I never got to the bottom of what the problem was." Nanna Jeannette, a member of the first loop who joined in 2013, hinted at the conflict that occurred in relation to one woman's views and the destabilising of the loop that she felt was making it dysfunctional, "I hate conflict. But it was one person, it was really disruptive and we were never going to be functional if they remained in the group". Although the woman left, she remains an anti-fracking campaigner and I was told she is in contact with individual Nannas.

Loops prefer not to spread any internal tensions beyond their boundaries however mentors from Nanna Central have often been consulted for confidential support (confirmed by Nannas Evelyn and Anne). They are seen as wise elders with experience to share, as Respondent S.55 wrote, "it's the years of experience they have in organising ... they know all about non-violent action and I enjoy hearing them talk about how afraid they used to be of taking direct action". As mentioned previously, Nanna Anne stressed that she regularly consulted expert Nannas, "everything I've ever done I've run through the Lismore Nannas. They are the older more experienced Nannas. That's why we've achieved a lot."

The Nanna Way is an aid to the ethical expression of KNAG praxis since it emphasises consideration of the "greater good of all Nannas" which was a phrase Nanna Vida used. By this she meant being consistent with the compassionate, caring and educative approach they have to NVDA. Nanna Jessie helped me to understand the Nanna Way better by relating an experience that led to differentiating KNAG from Extinction Rebellion (XR). There was a time when her loop considered being an affinity group of XR and then realised they were fundamentally different in their approach. Jesse explained about an XR action her loop attended dressed as Nannas:

The Nannas did their thing of water and sunscreen [called Nanna Care] and being in the background a little bit, but then we realised that we don't always agree with some of the things that XR do … we decided if we're going to do XR protests we do it in civvies not in Nanna gear, because we want to be seen as distinct.

She continued explaining that the women realised XR disrupt business as usual compared to LTG who work cooperatively with farmers when planning blockades, while KNAG prefer to use humour to challenge conventional assumptions. The Nannas decided all tactics were valid but realised that disruption was not their way of acting. Jessie told me:

… XR are taking action so the stakeholders will react to this. No, it's not the Nanna Way. We prefer to make people laugh or make people think 'that's a little strange', but we don't want to see them be late for their dental appointment or to get frustrated with folk.

When Nanna Jessie referred to making people laugh or think something was a bit odd she indicated this was a way of introducing a disorienting dilemma, in other words, a provocation stimulating transformative learning in others. In stating this she confirmed alignment with Hall et al.'s (2006) definition of SML which impacts learning both within the movement and towards others. The Nanna Way is unwritten, informal monitoring of the self and group, often explicitly mentioned and affirmed in meetings and conversation. Nanna Vida explained that more experienced Nannas lead by example:

I just try to do it by actions. Actions speak louder than words. I try to do it in my way as we go. Which over time shows that this is why we do it… we often used that term. That's why we thought we'd call it that because they were the words we often say. Oh that's not the Nanna Way.

Nanna Evelyn described a form of KNAG CoP induction, "… we'd spend a little bit of time with them, trying to identify areas where the new Nannas might feel comfortable and sort of moving in, merging into the loop. We show people the Nanna Way and it's about the leadership from experienced Nannas". Evelyn's Loop have a convention of inviting women who want to join to participate in meetings and actions and then debriefing afterwards. This provides an opportunity to discuss reasons for particular forms of action and different contributions possible.

The Nanna Way encourages negotiation, collaborative decision-making skills, and the use of creativity. Nanna Vida described her perspective on how this worked in her loop:

> I guess negotiation skills are important. Even if what you're suggesting might be a good idea, in that particular time, place or space it might not be for the better. And you need to accept that. OK, well fair enough. And not take it as an insult. And then maybe it's good and everyone will run with it. And then it might develop into something a bit different down the track and then it might be stopped because, you know, it's [had its] run doing that. So it has got a lot of creativity and creative people. So you bring your creativity that you have to the table.

5.5   Nannafy, Nanna-Up, Nannalingo

The KNAG's playful adoption of a uniform is referred to as "Nannafying" or "Nanna-ing Up". This involves donning their yellow, black and red colours, including their revolutionary styled yellow and black beret with assorted bling. For KNAG, bling is any adornment that attracts attention and is probably not expensive. This includes protest buttons, scarves, sashes, and jewellery in their favourite colours and motifs. KNAG members delight in sourcing their bling and clothing from second-hand shops and upcycle where possible. The sunflower and bee are popular due to their colours and symbolism. The black and yellow sunflower, to which a red heart is added, represents using the Earth for growth and using solar power as sunflowers turn to follow the sun (Carol Bennett, Gloucester KNAG, 2018). Bees are important pollinators, ensuring food production and sustainability. Figure 5.5 is a humorous representation of the KNAG uniform created by Nanna MaryBeth Gundrum which she used in social media posts during 2018.

Figure 5.5: Know your radical ecoterrorist (Source: MaryBeth Gundrum, reproduced with permission)

KNOW YOUR RADICAL ECOTERRORIST
According to the NSW Parliament Security handbook

Yellow beret or no yellow beret

Yellow cape or no yellow cape

Large yellow and black sign protest sign or no yellow and black sign

Yellow and black dress, trousers, skirts, tops or blouses

Badges or buttons with slogans about saving the future for the kiddies

Coffee or no coffee

Enclosed shoes or sandals

IS YOUR SUPER SAFE? NOT INVESTED IN FOSSIL FUELS

If you see any one dressed in this or remotely like it report immediately. May be armed with knitting needles. Considered highly dangerous to greedy profiteers and corrupt politicians.

Finding RQ2.9. The KNAG brand involves Nannafying which means adopting one's own version of the KNAG uniform. Intuitively implementing critical feminist gerogogy, the KNAG CoP celebrates diversity and inclusivity. Women are imbued with a sense of heroism, increased confidence, and safety in numbers, encouraging each another to enjoy creatively crafting and then publicly donning their individual attire to identify with one another by adopting the agreed yellow, black and red colours. Women learn empowerment through Nannafying. They also enjoy what they are doing, which sustains motivation for continuing to be in the KNAG CoP. This process of brand identification reminds women they are representatives of a movement and to stay in character and on message when in their Nanna gear. The KNAG uniform is an educative tactic, humorously attracting passers-by and encouraging them to engage in non-threatening conversation.

Each Nanna chooses how she will apply this uniform and contribute to the group's identity. The KNAG are careful to protect their brand which has now become well-known for

focusing on environmental issues, particularly the fight against CSG and fossil fuels. Nanna Vida told me she felt this gives women ownership of a courageous identity:

> Getting Nannafied gives you a certain heroic persona. It also reminds us that we have expectations to live up to - what we expect of ourselves and what we expect to project out there … we need to just keep reminding each other to stay on message about what we're about.

The women delight in challenging the stereotype of a non-descript older woman. They recognise this draws attention and stirs curiosity, which creates the opportunity for conversation. Diversity and individuality amongst Nannas is celebrated. Nanna Jesse, a lifelong feminist activist, claimed she felt more empowered through her participation in the KNAG and described her enjoyment of being noticed when she adopts KNAG's colourful image:

> … and now I wear bright yellow and black, all sorts of outrageous colours and funny hats, I've got a number of funny hats. And yellow. It's fun to wear that stuff downtown. It doesn't matter that we might wear an outrageous outfit or something really bright that you wouldn't expect a 70 year old woman to be wearing. We appreciate the strengths of the individual and the individuality of the other members. One of the greatest things about the Nannas is that we're all really different. It's really hard to have a typical Nanna. I think that's because we're mature age women who don't give a stuff. I've developed this more through being a Nanna. People go through eras of what their life is for at that moment, and that's fantastic. We've got the freedom to do the things that we've already earned the right to do, and it's great that we can.

Jessie's statement confirms there is no typical Nanna and that difference and inclusivity are celebrated. Appreciating one another's individuality and strengths is paramount for Nannas. KNAG do what critical feminist gerogogy proposes which is to reject a universalised identity for women, preferring to find strength in diversity (see Section 2.2.3 regarding Findsen and Formosa, 2011). The women feel empowered in their KNAG identities and have noticed gaining greater self-confidence. Inclusion fosters involvement and is considered a motivational condition of sustained engagement in learning, along with enjoying learning

which is evident in the fun and positivity KNAG report when they Nannafy (Wlodkowski and Ginsberg, 2017, see Section 2.2.5). Respondent S.61 supported this view when she wrote she was "… becoming more positive in myself about being 'out there,' basically on show, if you like". KNAG generally receive positive comments and are affirmed for what they are doing as evident in this comment from Respondent S.28, "when I wear my Knitting Nanna outfit people acknowledge me in a positive way. Love, love, love being a Nanna". Adopting the uniform adds to women's sense of safety not just in numbers but also in the face of possible arrest, as stated by Respondent S.48, "it is such a good idea. Who is going to arrest a group of older women knitting outside a politician's office? Wearing black and yellow clothing". Respondent S.27 was surprised to learn how powerful the KNAG outfit was because it provokes both attraction of passers-by and anxiety in politicians:

> The power they have! Even politicians are nervous of us and hate us sitting outside their offices. We are visible, colourful, approachable, and provide so many photo opportunities - We are a novelty and people talk about us and pass the info on.

It is important to keep in mind that these women were mostly circumstantial activists. For them, the realisation is empowering that authority is gained through a collective identity. This realisation has marked a significant personal shift for many. Respondent S.57 learned her membership of KNAG gave her an effective voice "[I've] been given hope that group actions can succeed where individual actions don't." This is a skill incorporated into the KNAG domain of competence which is referred to in social movement theory as the "logic of numbers" (della Porta and Diani, 2006, p. 171).

Other Nannas expressed this view in survey responses and interviews. An example is Nanna Julia, a circumstantial activist who echoed the theme of Respondent S.57 that collective action is more powerful than individual action:

> Yeah, well, it was a little quotation on Facebook, I've seen it many times, that says, "I thought somebody should do something about this. Oh dear, I'm somebody." So that's what it is. And it's having the strength and courage to be somebody, to stand up. And being part of the Nannas gives you that strength because you know you.re not alone.

As documented in Section 5.4, wearing Nanna gear to XR actions was discussed and one loop decided not to do so. Nanna Rose told me that her loop decided to consider what they would do on a case by case basis, depending on the nature of the XR action and whether it was disruptive or not:

> We had a similar discussion and I actually went with [name deleted] and somebody else up to a couple of XR events in Sydney, in Nanna gear. I think what we decided was that the XR is such a diverse organisation that we would look at each individual action and decide whether we wanted to be part of it as appropriate.

As Rose's quote shows, Nannas take their identity and brand seriously. The ethos of disorganisation gives flexibility of interpretation, with the Nannafesto as the overarching framework. Learning to combine these with the Nanna Way involves a constant conversation of critical reflection for the individual, for Nannas with their Nanna colleagues, and for the movement as a whole.

5.6   Nannalingo

"Nannalingo" is my term for the KNAG lexicon that has become part of KNAG culture and identity. The terms and their definitions in Figure 5.6 have been sourced from the women themselves through interviews, conferences, and Facebook or blog postings. Devising Nannalingo is a collaborative enterprise during knit-ins. It is how the original loop named their movement and came up with the term "Nannafesto". Newer loops have contributed more terms. For instance, Respondent S.55 referred to "pollivanting" meaning being involved in knit-ins outside politicians offices, "I like pollivanting because it raises awareness of the issues at hand and I enjoy the support we get from locals and tourists".

Finding RQ2.10.   Nannalingo is an extension of KNAG culture and identity that contributes to the sustained motivation for engagement in social movement learning through generating feelings of enjoyment via creative and respectful collaborative learning. Nannalingo enlivens the KNAG milieu and creates an important by-product to participation in the KNAG CoP in promoting well-ageing.

Figure 5.6: Glossary of "Nannalingo"

Term	Definition
Nannachat**:**	The online conversations Nannas have using Messenger.
Nannalution**:**	The changes that start to happen in society when Nannas get active which are described as "better than a revolution". Nannas often end their emails to one another with "Viva La Nannalution!" and have incorporated this into their graphic communications on protest buttons and T-shirt designs.
Nannafesto**:**	The guiding principles and philosophy for KNAG.
Nanna Way**:**	Being respectful, inclusive and considering one's actions in the context of the greater good of the KNAG movement.
3 Nanna rule**:**	Also known as the bully ratio, discovered by the Lismore KNAG during early knit-ins outside their local politician's office. "If there were two women to one man, he would bully us (saying 'stupid fucking old bags' and things like that). If there were three or more, then he would be a bit more respectful. The unwritten rule became three Nannas minimum, to any interviews or protests or anything. It also works with police." (Nanna Joy, interview)
Shenannagans**:**	"Nannas up to no good" the very law-abiding and also mischievous activities of the Nannas' form of non-violent direct action.
Nanna wrap / rap**:**	What happens when Nannas get into rap mode to explain who they are and what they stand for. Examples are: Lismore Loop (2015) https://www.youtube.com/watch?v=ECiMVm1fyOo Illawarra Loop (2017) https://www.facebook.com/IKNAG2/videos/1462035270519366
Knit-in**:**	Sitting, knitting, plotting, yarning and having a cuppa in a public place.
Nannarazzi**:**	The Nanna with the camera recording events.
Nanna-Up / Nannafy**:**	To put on Nanna gear, yellow, black and red clothes and lots of bling, including badges and banners.
Nannual and InterNannational**:**	Annual Nanna conferences where Nannas congregate to share stories, crafty merchandise, books, stickers, and information, learning environmental activism skills from one another and guest experts.
Naction or Nannaction**:**	Nannas planning and implementing their Nanna-style protest actions.
Nanna Central**:**	The first loop based in Lismore and the centre of much Nanna wisdom.
Nannapause**:**	A hot / heated moment.
Pollivanting**:**	Gallivanting around annoying politician.
#isoNannas**:**	How Nannas meet online during the COVID-19 pandemic when they can't meet face-to-face.

The Grafton Loop adds "loopy quotes" on their blog (http://knaggrafton.blogspot.com/

). Their examples include: Keep calm, carry yarn; Knit happens; Surrender yer yarn; It takes

balls to knit; Life's a stitch; I have sharp sticks and a lot of balls - be afraid; I have 2 needles you have 2 eyes, you do the math; Old knitters never die, they just cast off.

When I observed KNAG using Nannalingo and loopy quotes at conferences and during field trips, it became clear that it added a sense of joyful playfulness to the seriousness of these older women's activism by bringing smiles to faces and group acknowledgement. Combined with the enjoyment of Nannafying, this contributes positive motivation to return to an enlivening milieu that promotes well-ageing and later-in-life learning. Nanna Jessie told me how much she looked forward to her regular KNAG meetings and knit-ins and felt her knowledge of being in an activist movement had been deepened and strengthened by being a Nanna. She attributed this to her observations and critical reflections of loop social processes and the realisation that caring for one another further builds the capability to be educative. Jessie included how Nannas share their health and emotional issues and how this showed the movement is also about supporting one another in well-ageing:

> At times before Nannas, I've been active on community issues. The difference since joining Nannas is that I've learned to be more mindful of the process, keeping an eye out for others. How are they doing? Are they taking on too much? Can we share the load better? As Nannas we have shared about our frailties. Most of us have some health issues we are open about, as well as other responsibilities of family, farm, pets and other community commitments.

> Through Nannas I've got more confident in lots of activist processes. Talking with people on the street, using market stall info and products to get our message across, street theatre, politicians annoying, right up to blockading. My activism is richer, deeper, stronger since I've been a Nanna. 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. That's why Thursdays are the best and busiest day of the week.

Many Nannas valued fun, friendship, creativity, and finding common goals with like-minded women who they would not normally have met. Nannafying and using Nannalingo contribute to this gently paced yet dynamic and creative culture, rich in varied learning opportunities, firmly located in the experiential here and now. Learning environments that

foster enjoyment, inclusivity, and respectful relationships and encourage connected co-learning are motivational (Wlodkowski and Ginsberg, 2017; Findsen and Formosa, 2011).

Respondent S.36 valued "being with a group of serious but fun-loving women with one objective"; Respondent S.12 loved "being with other women with the same values"; and Respondent S.64 valued being part of a "network of women from all over the country linked by a common goal". Respondent S.54 added she enjoyed the qualities of "openness, determination, stamina, and caring for one another". "Support", "love", "kindness" and "kinship" were words that Respondent S.60 used. Respondent S.65 was one of a number of women who were amazed at the friendships built with women she would not normally have met. Respondent S.50 was impressed by "the intelligence of so many women. Just wonderful" and Respondent S.52 combined transformative environmental adult education (Hall et al, 2006; Clover et al., 2012; Riedy et al., 2018) with Wlodkowski and Ginsberg's (2017) levels of motivation and motivational conditions when she wrote about how she interpreted what being a KNAG meant. An analysis of her comment is given below, together with the relevant sentence:

- Transformative and emancipatory learning dispositions: "to empower and include other women in decisions, actions and group planning."

- Development of ecological and environmental literacy is evident when she recognised First Nations knowledge in caring for country: "respect for our traditional custodians and the important role we all play on the earth."

- The acquisition of activist skills through learning in the KNAG CoP: "to lobby and constantly seek creative, cheeky ways to undo the greedy fossil fuel companies that control our governments and pollute our planet".

- Emancipatory learning: "the fun! Sewing, knitting, crocheting, the sisterhood with other women where we can be free to do and say what we like without being told what to do."

5.7   Nannuals – KNAG conference learning

Finding RQ2.11.   KNAG conferences, located in sites of contestation, are cleverly structured combinations of instrumental, interpretive, transformative, and emancipatory social movement learning and

transformative environmental adult education. They consolidate and
celebrate the KNAG identity and culture, challenging ageist sexism by
making older women visible and vocal. Nannuals are one way KNAG
develop their CoP skills in empowering one another by drawing out and
utilising one another's expertise and interests. Nannuals add depth to the
KNAG CoP, enabling the transition from novice to experienced KNAG.

KNAG's enculturative learning culminates in the "Nannuals," KNAG's annual conferences which draw together all elements of identity formation and environmental activist learning in a celebratory milieu. Women participate wearing their Nanna uniforms, bring loop identification banners, showcase clever knitted slogans such as "crime scene do not cross", and sell commemorative T-shirts and mugs, as shown in Figure 5.7.

Figure 5.7: Nannual artifacts Left: 2016 Chinchilla Conference Field trip to CSG gasfields documenting KNAG bearing witness using triangular knotted gate, crime scene knitted banner, sign saying "never give up". Right:2018 Newcastle Nannual commemorative mug with image of Les Tricoteuses and the combined slogan "Protecting our Planet, Zero tolerance for Fossil Fools, Hugs a Speciality" (Source: L J Larri)

Months of planning drawing on the resources of a coordination group of Nannas from one or more loops result in comprehensive two-day agendas. Nannas' professional backgrounds contribute expertise in conference planning and in participation to the movement. They also draw on women's organisational capabilities. The development of

public speaking skills is encouraged. Nanna Rose, who had been an IT lecturer in TAFE[9] for many years, told me that women inexperienced in public speaking or organising conferences are often reluctant and then surprised by their ability to manage logistics or chair sessions.

Compassion and action are features of how the Nannas interpret their Nannafesto. In their conferences I observed Nanna loops reporting and sharing their strategies for offering a supportive and calming influence to other protesters, and giving comfort to rural families affected by exposure to toxic gases and whose rivers and groundwater have been contaminated by fracking. At the Chinchilla and Narrabri Nannuals, families affected by fracking were invited to participate and talk with Nannas about their experiences dealing with mining companies and negative health impacts. In this way, Nannas learn first-hand and bear witness.

Conferences have been strategically located near sites of contestation, with the intention of supporting local anti-CSG activists. Nannuals typically draw between 60 and 100 women, creating a public event which attracts local and regional media attention, as shown in Figure 5.8 which is a satirical cartoon and report from the Chinchilla News. Conference venues are in clear sight of their local community. One example is the bowling club in Narrabri (see Figure 5.8). Gasfield or fossil fuel affected communities have found themselves curious hosts. This occurred in 2016 in Chinchilla, centre of the first and largest Australian unconventional gasfields begun in 2009 in the Surat Basin (Queensland); in 2017 in Narrabri, with 850 gas wells proposed in the nearby Pilliga Forest (NSW); and in 2018 near Newcastle, with its harbour coal export facility (NSW).

Figure 5.8: Top left: Narrabri Bowling Club 2017 conference venue sign. Top right: Cartoon and article from the Chinchilla News, (1 September, 2016). Bottom: 2016 Chinchilla News article on the Nannual (Calvert, 1 September, 2016)

[9] TAFE (Technical and Further Education) is Australia's government funded post-secondary school vocational education system, equivalent to community colleges and polytechnics in other countries.

Conference agendas address the range of learning within SML: instrumental, communicative/ interpretive, and transformative/ emancipatory (Cranton,2002; Branagan and Boughton, 2003; Scandrett et al, 2010; Kluttz and Walter, 2018)

The 2016 Chinchilla agenda (Figure 5.9) is typical.

Figure 5.9: 2016 Chinchilla Nannual Agenda

The conference sessions can be analysed according to the type of learning they involve across the three domains, see Figure 5.10. Most of the program involves instrumental and communicative/ interpretive learning.

It is not possible to say whether the third domain of transformative emancipatory learning (involving critical questioning of assumptions underlying systems and worldviews, which is referred to as conscientisation or perspective transformation) occurred since this is not possible to easily observe. This could be identified through post-conference evaluation, for instance via semi-structured interviews. Some evidence in survey data supports the occurrence of emancipatory learning. For instance, Respondent S.44 described her shift in awareness as "eyes opened" and as being "moved" when she wrote "[I …] found speakers at the National Conference in Chinchilla, Queensland, very educational - their personal experiences were very moving. Also the field tour was an eye-opener to see the actual impact of all the gas works." Similarly, Respondent S.55, who had never been to Chinchilla before the conference, was able to meet "families who had been ruined by fracking."

Figure 5.10: Analysis of learning domains in the Chinchilla Nannual Agenda

(1) "instrumental learning"

This is where activists upskill to be able to mount campaigns: Deirdre Gardiner, Sister of Mercy, outlined her order's research and policy advice to the United Nations on the rights of individuals and communities affected by fracking (Acosta et al., 2015); environmental lawyer, Joanne Bragg (CEO, Environmental Defenders Office) listed and described the legal rights of environmental activists; workshops and a gasfields tour.

(2) "communicative or interpretive learning"

This focuses on people, symbolic interaction, and the social construction of meaning, including processes such as interpreting legal rights within planned actions, or group problem-solving in the creation of slogans and graphic communications. The Nannafesto is an example. Helen Bender, a lawyer, explained her family's fight to prevent gas companies entering their farm. Her father, a farmer, battled mining companies and government officials for ten years, becoming progressively depressed. Eventually he suicided. Judy Kaye Knox, Indigenous wellbeing and community recovery facilitator, described the intergenerational trauma suffered by dispossessed First Nations people. Another example is the conference dinner with shenannagans (women performing KNAG inspired rap songs and poetry).

As an "honorary Nanna" I was invited to participate in three Nannuals in Chinchilla (2016), Narrabri (2017) and Newcastle (2018) and, as mentioned in Section 3.2, I took the opportunity to report on research project progress and seek ongoing feedback. This afforded me the opportunity to observe women's interactions and reactions to the speakers. The agendas sustained their motivation by being engaging, challenging, and inclusive in their content and processes. There were many opportunities to discuss ideas and propose future strategies. Respondent S.30 was looking forward to learning more at her next conference and wrote "I'll be attending the upcoming Nannas conference in Narrabri, and learning more".

Respondent S.51 considered the Nannuals were important social learning opportunities giving the women time to be with one another, and "the chance to share stories, experiences and offer new ideas to take us forward into an increasingly chaotic and fragile world". Her comment demonstrates a culture of caring and hope-giving that draws energy and capabilities from within the CoP. She is inclusive in her language by focusing on sharing and offering experience and ideas. Getting to know one another better means the women can appreciate one another's worldviews and capabilities.

This contributes to what Nanna Joy described as an essential activist skill for the KNAG CoP, that of empowering women by identifying and using their life experience and talents. She compared this with wasting women's abilities by falling into ageist stereotyping where

older women are "wrinkly invisible, useless dredges, drains on the public purse". Joy explained her rationale for the KNAG 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 dredges, drains on the public purse.

5.7.1   *A morning in the Pilliga with the Nannas*

A feature of the Nannuals has been guided CSG installation field trips with knowledgeable local activists. The following is an autoethnographical account of my participation in the Narrabri conference field trip to the nearby Pilliga Forest, a site of 850 proposed gas wells. The account demonstrates the power of first-hand knowledge that gives Nannas the ability to bear witness and speak with authority and credibility in sharing their experiences. Seeing the environmentally destructive potential of fracking and hearing about the mining company's lack of capability in environmental remediation exposed learners to the extent of the potential damage, with implications for nearby agricultural production and, in this case, internationally significant astronomical research at the Siding Springs Observatory complex. This instigates a transformational lesson in the way governments ignore the precautionary principle of ecological sustainability:

> About 30 of us are being guided by two younger environmental activists, Dan Lanzini and Jo Holden. I'd say they're in their mid-thirties and their knowledge, commitment, and passion is impressive. They've made it their mission to spend as much time as possible in the Pilliga, bearing witness to CSG mining company Santos' fracking operations hidden deep in the forest. Nannas tell me this is not easy. Jo is a mother of young children. Her husband and family support her as much as they can. Dan

often camps for days in the Pilliga but has to leave for contract work so that he can keep coming back. He seems very independent and alone.

We begin our tour, stopping at CSG extraction well sites, vents, and flares. Forest clearings bounded by high mesh fences, metal industrial structures, eerie silences punctuated by intermittent buzzing, clicking, and hissing, the occasional CCTV, faint chemical smells (not the fresh forest air you'd expect). Getting too close makes you feel sick and headachy. The Nannas have come prepared and put on their face masks. I've got mine. A local Gomeroi man who's come along on the tour tells us he remembers exploring and camping in the forest as a child. That was 30 years ago and that's how long it's been since the first wells and flares were put in by Eastern Star (bought out by Santos).

The day before, we heard from Gomeroi women about how sacred the Pilliga is to them. They described it as their heartland, their responsibility to protect and care for. A highly significant Dreaming site, it's said to contain an underground gigantic crocodile – safe as long as it stays where it is, but with catastrophic consequences if set free. How prophetic! I'm struck by the reality of dispossession, stolen lands, the loss of life purpose.

"What are they doing with the CSG from this well?" asks a Nanna. "Nothing" says Dan, "it's just for show when they bring investors in. Been like this for years."

At each stop, the Nannas make a point of photographing their presence – documenting the scenes so they can show others. They gather in various formations holding their knitted banners, fists raised or arms crossed in defiance. As they leave, I see yellow and black woollen knotted threads across gates. Soft barriers reclaiming spaces, symbolic memorials of their anger and fulfilling their Nannafesto to bear witness.

Back in the cars, we're heading for the dead zones. Created 16 years ago when contaminated water from exploratory wells spilled from evaporation ponds onto huge sections of forest. Of 22 sites in all, we only see two. I'm walking through a grey and black denuded landscape, eerily more silent than a graveyard. It feels immediately desolate. At my feet, an expanse of dead wood, grey mulch, and patches

of muddy sludge criss-crossed by irrigation pipes and the odd dying bush or leafless bare tree. In the far distance a fence and thick forest beyond. The demarcation line is dramatic.

"Look down," says Dan, "tell me if you can see any ants or other insect life or any signs of animal activity." "He's right" we murmur to one another, "there's nothing alive here." We see signs saying "Keep out, rehabilitation area." Despite regular attempts with water, dispersant chemicals, and bush regeneration, nothing has worked, it's still a dead zone.

I'm shocked at how my emotions of disbelief, then sadness, affect me. I've never been here before, it wasn't mine to lose and yet I feel grief and a growing sense of anger at the carelessness and irresponsibility of people who would let this happen.

Next stop Bohena Creek. Can't see an actual creek with water, just sand, but Dan explains, "dig down no more than an elbow length and you'll hit water." The creek drains from the Pilliga onto the nearby Namoi Valley – rich agricultural country, a major food bowl for Australia. Dan tells us the miners have been known to dump their contaminants into the sandy beds, conveniently leaving a non-descript wet patch.

The concern is the downstream impact when approval is finally given for the proposed 850 well. That's one every 700 metres. The rains don't come often, but when they do Bohena Creek is big and floods into the farmlands. They rely on this and artesian water. The Pilliga is known to be a recharge site for this edge of the Great Artesian Basin. I already know that fracking uses megalitres of water and relies on government approvals to tap into natural sources. Dan tells us that each well will create 150 million litres of contaminated so-called "produced water." The facts are swirling around my head, I can't understand why we're not learning from experience – preserving and protecting. With these sorts of track records, how can you trust mining companies with government approval not to contaminate precious water resources?

We talk about the many flares that would keep firing 24/7, lighting up the dark night sky. What would this do to nearby Coonabarabran Siding Springs Observatory and

their international work in astronomy? What happens when there's a bushfire? The local volunteer Rural Fire Service has said it won't send crews in, too dangerous.

A grey silence descends on us all. By now all we can do is shake our heads in disbelief but Dan can't stop telling us what he knows. It spills out and we listen to all he's seen and researched. Finally, he ends and says "that's it! Now you know. What I can't understand is why people aren't listening and fighting this. Thank you for taking the time to see it and for listening."

It's time to leave but before we get into our cars, the Nannas thank Dan and give him some money collected during the morning. He didn't expect it and shyly accepts. It will help pay the bills. He's a tall, lanky bloke and towers above the Nannas gathered around him. He looks down at them as they thank him. Spontaneously the Nannas close in with a huge, group hug. It's like Dan is briefly wrapped in their tender warmth and caring. He closes his eyes and I notice some tears.

The moment passes and the Nannas promise to share the knowledge and pain. Someone listened.

5.8   Summary

In this chapter, much of RQ2 has been answered. This chapter included a description and analysis of the learning processes enabling older women to sustain their motivation and ongoing engagement in their anti-fossil fuel activism for ecological sustainability. The findings show the KNAG CoP is a social movement learning phenomenon, constituted by knowledge production and praxis embedded in the Nannafesto, disorganisation, the Nanna Way, Nannafying and Nannalingo.

These combined aspects of KNAG's culture, discussed in some detail in this chapter, constitute an empowering and engaging learning environment, enabling older women to challenge ageist sexism as they embrace their environmental activist alter egos. The KNAG NVDA knit-in and learning formula of "sit, knit, plot, yarn, have a cuppa, and bear witness" is a critical element being a form of situated experiential learning involving critical questioning. Taking the traditional knitting circle out into the open facilitated a form of non-violent direct action that is sympathetic to older women's physical capacities and interests. It is a

supportive and energising opportunity for peer to peer learning. The Nannas realised that sitting and knitting by a roadside, in a field, at a blockade, or outside a local politician's office enabled them to have many productive learning conversations, to share knowledge of unconventional coal seam gas mining (fracking) and its environmental impacts, to gain a deeper understanding of their communities, and to strategise and reflect on what they were learning.

Combinations were identified of situated experiential instrumental, interpretive, and emancipatory social movement learning that contribute to transformative environmental adult education. The Nannafesto was the result of an initial phase of critical reflection in a yarning circle, very similar to action learning processes. Adherence to the Nannafesto requires ongoing critical reflection, the induction of novice Nannas, modelling and mentorship by those more experienced, and the development of critical reflection and negotiation skills. Implementing the Nannafesto engages women in developing their ecological and environmental literacy by learning and disseminating evidence-based knowledge.

Disorganisation is a disorienting dilemma and the start of transformative learning. It challenges novice Nannas to realise alternatives to working in hierarchical institutions. It offers a degree of autonomy, encouraging women to reflect and draw on their skills and interests and invent their preferred activist voices. This mirrors the empowerment objectives of critical feminist gerogogy and is one of the ways women learn to contest paradigmatic thinking.

The Nannafesto is the overarching framework in which the ethos of disorganisation gives interpretive flexibility. Learning to combine these with the Nanna Way involves a constant conversational interplay of critical reflection by the individual, with their Nannas as colleagues and with the movement as a whole.

Nanna-ing Up (Nannafying) and the use of Nannalingo engage women in the joyful expression of their adopted KNAG identity, brand and culture. Nannuals are very productive sources of individual and collective learning. The motivation for sustained engagement in ENSM learning is maintained by: the ethos of inclusivity, creativity and humour, frame

alignment through ecofeminist positionality, and a culture of caring and concern for the greater sustainability of both the movement and the planet.

Chapter 6.   "Viva La Nannalution": using craftivism to transform crisis into social movement learning

6.1   Introduction

Chapter 5 was the first of three chapters which address Research Question 2 about learning processes enabling the KNAG to sustain their motivation and ongoing engagement in anti-fracking activism. In Chapter 5, it was reported that the KNAG CoP is a social movement learning phenomenon that implements principles of critical feminist gerogogy (educational gerontology) and transformative environmental adult education. Empowering and engaging older women to challenge ageist sexism has enabled older women to undertake learning to be anti-fracking environmental activists.

The KNAG CoP relies on the NVDA knit-in as its primary situated experiential learning strategy. This has led to achieving a motivationally engaging learning environment with an intra-movement creation of knowledge and praxis contained within artefacts which include: the Nannafesto, disorganisation, the Nanna Way, nannafying, Nannalingo and nannuals. In Chapter 5, it was identified that learning through the KNAG CoP combines instrumental, interpretive, and emancipatory social movement learning that contribute to transformative environmental adult education.

This chapter (Chapter 6) is an investigation of Research Question 2 which focuses on the contribution of craftivism to transformative environmental adult education. In order to capture the breadth and depth of the KNAG CoP craftivism, much of this chapter is descriptive. This description is necessary before any analysis of KNAG CoP craftivism is possible. I am also mindful that this research is the first to look at KNAG in such detail and it is important to document this phenomenon so as not to perpetuate an ageist gender-blind agenda.

As discussed previously, the knit-in was a formative innovation in KNAG NVDA activism that forged the Nannas' identity and structured the development of their CoP. Craftivism, defined in Section 2.3.3, combines craft with activism by using non-violent means to achieve social and political change (Greer, 2014; Fitzpatrick, 2018). The title of the present chapter comes from one of the Nannas' favourite memes found in many of their T-shirt designs and

protest buttons, "Viva La Nannalution". They define the nannalution as the changes that start to happen in society when Nannas get active. They say this is "better than a revolution," implying the power of their peaceful craftivism (see Section 5.5 on Nannalingo).

In this chapter, KNAG activities are examined to see how they intersect with craftivism, transformative environmental adult education, and critical feminist gerogogy (educational gerontology). Recapping from Section 2.7, Greer's taxonomy of craftivism (Lothian, 2017, 0:38 seconds) provides the criteria for the characteristics of craftivism. In this, craftivism is understood to exist if one or more of the following are present: (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. The criteria to be applied for transformative environmental adult education summarised in Section 2.7 are: (1) ecological and environmental literacy; (2) activist skills; and (3) transformative emancipatory learning dispositions. The criteria applied for critical feminist gerogogy from Section 2.7 are: (1) respectful relations that seek empowerment and appreciate women's experiences of oppressions including ageism, sexism and multiple intersectionalities; (2) valuing each woman's individuality by recognising her capabilities; and (3) providing enjoyable, engaging and sufficiently challenging learning opportunities in a milieu that supports and celebrates success.

Three themes drawn from the literature on craftivism (see Section 2.1.5) are explored in this chapter. These are: (1) crafting an activist community of practice; (2) reclaiming and reframing spaces; and (3) performative activism. The purpose of this approach is to describe different facets of KNAG craftivist praxis and determine how each contributes to learning within the KNAG CoP. It must be noted that craftivism per se was not popularised, nor was it on the Nannas' agenda in 2012 when they began their knitting-in. The connection with craftivism came around two years later with a media article identifying KNAG as craftivists (McKinnon, 2014), which the Nannas indicated they accepted by posting the article on their Facebook page (Knitting Nannas Against Gas, 18 March, 2014).

6.2   Crafting an activist community of practice

In my analysis of crafting an activist CoP, I have drawn on Emery (2018) and Garber (2013) who consider that crafting creates opportunities where people can form new spaces of new communal understandings. The KNAG knit-in, a crafty more productive version of the NVDA sit-in, easily conforms to the definition of craftivism (referred to in Section 2.3.3) whereby the private domesticity of craft is turned public for non-violent social and political change purposes (Greer, 2014; Marsh, 2017; Fitzpatrick, 2018). As found earlier in Section 4.2, this was the product of a small group of older women, who, motivated by their reaction to ageist sexism, developed their autonomy and agency as anti-fracking activists, and in so doing, created their own CoP. In the section below I argue that KNAG: (1) learn their activism through crafting; and (2) educate others through their crafting.

> *Finding RQ2.12.   The KNAG CoP integrates crafting as a motivational tool to: encourage the self-confidence and agency of older women in acquiring NVDA activist skills, and engage in collective identity formation to build an activist community. Through crafting, KNAG establish their values base of sharing their personal wisdom with one another born of life experiences, and their strategies for engendering hope in themselves and others. The KNAG CoP culture is invested in the craftivist practice of non-violence and generous gifting (donation), enabling Nannas to use their crafting to weave together a community amongst older women and beyond. They build their ecological, environmental and political knowledge base together with one another and with those outside the movement in a web of educative conversations that flow back, forth, and around.*

6.2.1   *Learning activism through crafting*

In this chapter, the KNAG knit-in is considered as an educative process of crafting and an activist community of practice. As the primary form of social learning, I wondered what the women had to say about how and what they learned through crafting. I found that crafting is used by the KNAG as a tool to build self-confidence and agency. Nanna Evelyn, a

member of the first loop, 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 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 strategic planning. She explained her simple knitting pattern involved using yellow and black yarns in small lengths:

> … twenty stitches, one row plain, one row purl - to the length of my hand span - turns into a set of handcuffs so that we can link a bunch of Nannas into a formidable line of resistance. Or more loops joined together make great colourful decorations that are easy to attach to any object.

Nannas Evelyn and Jessie evidence different aspects of the micro-politics 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.

Nannas have an ethos of inclusivity by identifying and then drawing on women's different abilities. This builds connection and motivation in the women as they feel validated for their contributions, no matter how small. Respondent S.61 valued "being able to contribute my creativity to a good cause." In Section 5.7 a quote from Nanna Joy emphasised the importance to Nannas of finding and utilising people's strengths. This is a conscious and intentional strategy that challenges ageist sexism and empowers older women, which is consistent with critical feminist gerogogy.

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 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" which is defined as furthering "feminist goals of empowerment, social justice, and women's community building" (Kelly, 2014, p. 133). I was surprised to hear from Nanna Evelyn that she did not define this as feminist but insisted 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 S.7 wrote "I love the Nannas' guts and creativity. Older women being radical, outspoken not meek"; and Respondent S.54

valued "the spirit of the groups I've met. Openness, creativity, fun, determination, stamina, caring for one another".

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 (see Figure 6.1).

Figure 6.1: Examples of KNAG products. Top left: Soft chains. Top middle and right: Soft "Chooks Against Gas". Bottom: Charity blankets for Lismore Hospital fundraiser.

KNAG recognise crafting is more than the physical act of making. "Spreading hope and love" as a KNAG was important to Respondent S.52 while Respondent S.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 yarn and share one another's insights in conversation.

Social learning requires conversation. Nanna Joy described the importance of conversation in developing cohesion and connectedness of the movement within and between loops. As she explained, through conversation, the women have realised their common bond is 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.

As the women sat knitting, chatting, and observing gas mining company activities, they realised their conversations were also productive. They were learning about one another, sharing knowledge about coal seam gas mining, and developing cheeky ideas for their activism. Respondent S.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. 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 S.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 S.43 further confirmed the KNAG CoP 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 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.

The atmosphere of knit-ins embodies elements of critical feminist gerogogy, as shown by these survey data which emphasise characteristics of the milieu as motivational, respectful of diversity and individuality, engaging, challenging, and empowering. Respondent S.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 S.51 was clearly enthused and stimulated by being in KNAG and summed up her feelings of engagement in the CoP 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 S.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".

"Friendship" was the most common word used by survey respondents when describing what they valued most about being a KNAG (see Figure 6.2). Respondent S.47 discerned a strong "camaraderie among all the Nannas" where she immediately felt "among friends when meeting a group of Nannas, even if you didn't know them before." Respondent S.17 was impressed by how "friendly and dedicated" others were and Respondent S.66 mentioned "making such good friends." Respondent S.9 described the social aspect as "great" because she easily made connections with others. She wrote "the Nannas are welcoming and not 'heavy'. From all walks of life. [I] found another ukulele player too."

Figure 6.2: Word cloud generated in Nvivo 11 from responses about what women valued most about being a KNAG (Question 21)

Word	Count	Word	Count
friendship	17	helping	6
people	13	knowing	6
women	13	love	6
like	11	respect	6
making	10	focus	5
fun	9	hope	5
community	8	protest	5
support	8	save	5
sharing	8	able	5
effective	6	difference	5
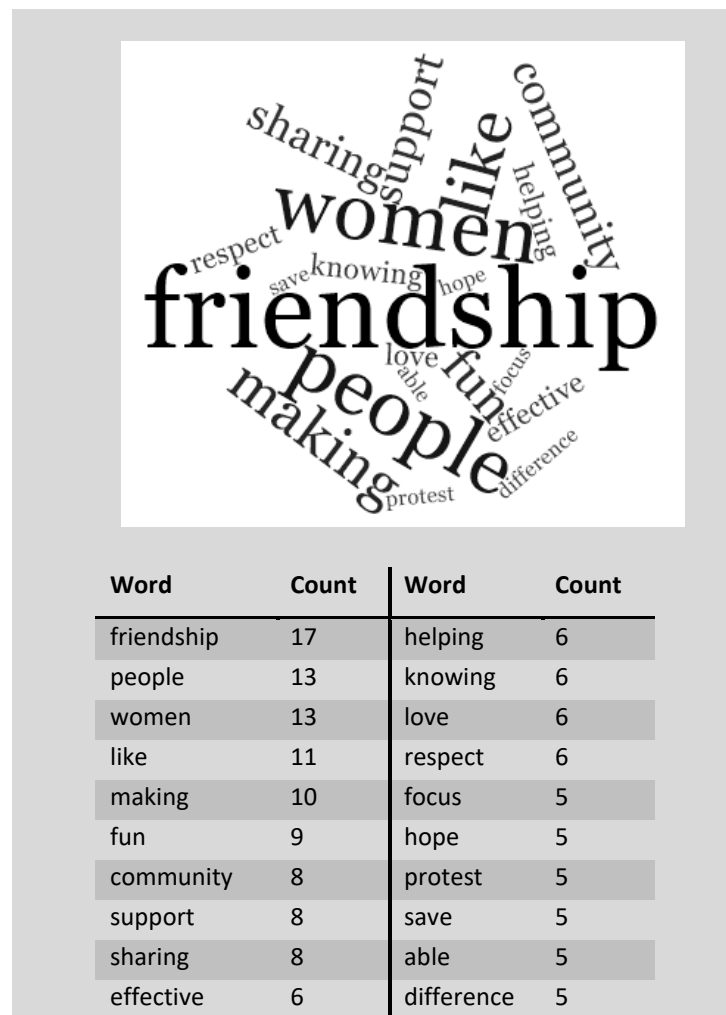
The first wave of the COVID-19 pandemic in Australia in 2020 challenged KNAG knit-ins and their gifting culture. Not daunted, the Nannas found opportunities to continue meeting. When possible, they socially distanced in public places. One loop used a knitted five metre long yellow, black and red scarf to measure the distance between one another, assuring passers-by they were law-abiding. In the initial stages of the pandemic when masks were not easily available, Nannas made them as gifts to disadvantaged communities. When isolating lockdowns were enforced, they took to meeting online, learning Zoom technology and documenting their loop activities on Facebook using the hashtag #isonannas (discussed in more detail in Section 7.3).

Women see the knit-in as more effective than meetings and prefer it for strategic planning, sharing knowledge, and exploring creativity. Respondent S.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 S.31's comment. She enjoyed "sharing creative protest ideas" and "exchange of patterns [and] ideas for craft." Similarly, Respondent S. 17 wrote "we have all increased our knowledge and creativity." Nanna Vida's loop operated slightly differently by holding separate fortnightly meetings which they used for training activities they could not engage with during knit-ins.

6.2.2   *Educating through crafting*

KNAG use their public crafting for educative purposes, seeking to converse with passers-by by promoting community engagement. This is consistent with SML's bi-directional targets of educating those within and outside the movement and conforms to Greer's third craftivist criteria: notifying or teaching others about the causes. I have regularly been told by interviewees that crafting is a means of engaging others in conversation. According to Nanna Vida, knit-ins often prompt curiosity from passers-by with the typical question "what are you making?" to which Nannas typically reply "a statement" or "a revolution". The cheeky challenge inherent in the reply operates as a provocative disorienting dilemma that indicates the Nannas are using transformative learning techniques. The questioner is put on notice that the women have a greater purpose than craft making. This exchange generates conversation between the passer-by and the Nannas.

As Vida explained, "we look at the bigger picture. We try to keep a focus on a global resolution because there's no point us winning in Australia if the rest of the world goes kaput, because the whole thing's interconnected." Nanna Joy agreed, knitting is a means of subversive involvement, saying, "it's a front, it's what we use to sneak in behind their guard, like Superman, we duck into our mobiles and come out as Supernanna!" Saying this, Nanna Joy hints at the way KNAG have defined their identity as akin to a virtual reality avatar.

Whilst the Nannas like to be light-hearted, they are serious about educating. They have identified their educational target markets as primarily older women, then families and politicians. According to Nanna Vida their main message is "to empower older women to care, or if they already care, to have a bit more courage to take that step to join us. Or if they can't join us, to support us from afar, whether it be knitting or telling other people

about us." Vida also wanted to educate families and children because children will "… have to, in another 50 years, cope with whatever we leave them. Because it's not going to be pretty, and that makes me sad. But that's what we're about. You know that's the important thing."

KNAG also see they have a duty to educate the political class. This was encapsulated in this comment from Vida, "we want to educate the people who are supposed to be educated and leading us as well." There was agreement from other KNAG members that these goals were being achieved. Confirming critical feminist gerogogy and the intrinsic motivational needs of older activists, the women feel what they are doing is purposeful, relevant, and fun as this comment from Respondent S.59 confirmed:

> The simple way that just being out there, showing by example, educating people, taking a stand while having fun and developing new friendship, while standing for such a vital cause against greed and corruption, has empowered others to support and join too.

Through adopting their Nanna personas, the women have become expert 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. Nanna Vida saw this as building hope through KNAG visibility, non-violence, determination, and public joyfulness. Her goal was to grow autonomous loops everywhere, with prominence in many regional communities:

> 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. We can provide the hope, and the laughter and defuse situations with our silliness. And half of it's not put on, it just does happen, it is just hilarious.

KNAG have played a pivotal educative role in their communities by coordinating information sessions with expert guest speakers. An example was the Illawarra Loop (I-KNAG) and Protect Our Water Alliance public forum (13 February, 2019) which I attended (see Figure 6.3). Below is my brief autoethnographic memory of the event:

Walking into the church hall, I was struck by how many people were already there and how quickly the hall filled to capacity, until there was standing room only. Immediately recognisable were the Knitting Nannas, welcoming people at the front door in their yellow, black and red t-shirts, berets, and sunflower badges. Dotted around the room were knitted banners: *Knitting Nannas stitching up the big issues*, *Water our most precious resource*, and *Clean energy*. The forum began with a Welcome to Country by a local First Nations elder and then host / MC Nanna Cherry Hardacher introduced the first speaker. I learned how there had been an ongoing issue for some years characterised by government inaction allowing deleterious long-wall mining under Sydney and Illawarra regions' water catchments. The audience asked questions of each speaker and the Mayor of Illawarra. There was a general consensus that grassroots action was needed.

Figure 6.3: Protect our Water Forum. Left: Poster invitation (Illawarra Knitting Nannas Against Greed, Facebook, 9 February, 2021, Fair Use) Right: Photos from the forum (Illawarra Knitting Nannas Against Greed, Facebook, 13 February, 2019, Fair Use)

In November 2019, I-KNAG and the Sydney Loop held an open-air information session instead of the usual Sydney knit-in. Expert guest speakers spoke about the Sydney water catchment issues to a city lunchtime crowd. Again, Nannas were visible and chatting to passers-by. At the end, a group of acapella Nannas entertained their audience with tunes about climate change and fossil fuels. Every element of the action was educative and entertaining, somewhat of an open-air community college. The images below show some of the crowd and more of the I-KNAG knitted posters tied onto trees as a form of yarn bombing. *How good is water* is a critical poke at pro-coal Prime Minister Morrison who earlier that year in his election victory speech proclaimed "How good is Australia! How good are Australians!" (see Figure 6.4).

Figure 6.4: Top: KNAG Open-air water catchment information session in Martin Place, Sydney. Bottom: Illawarra Loop yarn bombing (Source: L J Larri, November 2019)

Nannas not only educate themselves and others, but they also seek opportunities to be educated by others. By being in public spaces, Nannas have opportunities to learn from their communities and gather local intelligence. Respondent S.63 enjoyed meeting new people and learning from them during her regular knit-ins in the Western NSW regional city of Dubbo. She described elements of transformative learning such as active listening skills, and critically reflecting on what people from her community have told her about their life experiences, activism, and understanding of the relationship between environmental values and sustainable economies:

> The people I have met in Dubbo have been absolutely amazing. Our best supporter, Wiradjuri Uncle Ray, travels in his electric mobility vehicle and talks with us for at least an hour every week. He is a past activist and loves to talk politics. I've met Emily, an elderly woman with a background in the USA as a circus acrobat who lives in a caravan in a park and is supported by our local council to do so. Riverbank Frank is another member of the Wiradjuri nation who travels across the Central West working with young people. I've met countless ordinary farmers and small business owners who are interested in protecting the environment from the pervasive destruction by miners.

The cover of knitting and being a Nanna enables an educative context where Nannas can learn from local communities about the health and social impacts of fracking. Nanna Anne described to me how she was able to learn about unsafe CSG work conditions from miners reticent to share their experiences in public. She also drew my attention to her perception of social undercurrents in Chinchilla where townsfolk were divided by mining. Anne reminded me of a scene at which I was also present at a local pub, the initial meeting place of the 2016 Nannual conference in Chinchilla. As Anne spoke, I remembered seeing 40 or so identifiable Nannas and feeling the tension inside the pub that night:

> Remember in Chinchilla? Even when we were in the pub and people were getting drunk and it was getting quite fraught, I went outside to get an overview of what was going on and the number of people who came up to me and told me what was really happening! People were really frightened and inside the pub they were defensive,

but then outside they would come and tell us. The stuff we learned about the workers' conditions.

KNAG bring to light the existing anti-fracking frame alignment within communities that they hope builds towards a critical mass of sentiment where the transition to renewable energy is possible. This is evidenced by the generally positive reactions of passers-by. Nannas experience "very little opposition" (S.61) having been surprised and heartened by the reactions they have got. According to Respondent S.61, most people say "good on you ladies, you are doing great work". Respondent S.47 felt Nannas are held in high regard generally and "… especially [by] young people. It's totally mind blowing to have total strangers walk up to you when you're dressed as a Nanna and give you donations" and say "continue doing what you do!" I have witnessed the goodwill from strangers when observing Sydney and Lismore Loops during their knit-ins. People have walked past and donated money saying "love you Nannas, thank you"; or driven by tooting their horns shouting "go the Nannas!"

It seems that the Nannas are doing what Respondent S.17 suggested, "… tapping into what many people believe - expressing their concerns in a peaceful manner with an image that has charm and a little humour. We can't easily be fobbed off as just 'greenies' and we are able and willing to be part of larger fights for the environment." Respondent S.2 considered that KNAG have found a powerful form of peaceful protest. She described being at an action where "… some protestor had become agitated and as Knitting Nannas we have spoken to that person and calmed him down, and everyone calmed, and that is how powerful peaceful protest is." A favourite KNAG meme has the slogan *Stay calm and hug a Nanna.*

The Nannas carry their calmness with dignity and jubilant pride, even on the infrequent occasions when public response has been negative. Nanna Joy described how early knit-ins occasionally received the comment "get a real job," which drew hilarity from the retired Nannas who had spent much of their lives in such so-called real jobs.

6.3   Reclaiming and reframing spaces

Finding RQ2.13.   Through their CoP, the Nannas have developed
environmental craftivist strategies that effectively reclaim, reframe, and
give prominence to sites of contestation in the spirit of craftivist
beautification and social movement, bearing witness. The forms include:
knot the gate, sunflower badges and installations, and tea parties. Through
these processes the Nannas have realised the peaceful healing power of
connecting with similarly affected communities, which is known as
"ecopsychology".

The KNAG CoP promotes craftivist strategies for reclaiming and reframing sites of contestation through numerous examples. This aligns with Greer's notion of yarn bombing as a form of beautification (Lothian, 2017, 0:38 seconds), reminding observers that sites of contestation are spaces of public concern, whether they are easily visible or not. The knit-in (discussed in Sections 4.2 and 5.2), has not always been met with acceptance. On occasions, Nannas have had to assert their legal right to sit outside their politician's office, holding their ground while negotiating with local police (further discussed in Section 7.1.2). Nannas tread a careful line between ridiculing or challenging their local politicians and staying within their carefully studied rights. The following three KNAG CoP craftivist routines reclaiming and reframing spaces are described and analysed for their educative impact. These are: (1) Knot the gate; (2) Sunflower ecopsychology; and (3) Time for tea and cake.

6.3.1   Knot the gate

One of the signature tactics of the KNAG is their knot the gate (described in Section 4.2). Nannuals are an opportunity for Nannas to learn first-hand what CSG wells and infrastructure look like (see Section 5.6). Typically, CSG drill sites are located on rural properties and not easily accessible, hidden behind forested landscapes as shown in the top image of Figure 6.5, and best seen in aerial views as shown in the bottom image in Figure 6.5**Error! Reference source not found.** of the same location.

Figure 6.5: Top: Group of Knitting Nannas during Chinchilla gas fields tour looking through the forest to a well barely visible and indicated by the arrow (L J Larri, 2016). Bottom: Aerial view of coal seam gas wells south of Chinchilla, Queensland (Australian Broadcasting Commission News online, 4 Aug, 2014, Fair Use).

Knot the gate began as a mischievous soft derivative of the LTG Alliance's yellow and black triangular signs which farmers were using to resist miners entering their lands. Appropriating the motif, KNAG began tying yellow yarn triangles across mining company fences to claim a physical presence. Documenting instances then disseminating the images on Facebook, KNAG expanded the visibility of fracking locations to their followers (see Figure 6.6).

Figure 6.6: Three images showing Lock the Gate sign on a farm gate (Source unknown) and KNAG Facebook posts of their knot the gate activity at fracking sites. (Knitting Nannas Against Gas Lismore, Facebook, 28 August, 2016 and 20 July, 2020, Fair Use)
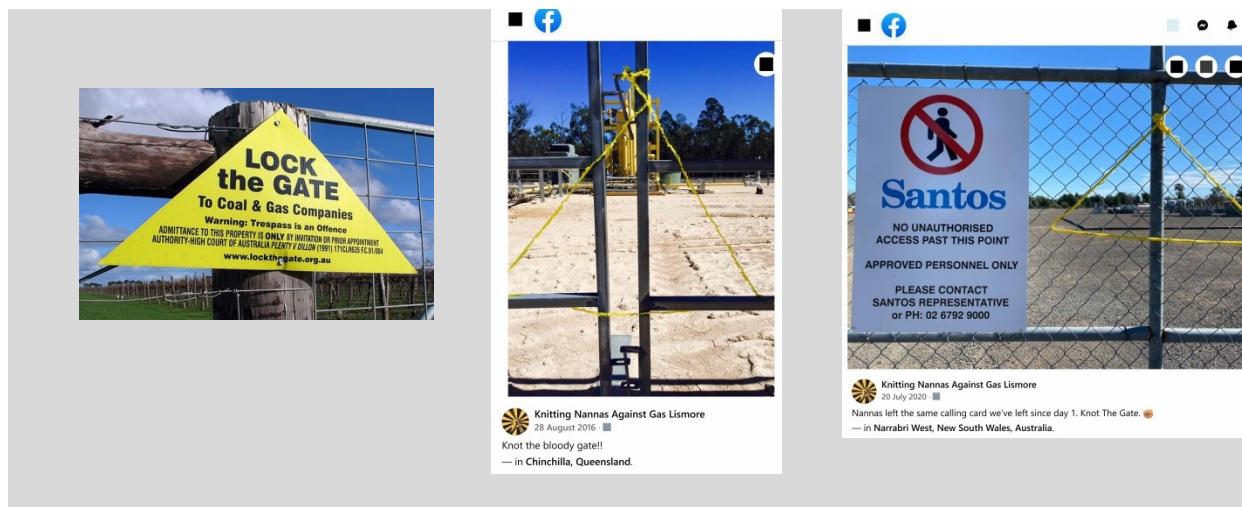
From this innovation, KNAG developed a range of soft strategies to reclaim spaces, each time taking care to document their soft style of assertiveness over the industrialised landscape. The photo from the title page is a typical example taken during an educative field trip to the Chinchilla gas fields (north-west of the Queensland capital, Brisbane) during the 2016 Nannual gas field tour (see Section 5.6). The 2016 visit was an update from an earlier 2012 gas field tour (mentioned in Section 4.2). Nannas were interested to see how Chinchilla and the neighbouring town of Tara were being affected since the completion of the fracking infrastructure and consequently reduced work opportunities for locals.

The women came prepared to reclaim the fractured lands. I observed them staging this image and a number of others at each installation during the tour (see Figure 6.7). Visually expressing their anger, annotated with red circles are: crossed arms and oversized crossed knitting needles; thumbs down; the one-finger salute; a knitted banner with the words *Crime Scene Do Not Cross*; and T-shirts with slogans like *Don't Frack With Me*. The masks they wore were to protect Nannas from the ill-effects of the fugitive methane gases prevalent in any gas extraction site. Satisfied with their tableau, having documented their presence the Nannas moved off, leaving yellow and black woollen knotted threads across the gates and fences.

Wanting to understand what the women were learning, I reflected on my observations of their actions. I saw a proficient team effort in the setup of the image as women took their places with little discussion. There were laughter and enjoyment at one another's spur of the moment expressive actions. I sensed a collegiality in making a concerted group effort that confirmed the KNAG identity as peaceful, yet powerfully determined to make their opposition visible.

Figure 6.7: KNAG Tour of Kenya Gasfields, Chinchilla, Queensland, September 2016 (Source: Judi Summers, Lismore KNAG Loop, reproduced with permission)

Reminiscent of the Greenham Common and Pine Gap Women's Peace Camps (discussed in the Section 2.1.5), KNAG have created soft barriers, thereby reclaiming spaces. They documented these symbolic memorials of their anger and fulfilled their Nannafesto to "bear witness". Interestingly, KNAG interviewees had no knowledge of the activities of the precursor peace camps. Their inventiveness was a serendipitous re-emergence of women's peaceful activist culture, a culture that seems to keep reappearing.

6.3.2   Sunflower ecopsychology - The Ground Beneath Our Hearts

Gloucester Nannas learned the healing power of ecopsychology when they participated in a worldwide project called *The Ground Beneath Our Hearts*. A synthesis of the psychological and ecological, "ecopsychology" integrates the relationship between humans

and nature, fostering caring, connection, healing, and a more harmonious holistic understanding of the world, with the objective of positive ecological behaviour change (Hibbard, 2003; Fisher, 2013). The project initiator, an American woman called Trebbe Johnson, worked with Australian environmental philosopher, Professor Glenn Albrecht, to inspire healing in communities suffering from the effects of mineral extraction in their landscapes. Albrecht calls this distress caused by environmental damage "solastalgia" or "the homesickness you have when you are still at home" surrounded by a devastated landscape (Albrecht, 2019, p. 200). The project invited communities "to make something beautiful for the place you mourn" (Johnson, 2016, 05:00) and to have a celebration of art and music on 12 September, 2015.

The Nannas decided to use their popular sunflower motif as the symbolic centrepiece of their day which they themed *A Field of Dream*. Nanna Julia told me the Gloucester Loop had already been making crocheted sunflower badges in their many protests against the incursions of CSG mining company, AGL. In a form of craftivist donation and then notification, the women used the badges as gifts to passers-by, quickly followed by the opportunity of conversation in explaining that sunflowers are KNAG emblems of the preferred renewable energy form of solar power. As Nanna Julia said "using the Earth in the way it should be, for growing … as they turn their faces to follow the sun" and "in Greek mythology, the sunflower's message is stand tall and follow your dreams, focus on what's positive."

In preparation for the September event, in April 2015 the Gloucester Loop invited their Facebook followers to make and send crafted sunflowers, bees and butterflies in large quantities "to help us and the people in mining and drilling communities around the world". People overseas were encouraged to send pictures of displays in homes or gardens on the day. All gifts were displayed in Gloucester as part of the global event described as "part festival, part live-art that will begin in the Hunter Valley [a rich agricultural location affected by extensive coal mining] and circle the Earth as people join together to make a living declaration that their home place is heart-ground ... loved and important, even when it's broken or under threat" (Gloucester Knitting Nannas, Facebook, 6 April, 2015).

As the craft and art works were received, the loop posted Facebook photos and messages of thanks such as this one:

Gloucester Knitting Nannas with a lovely array of sunflowers. Planning is well underway for 12 September. We received a bunch of crocheted sunflowers in the post today 💛 [yellow heart / friendship] thank you to everyone who is knitting for us ... it is greatly appreciated 🌻[sunflower / happiness]. (Gloucester Knitting Nannas, Facebook, 30 July 2015)

The loop also posted sunflower knitting and crochet patterns, as shown in Figure 6.8.

Figure 6.8: Sunflower pattern (Gloucester Knitting Nannas, Facebook, 6 April 2015)

> One of many patterns we are using. Lots of adaptations and personal creations.
> For large sunflowers.
> This one is the size of a large bread and butter plate. Using 2 strands of 8 ply wool.
> Knitted Centre:
> kpk-(k in front,p in front,k in back)of st to make 3 sts from one.
> pkp(p in front,k in back,p in front)of st to make 3 sts from one.
> 1st row: Kpk,p1,ki,pkp,k1 (9 stitches)
> 2nd,3rd &4th rows:k1 *p1,k1 repeat from * to end
> 5th row:Kpk, (p1,k1) 3 times, pkp, k1 (13 stitches)
> 6th-14th rows: same as 2nd
> 15th row:ki, p3 tog, (k1,p1) twice, k1,p3 tog, k1 (9 stitches)
> 16th- 18th: same as 2nd row.
> **Crocheted Petals**:I use 2 different coloured yellows/golds(2 strands 8 ply)
> Join with slip stitch to centre. Chain 9 and then do a combination of stitches to get you back down to the centre .1 combination per chain. I do: Single crochet. Half treble. Treble. Then about 5 extra long trebles (whatever they are called)

Each of the ten participating communities from around the world contributed audio recordings, videos, and photos which were then edited into a video of the event. Apart from Australia, the other countries represented were Azerbaijan, Colombia, Ireland, the Philippines, South Africa and four different locations across the USA. In Gloucester, the day began early for Nannas who laid a trail of sunflowers, bees, butterflies and placards down the main street to the centre of town (Figure 6.9). Mid-morning, community members of all ages with visiting KNAG loops and Professor Albrecht assembled in a local park for "a walk-demonstration through the town" (Glenn Albrecht, Facebook, 12 September, 2015) then collected the craft works and stopped in the town centre (

Figure 6.10 and Figure 6.11). Nanna Julia told me they did not seek police approval because it was not a protest, merely "a stroll down the main road".

The gathering then created an installation of all the pieces on and around the AGL mining site gates (Figure 6.12 and Figure 6.13), completing the day of celebration of "the home place and a peaceful protest at the threats of gas fracking and open cut coal mining in their area" (Glenn Albrecht, Facebook, 12 September 2015). The process included a picnic and conversation debrief (Figure 6.14) and an acknowledgement of "other places that are in the front line of damage from these industries" (Glenn Albrecht, Facebook, 12 September, 2015). On the video, *The Ground Beneath Our Hearts* (Johnson, 2016, 12:30), Nanna Carol Bennett says with a tone of surprise that the experience was therapeutic:

> It was actually a really healing and beautiful thing to do. We felt supported knowing that other people all over the world are doing something with their communities on the same day like us. They knew what it was like to live with the pain of damage to the ground beneath their feet and beneath their hearts.

In solidarity with the Gloucester Loop, their Lismore counterparts created a yarned sunflower and heart installation at the site of the successful Bentley Blockade, contributing aerial drone shots for the final video (Figure 6.15)

Figure 6.9: Crafted sunflowers laid out along footpath of Gloucester's main street (Johnson, 2016, 10:21, Fair Use)
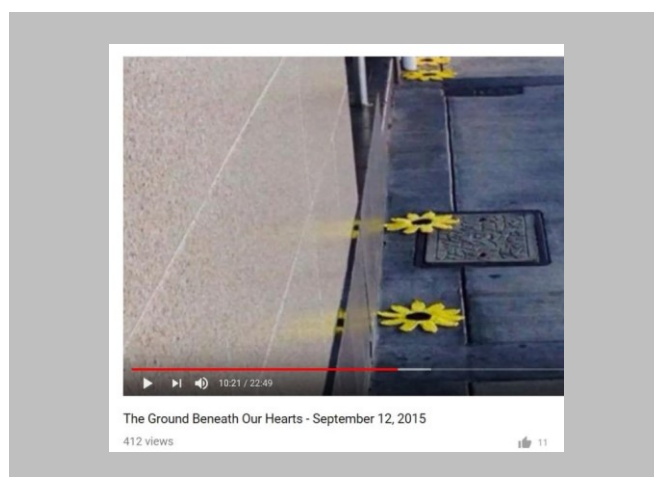
Figure 6.10: Community assembling, Gloucester (Glenn Albrecht, Facebook, 12 September, 2015, Fair Use)

Figure 6.11: Gathering in the Gloucester town centre (Glenn Albrecht, Facebook, 12 September, 2015, Fair Use)

Figure 6.12: A Field of Dream sunflower installation at AGL mining site (Gloucester Knitting Nannas, Facebook, 12 September, 2015, Fair Use)

Figure 6.13: A Field of Dream sunflower installation at AGL mining site (Johnson, 2016, 10:39, Fair Use)

Figure 6.14: A Field of Dream picnic and debrief conversation at AGL mining site (Gloucester Knitting Nannas, Facebook, 12 September, 2015, Fair Use)

Figure 6.15: Lismore Loop's The Ground Beneath Our Hearts installation (Johnson, 2016, 21:01, Fair Use)
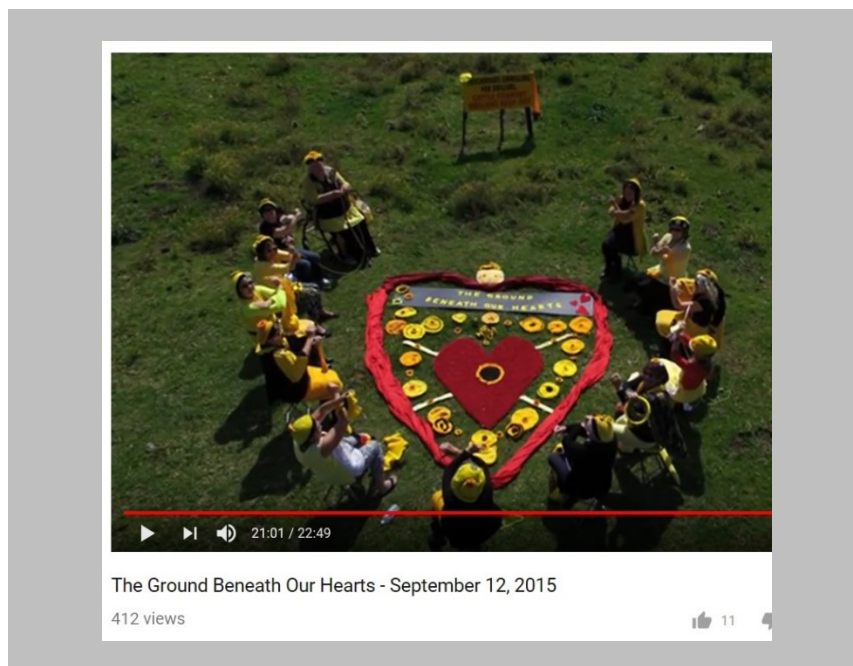
6.3.3   Time for tea and cake

An adjunct to the KNAG CoP NVDA knit-in has become the tea party since tea (or coffee) and cakes are needed when Nannas sit, knit, plot and yarn for any length of time. Central to the KNAG CoP is the grandmotherly activist persona of disarmingly charming

civility which Respondent S.63 characterised as "Nannas are polite and enjoy tea and cake". In the rest of this comment, Respondent S.63 described how her loop successfully engaged the attention of their local member of parliament (MP) and started a conversation about the dangers of CSG mining when he accepted her emailed invitation "to meet with us on the pavement outside his office and he offered us coffee and cake." I have not been able to find a Facebook post of this event to date it, nor was I able to learn any more about this event from interviewees. I imagine the "nannafied" women and the politician being very visible to the local community as they engaged in their educative dialogue on the footpath. The same respondent made another comment dated 23 July, 2015 and reported in an article in the Mudgee Guardian (McDonald, 2015) that showed the loop's relationship with their MP had its less convivial times:

> One day on the way to our information day, we individually heard our MP on local radio responding to a question about where he would be in 30 years' time. What would be the impact of CSG on water supplies then? He replied "in 30 years I'll be retired and living in Hawaii." At the end of our session on the street we bought a Hawaiian shirt and a few leis and took photos against the portrait of our MP on his front office window and sent it to the media [local newspapers]. It was a hit. The MP was reported as saying we were disingenuous!

Nanna Joy was more strident in her interview when talking about the tea party strategy, echoing McHugh's (2007, p. 38) "oppositional discourse", by explaining it in feminist terms that referred to the KNAG beginnings, challenging ageist sexism in the NVDA GFNR CoP:

> The main thing that we were trying to do, which is something that a lot of feminists have done in their activism, is just subvert the stereotypes. Sometimes that's by countering them and sometimes that's just by amping them up. So you want us to make tea, we're gonna fuckin' make tea and we're going to have tea cosies in the yellow and black [colours of the anti-CSG movement adopted by KNAG] and we're gonna have cake and scones. We joined the CWA [Country Women's Association] at one stage and would go to their craft afternoons. When we talked about it, the first word that was used was 'infiltrate', let's infiltrate the CWA and educate them. We

ended up educating and a couple of the women stayed with the CWA. This is after
Bentley [the Bentley Blockade, see Section 4.3].

Nanna Joy's reference to the CWA is significant. In Australia, this organisation is known
for their fundraising activities which rely on their crafting and baking skills, selling tea and
scones and home crafted objects at community events. Founded in 1922 by Grace Emily
Munro (1879-1964), the CWA sought to improve services to address the needs of country
women and is now the largest women's organisation in Australia (State Library of New
South Wales, 2012). Thus crafting was a way of infiltrating this other very strong rural
women's social policy making network.

In 2017, the NSW CWA passed a motion which originated from the Northern Rivers
Maules Creek Branch, partly instigated by KNAG (confirmed by Nanna Vida) and calling for
"a halt to any further unconventional gas exploration" in NSW and a ban on coal seam gas
(Ellicott, 2017).

The knit-in tea and cake routine has also been used by other loops. The Far North
Queensland Nannas (aka FN-KNAG) used this tactic to support and bear witness to younger
anti-coal mining protestors whose safety was at risk. The Nannas heard about escalating
tensions between workers at Aurizon (a rail freight company) and the demonstrators in the
Galilee Basin who were attempting to prevent coal trains getting to the Adani Abbott Point
port, some 450 kilometres north-east. The Nannas were contacted by the "defenders" (as
they preferred to be known), and were able to get active starting with an eight hour road
trip from Cairns to the site.

Being retired or semi-retired and less constrained by relational duties, KNAG are
generous with their time, another form of donation, and have the mobility to respond to
calls for support. Nanna Anne said this happened often to Nannas in NSW during the earlier
Northern Rivers campaign. "Someone would call and say 'we've got a drill at our gate!'
Nannas will drive, fly, hire a car, often six at a time," she said. Through their KNAG CoP, the
women gained knowledge of their legal rights (learned during their nannuals, as discussed in
Section 5.6) and the courage to challenge authority.

Nanna Anne mentioned that on their way to the Galilee Basin, they stopped at garage
sales and charity stores collecting "wool and stuff for their high tea." Meeting with the

defenders that night, the Nannas heard that two of the young people were planning more disruption, positioning themselves across the train tracks and locking arms inside a steel barrel filled with concrete. Nannas emphasised that their observer support role would be to ensure the action and treatment of the defenders was peaceful. Nanna Anne described the scene which unfolded the following day:

> When the Aurizon workers arrived, the police had already told them to keep away, that was quite clear. Because they were quite a way away. They [police] had loud hailers and cameras recording us. So here on one side of the road there are 39 men, including what looked very much like Federal Police officers to me, and then these two Nannas started having high tea in the middle of the paddock. When the first cops arrived, the poor little things, I always feel sorry [for them]. Really, I think it says the beauty of the Nannas is that they come in and they don't quite know what to do, particularly if you're in the middle of a paddock with high tea and they come over and try to talk to you and you say "would you like a cup of tea and some fruit cake?"

The police attempted to move the Nannas to the opposite side of the railway tracks, which would have meant they would have been within fifteen metres of the defenders and could be arrested. The women politely demurred saying "oh no, that's terribly illegal." The police officer in charge insisted "I'm telling you to come on in" and one of the Nannas refused asserting "oh no we don't break the law." Nanna Anne commented "they had no choice but to leave. They don't know what to do with you. It's like non-compliance with the police. Oh no. I'm not going to the railway track with you. I'm not doing that. It culminates!"

From the railway tracks (shown in Figure 6.16), the defenders videoed the action which they uploaded to Facebook (Frontline Action on Coal, Facebook, 9 January, 2018) with the following voiceover:

> Over to my right, you can see the Knitting Nannas who are keeping us well fed, sun-screened, and happy this morning. Looks like police are asking them to move on but they're over the fifteen metre barrier between the rail corridor and the public road. They should be fine and safe but you never know what police can do these days.

The action went for hours with Aurizon management and workers standing by, the Nannas reassuring the defenders they would keep observing, and police pressuring Nannas

to leave so they could arrest the defenders. Eventually the Nannas agreed on condition that the police make a public declaration they were also there to protect the defenders. To ensure this, one of the Nannas proclaimed to all present "this sergeant said he'll take care of you for me. If there's any other trouble, ring, the Nannas will come."

Nanna Anne enjoyed telling me how they took their time packing up, carefully stowing their crockery, checking, and repacking to make sure they had not forgotten anything. Nannas often make light of their frailties (whether actual or presumed by others) such as forgetfulness. After offering the last pieces of their fruit cake to the Aurizon management and workers, who declined, they left.

This situation typifies the way Nannas consciously de-escalate stressful situations with their role-play antics and pose disorienting dilemmas to those present by their unpredictability. Learning the craft of de-escalation is an NVDA skill KNAG added to their repertoire early on during the Northern Rivers campaign blockades. As well as knowing their rights, and exercising their ability to diffuse tense situations, Nannas are aware that it is very hard to arrest a Nanna since the media image reflects negatively on the police.

Figure 6.16: Left: Frontline Action on Coal defenders locked on across rail tracks. Right: Video screenshot of two police and two Knitting Nannas in the distance. (Sources: Green Left, 2018; Frontline Action on Coal, Facebook, 9 January, 2018, Fair Use)
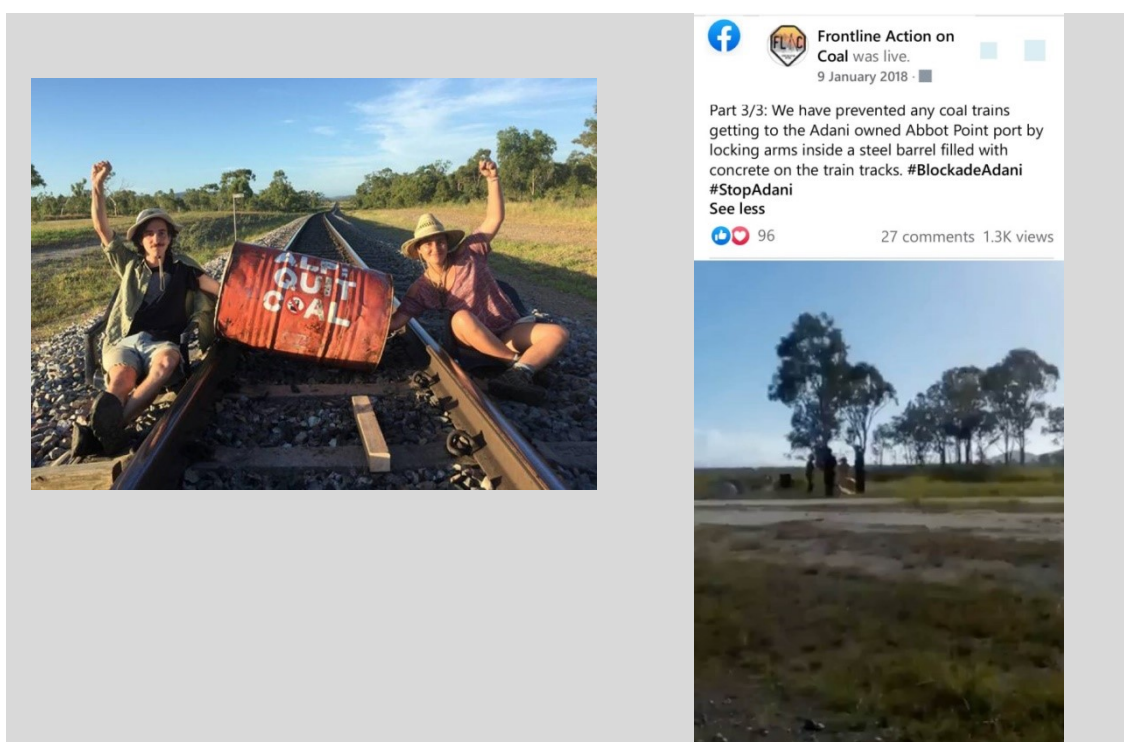
6.4   Performative activism

KNAG employ educative street theatre antics, also known as performative activism (Mayhall, 2000; Shefer, 2019), to challenge the mis- and disinformation about fossil fuels promulgated by Australian politicians and the media (as previously discussed in Section 1.2). In 2017, only three survey respondents mentioned being involved in street theatre. However, as the movement has grown, I observed loops exploring this for its educative potential and humorous collegiality. Respondent S.4 was surprised by the effectiveness of this activist strategy and explained how it had helped her develop greater confidence:

> The street theatre we have feeds into my own performing arts background. I was surprised by this aspect of being a KNAG. I love the humour that is very much a part of our message. I am surprised that I am able to be an activist in such a gentle, intelligent, happy, and engaged way. I have been surprised too, by the falling away of my anxieties when out on the street as I grow in confidence that we are a good and kind group of women.

Finding RQ2.14.   The KNAG CoP promotes skill development in craft-centred performative activism with the intention of generating curiosity and educating. What began as publicly sitting, knitting, plotting, yarning, and having cups of tea has, over time, grown to encompass street theatre and protests that make bold visual statements composed of carefully crafted objects, which involves many hours of work.

As previously discussed (in Section 5.2.2), humour de-escalates tension and assists educative endeavours by stimulating curiosity (Branagan, 2007). In the remainder of this section, I analyse three different examples of performative activism to discern the ways in which KNAG use their craftivism for educational or notification purposes. These are: (1) washing coal clean (2017 and 2019); (2) Explaining water in the landscape; and (3) the Cape York epic trek (2015).

6.4.1   Washing coal clean - 2017

In the early months of 2017, Australia's conservative Federal politicians escalated their attempts to undermine the transition to renewable energy by advocating low fossil fuel

emissions technologies which they referred to as "clean coal" (Holmes, 2017). This culminated in the then Treasurer, Scott Morrison's exhortation in Federal Parliament that the lump of coal he was holding was safe and good (see Section 1.2.1 on "coal evangelism"). A few weeks later, on 2 March, 2017, the Lismore Loop decided to publicly test the claim that it was possible to make "clean coal" and turned their regular knit-in into a coal wash-in.

After much energetic scrubbing with cleansers and tuneful singing, "gonna wash that coal and make it all clean" to the South Pacific musical hit *Gonna Wash that Man Right Outta My Hair*, which ends with the words "and send him on his way" (Rosie Lee, Facebook, 2 March, 2017), the Nannas agreed it was not possible to make coal clean. In a provocation to the Deputy Prime Minister and Federal representative of a rural constituency, one of the women asks "so, Barnaby Joyce, tell us how you make yours shine?" Whilst this act of performative activism happened in real time on the street and may have had limited impact, its effect on social media has grown significantly. The initial response garnered 119 likes, 16 comments, and 170 shares (see Section 7.2 for the use of Facebook for amplifying impact through metavoicing). A reprise of the post in 2019 shows the video is a viral event still attracting views – up to 23,000 (when checked on 23 September, 2021). See Figure 6.17.

Figure 6.17: Lismore KNAG experiment with "clean coal" (Rosie Lee, Facebook, 2 March, 2017 and 18 February, 2019, Fair Use)

6.4.2   Explaining water in the landscape

This next section is a descripton and analysis of how KNAG translated into performative activism their growing concern for Australia's scarce water supply and the lack of sustainable and equitable water resource management. Two examples are considered: (1) explaining the Great Artesian Basin; and (2) *United to protect our water* action on International Women's Day, 2019.

The context is South-East Australia's regular phases of low rainfall and drought, including the Millenium Drought which exgended throughout much of the first decade of this century. As Australia experiences significant periods of drought, water is a precious resource for which both agriculture and coal mining vie. Coal mining and coal-fired power generation consume considerable amounts of freshwater, around 383 billion litres per year in NSW and Queensland. This is equivalent to the annual needs of 5.2 million people and comparable to about 120 times the water used by wind and solar to generate the same amount of electricity (Overton, 2020).

KNAG had learned how communities, such as Chinchilla, had been affected by water resources contaminated from toxic fracking wastewater. Loops located around Sydney and Illawarra became involved in raising awareness of the deleterious impacts of long-wall coal mining co-located in their water catchments and dam storages. As mentioned in Section 6.2.2, long-wall coal mining has been found to significantly undermine the capacity of water feeding into dams which is critical for a sustainable water supply. The NSW government seemed poised to approve more long-wall mining in these areas (Davies, 2018).

6.4.2.1 Explaining the Great Artesian Basin

During the Narrabri Nannual (2017), Nannas were alerted to the potential contamination of the region's aquifer-based water resources drawn from a section of the Great Artesian Basin (GAB). It emerged that the proposed fracking sites in the Pilliga Forest would potentially impact water quality since this area is a recharge location for a section of the GAB.

The GAB is one of the largest underground freshwater resources in the world. A permanent water source even in dry times, this basin spans over one fifth of the Australian contintnet, storing approximately 64,900 million megalitres of water. This precious resource

feeds springs, shallow water tables, creeks, and rivers, supplying 120 towns and generating nearly $13 billion per year for pastoral, agricultural and extractive mining industries. It supports Indigenous cultural values, sustaining groundwater dependent ecosystems throughout much of the dry interior. Scientists are still investigating how the GAB collects water called "recharge" through porous rock and how the different parts of this basin are linked. It is thought that there is transference of water between different levels and connections (Geoscience Australia, n.d.). This fact alone signals a warning for environmentalists who emphasise caution where there is the threat of serious or irreversible environmental damage, which is referred to as using the "precautionary principle".

Realizing their own ignorance about the GAB was most likely reflected in others, the Sydney Nannas added their repurposed bed sheet infographic to their weekly knit-ins in the Sydney CBD. Figure 6.18 shows three Nannas holding their educative bed sheet and explaining to passers-by how rain water enters porous rock and travels far below the surface, before being collected in sections of the GAB. A map of the GAB appears on this infographic in the bottom right-hand corner.

Figure 6.18: Sydney KNAG Loop educating the public about recharge to the Great Artesian Basin from the Pilliga Forest, map of the Great Artesian Basin bottom right (Source: L J Larri, 2017)

6.4.2.2 *United to protect our water* action on International Women's Day, 2019

The Facebook reprise of KNAG's clean coal experiment on 18 February, 2019 (shown in Figure 6.14) was timed as a lead up to the Nannas' protest on International Women's Day (8 March, 2019) which aimed to raise awareness about protecting precious water resources.

On this ocassion, KNAG were inspred by a UK offshoot of the movement, the Lancashire Nanas (aka "Nanashire" with only two "n's"). Nanna Evelyn explained how she happened to be in London (12 September, 2018) to join the *#100women in Parliament Square* action. Evelyn remembered being "awe-struck" at the power of the action where Nanas were dressed as suffragettes wearing sashes in white, purple, and green, with their *No Fracking* message. When she returned home she "put out the idea to all the loops and they all jumped on board," getting to work making banners, sashes, and T-shirts still referencing suffragettes but in the KNAG colours.

When the day came, 101 Nannas gathered a few blocks away from Parliament House in Martin Place (Sydney CBD), who then marched with their loop banners up to NSW Parliament House singing "no water, no coal", to the tune of Bob Marley's *No Woman, No Cry*. In a carefully crafted and choreographed installation, the women draped cardboard cut-out water droplets to the fence behind them, displayed placards advancing their claims including knitted banners such as, *Don't unravel our rivers knot coal*, and used their *No water no life* yellow, black, and red sashes in a symbolic soft lock-on, tying themselves onto the fence bars. The Nannas settled in for a few hours. Occasionally they were joined by politicians, School Strike 4 Climate youth, other supporters, and were entertained by their own small band of ukelele players performing the *No Water, No Life Rap* (Brown, 2020).

Nanna Jesse commented that it took "a lot of planning, a lot of making and a big, big kind of presence" as shown in the photos in Figure 6.19, Figure 6.20, and Figure 6.21. In her Facebook post Rosie Lee (Lismore Loop, Facebook, 10 March, 2019) commented:

> We came, we sang, we sashed [for International Women's Day] … and after weeks of hard work and [then] hours of sitting on the hard, hard concrete we needed to get out of the hot sun and get something to eat and drink and a Nanna nap! Nothing is too hard for Nannas ... and we never give up.

Figure 6.19: United to protect our water –The Knitting Nannas rally on International Women's Day, 2019 (Martin Place, Sydney, Australia) (Photo: Dominique Jacobs, Gloucester KNAG Loop, reproduced with permission.)

Figure 6.20: United to protect our water, screenshot of sash lock-on with knitted banner displaying the words: Don't unravel our rivers knot coal (Brown, 2019, 04:40, Fair Use)
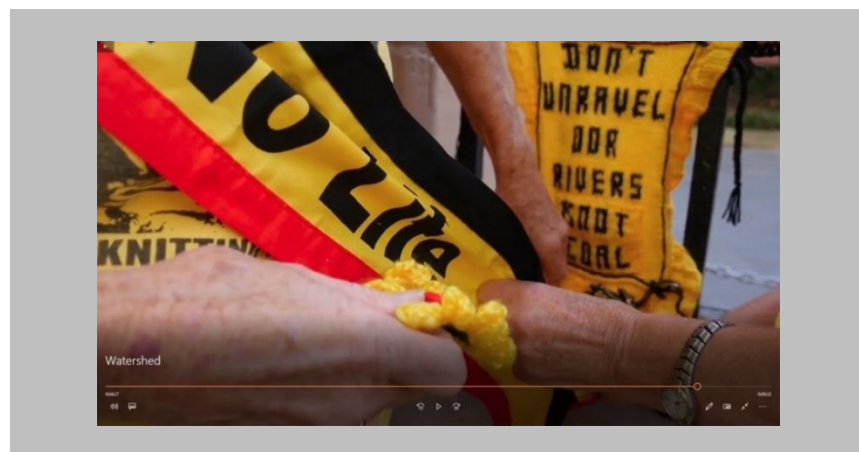
Figure 6.21: United to protect our water – 101 Knitting Nannas use their No Water No Life sashes for a soft lock-on to the bars of NSW Parliament House, on International Women's Day, 2019. (Photo: Dominique Jacobs, Gloucester KNAG Loop, reproduced with permission).

6.4.3   Cape York epic trek - 2015

In this section, how KNAG have crafted community engagement on the ground is described. In this example, they created an epic journey. The motivation for this action came about in 2014 when Cairns-based environmentalists became concerned by the news that mining companies and the Queensland government were planning CSG exploration and pipelines in the tropical Cape York Peninsula in Far North Queensland (FNQ). This posed a threat to the environment, water security, community cohesion, and traditional land owners, a threat that very few people were aware of. Ngarrabullgan / Mount Mulligan (160 kilometres west of Cairns), a sacred Djungan peoples heritage listed area, was being targeted. From the experiences in other fracked and mined locations, Nannas had learned how mining companies had already shown their ability to split traditional owner communities into factions.

The Far North KNAG Loop were determined to educate the remote First Nations peoples. The best way to do this, they decided, was on the ground. Spokesnanna and trek organiser, MaryBeth Gundrum, described this as "an iconic pilgrimage to the tip of Cape York" of approximately twenty days' duration. By walking, the Nannas intended to engage with and educate more people and bring more media attention "to the topic of coal seam gas and the invasion of our community, particularly our rich farmland" (Aidt, 2015, 00:00.15 and 11:05). In the lead up to the trek, FN-KNAG Loop held a letter writing campaign, delivering hundreds of letters to the Cairns Regional Council from FNQ residents supporting a CSG ban. In a craftivist mode of donation, the Nannas gave away knitted beanies and blankets along the way (Campbell, 2015).

Called the *Nanna Dreaming Project*, twelve Nannas began the trek from the annual Laura Quinkan Dance Festival where they were granted permission by traditional owners to walk on country and were supported spiritually by a traditional smoking ceremony as they left (Aidt, 2015, 08:09), as shown in Figure 6.22.

Figure 6.22: KNAG depart the Laura Quinkan Dance Festival with their Viva La Nannalution flag, 2015 (Source: Unknown, through Google Images, Fair Use)
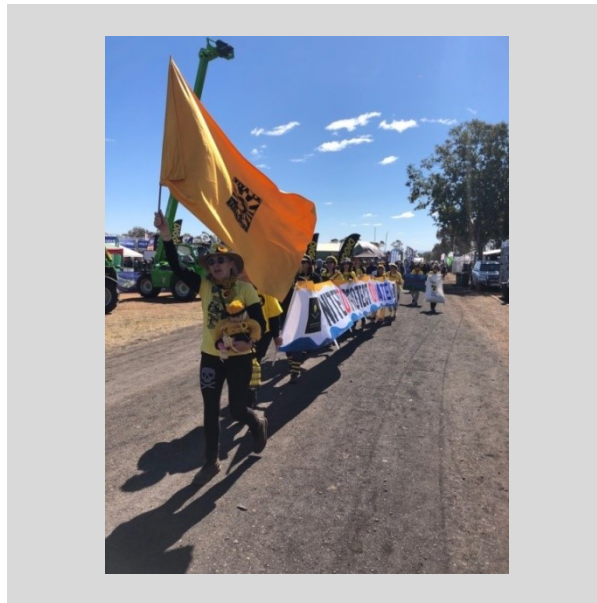
Nanna Anne recounted that the group included representatives from four loops; one Nanna was a fully trained Army Reserve remote area operator who ensured safety protocols were adhered to. They camped out and had support vehicles so women were able to share the walking. Volunteer film-makers went along to document the action. Showing respect for First Nations cultural rights and practices, Nannas were careful to ask traditional owners' permission to go onto each new nation's country. At times this meant waiting. At one barge crossing, there was a considerable wait while the community held their sorry business (communal funeral bereavement rituals) for four people. The Nannas encountered "massive support" with donations of food and encouragement. They had to be careful when cars or trucks passed not to be covered in dust or flicked by stones on the unsealed and corrugated roads (Aidt, 2015, 07:17).

Along the way, Nannas learned from travellers who had lived and worked in CSG fields. Local communities shared their ancient culture which included a private tour of rock art located above coal deposits (Aidt, 2015, 08:09). Other Nanna loops and anti-CSG activists followed the progress of the Nanna Dreaming Project through Facebook posts. The trek challenged the ageist sexist attitude that older women were not capable of such an adventure which took them out of their comfort zones, despite five leaving early. Through situated experiential learning, their ecological and environmental literacy was extended by connecting with traditional owners' connection to country.

In Facebook comments there was much admiration for the courage and determination of the intrepid women who undertook this extreme version of bearing witness and were open to emancipatory learning dispositions. Facebook post examples include Figure 6.23 which was liked by 92 people and shared by 106; and Figure 6.24 which was liked by 84 people and shared by 144.

Figure 6.23: Cape York trek on unsealed dusty roads (Celestial Serpent, Facebook, 25 June, 2015, Fair Use)
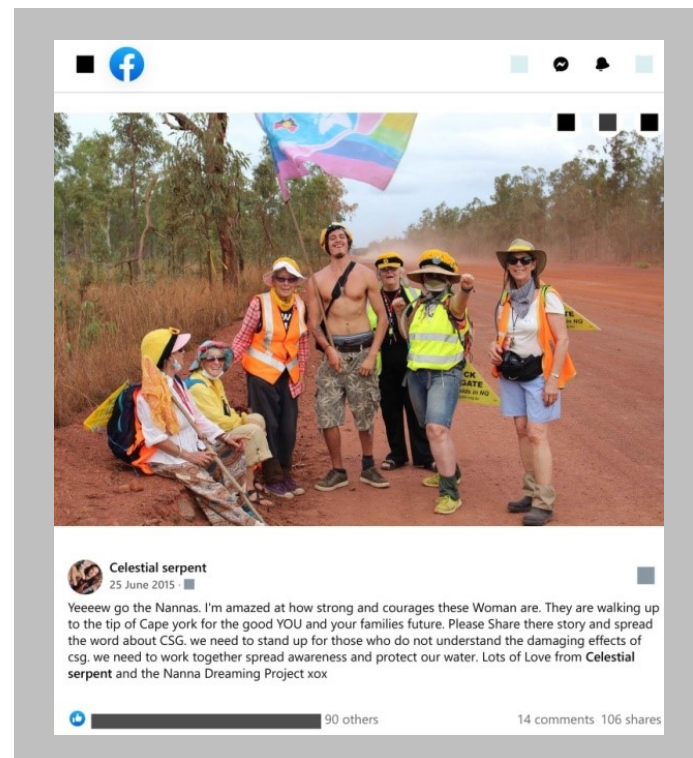
Seven women out of the initial twelve finished the trek, celebrating the successful conclusion of their walk at the tip of Cape York (see Figure 6.24). Whilst other mining and prospecting has been conducted in Cape York, such as for bauxite, lithium and silica, the Ngarrabullgan / Mount Mulligan plan did not go ahead and so far there has been no fracking (Falvo, 2015).

Figure 6.24: Celebrating reaching the tip of Cape York (Far North KNAGS, Facebook, 1 July, 2015)

6.5   Summary

This chapter has offered answers to the aspect of RQ2 concerning the contribution of craftivism to transformative environmental adult education. Building on the knit-in, a craftivist version of the NVDA sit-in, gave the KNAG CoP a springboard to initiate other creative craftivist innovations. Findings in this chapter confirm the craftivist nature of KNAG activities by showing how they cover the complete gamut of Greer's craftivist characteristics of donation, beautification, and notification (Lothian, 2017, 2017, 0:38 seconds). Furthermore, crafting enables group processes of critical reflection that create the learning environment for KNAG to innovate activist repertoires and strategies which then become praxis integrated into their identity. KNAG craftivism takes many forms and is the means by which they deliver learning to others. Craftivism is a camouflage for KNAG's main objective: to raise awareness and educate about CSG and fossil fuel environmental impacts.

KNAG educate themselves and others, and in reciprocal relationships of giving and receiving, are educated by others. By doing this, they have expanded their ecological and environmental literacy and activist skills. The insights they gain and their encouragement of one another to be courageous and determined contribute to transformative emancipatory learning dispositions. In this way, they are open to new experiences and challenges. 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. These women have learned how to build their KNAG collective identity through their craftivism, using it as a strategy for induction and identity building.

Under the camouflage of crafting, KNAG connect with individuals, communities and networks to amplify their anti-fracking messages. The ongoing potential to connect with others in many different contexts has been motivational for women who have enjoyed socialising and connecting with people they would not normally associate with, through the visibility afforded by crafting outdoors.

The findings presented in this chapter illustrate and exemplify the many forms of craftivism KNAG have used in their educative activism. KNAG reclaim and reframe spaces, engage in street theatre making bold visual statements, and have undertaken epic journeys to engage more people in their cause. In the process, they have learned more about the power of their grandmotherly identity in garnering support. They are known and admired for their courage, determination, and wisdom in their defence of environmental sustainability by challenging ageist sexism.

Craftivism is the core learning process of the KNAG CoP. In this chapter, I have shown how craftivism is central to KNAG activist learning. Under the cover of peaceful crafting, the KNAG CoP emboldens and empowers older women to make very publicly visible statements about environmental issues. The KNAG CoP milieu of craftivism motivates older women to collaboratively build their activist identity, ecological and environmental literacy, and NVDA activist skills. This is a milieu involving a complex web of social learning interactions and encounters that stimulate opportunities for active listening and critical reflection, which promotes transformative and emancipatory learning dispositions.

In this way, craftivism was analysed to be the catalyst and transformative force that activates situated experiential learning and identity formation. 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 stich, 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.

Chapter 7. "KN-IT-working": using social media for learning and empowerment

7.1 Introduction

The previous chapter was the second of three investigating Research Question 2 through the KNAG's use of craftivism as an environmental activist learning process. Chapter 6 found the KNAG CoP uses craftivism as a strategy for empowerment, and fostering an inclusive and enjoyable learning environment. Embodying elements of critical feminist gerogogy, craftivism was analysed to be the catalyst and transformative force that activates situated experiential learning, identity formation and the KNAG educative activism.

This chapter looks at a uniquely 21st century aspect of social movement learning where the social movement landscape (Cox, 2016, p. 114; George and Leidner, 2019, p. 4) combines collective and connective action through digital activism. The social movement landscape is taken to mean the underlying features of how social movements work, in this case mediated though information systems. Digital activism is digitally mediated action to create social change. Traditional collective action, where people come together in a group to act for common interests or beliefs, is transformed into connective action by using information systems such as social media to organise and communicate the group's purpose (ibid.).

Unlike traditional or legacy media (television, radio, or newspaper), where communication operates in one direction from a publisher to a receiver, social media is two-way communication. In social media networking sites (Facebook, Twitter, Instagram and Tik Tok) users create and share information, ideas, messages, pictures, videos, and other content (Khillar, 2020). Commenting on content is also a form of content generation.

The theoretical frame of "connectivism" is used to understand the dynamics of social movement learning (SML) in connective action in digital environments. To recap from the literature review, connectivism (Siemens, 2008; Downes, 2012; Guerin, 2016) identifies learning as the ability to traverse distributed knowledge in the digitised networked environment where connections are characterised by openness and diversity. For environmental activists such as the KNAG, networks involve alliances with like-minded

groups, knowledge experts, and other credible information sources. Learners autonomously seek information from each other, actively creating and disseminating knowledge (Siemens, 2008; Downes, 2012; Guerin, 2016). This self-directed learning requires internet research skills and capability in using Web 1.0 (email) and Web 2.0 (social media) tools. This chapter incorporates analytical criteria previously used relating to: critical feminist gerogogy, motivation for engagement in older adult learning, and transformative environmental adult education (see Section 2.7).

In keeping with the bi-directional nature of SML, in this chapter, KNAG's use of social media as a tool for networking and learning is interrogated, within and between loops and outwards to social media followers. In this they exploit the ability to reach beyond loops to broaden their audience. Data from surveys, interviews and a Facebook analysis are combined to build a picture of the KNAG CoP approach to connectivism. Networking within and between loops is critical to cohesion within the movement. The internet provides a means of empowerment and a form of connective action that supports the mobilisation of older women for collective action. The chapter concludes with implications for the inclusion of older women's online activism as part of the emerging field of social movement learning theory (SMLT). Points are made concerning how older women activists leverage the internet as a platform to voice their agenda.

Research findings about KNAG's use of Web 1.0 and Web 2.0 tools follow. They are organised under four themes: (1) beginnings and the online launch; (2) overcoming the digital divide – extending digital literacy; (3) collective identity and community; and (4) a media movement overcoming ageist sexism and climate scepticism.

7.2   Beginnings and online launch

Finding RQ2.15.   KNAG launched their social media identity via Facebook on 20 June 2012. Using social media was new to all but one of the members in the first Nanna loop. KNAG quickly learned the communicative and educative power of social media.

In Section 4.2 it was documented that the KNAG movement emerged in only 20 days, from 8 to 28 June, 2012. KNAG was recognised in the local media and began their online

visibility on Facebook. Initially, Nanna Joy told me, only one of the women in the first loop used social media and she convinced the others to go online. This led to their first Facebook posting titled *Nannas are go! At Shannon Brook* which celebrated their involvement in the first GFNR blockade where mining company Metgasco had begun to excavate holding ponds for contaminated water (Knitting Nannas Against Gas, Facebook, 20 June, 2012).

Their formula of "sit, knit, plot, yarn, have a cuppa, and bear witness" and their guiding principles in the form of a "Nannafesto" emerged within the first six months as the women peacefully knitted in front of mining company site fences, a local politician's office, and community markets. They created on and offline spaces in which they would be seen and heard. At first this was amongst other women, where they crafted a powerful identity that gained credibility for its ability to mobilise hundreds of people, contributing vital numbers to the anti-fracking movement. Nanna Vida considered the use of social media across the GFNR made possible the success of the Northern Rivers campaign. KNAG, with their following, played an instrumental role over three years that culminated in a four-month blockade at Bentley (2014). Nanna Vida indicated behind the scenes social media networking Nannas were involved in:

> We have a good following and a lot of that has really been helped by social media. It really has helped win a whole lot of things. Bentley would never have been won without the speed of social media, the ability to communicate without being tracked and things like that, and to get people there quickly when needed. Yeah, it's really important.

"Liking" and "following" are forms of "clicktivism" where social media audiences indicate their endorsement of groups or content, which raises these groups' profile (Halupka, 2018; George and Leidner, 2019). Nanna Joy attributed the early growth of KNAG to their intentionally educative approach through their Facebook visibility, which built a following of around 13,000 within the first two years. In November 2020, Joy told me:

> We still have a lot of people following us. That helped us to advertise ourselves and what we were doing and attract other women who were looking for something meaningful. Wide protest groups are all women. So a lot of this is how I'd say that we

got so many other loops joined up. We worked very hard on education and bringing people onside. Yes, social media was very important.

As previously discussed in Section 4.2, situated experiential activist learning led to the inventiveness of the knit-in. Nannas used Facebook to document their burgeoning identity as they grew their online brand and CoP. The Shannon Brook protest (on 8 June, 2012) was a pivotal event of environmental activism and was celebrated online. This was the catalyst for establishing a social media presence and gaining recognition in the local press.

Social media platforms enable followers to share and comment on content, which is referred to as "metavoicing" (George and Leidner, 2019, p. 4). Depending on the size of a follower's own following, metavoicing may significantly multiply the impact of posts. Commenting creates new content that can cleverly enhance a post. "Cross-sharing" and "cross-posting" are two ways of sharing content. Cross-sharing involves clicking "share" or using the "@" as a tag in front of an individual or a page name. To cross-post, the page administrator intentionally feeds content to other groups or organisations by enabling links to their pages. An analysis of Facebook groups identified that KNAG and other environmental groups mostly utilise the more informal and serendipitous cross-sharing. For example, on 18 July, 2012, a Lock the Gate (LTG) member cross-shared their organisation's first KNAG message to LTG followers about the successful acquittal of the protester, Davey Bob Ramsey, arrested on 20, June 2012 at Shannon Brook. Ramsey is shown celebrating with family, friends, and Nannas wearing their gift of a yellow and black crocheted beanie with the word "hero". The cross-post expanded the reach of the original KNAG post of 58 likes to the membership of LTG (around 13,000 in 2021). Amongst the LTG there were another 68 likes, nine shares and the possibility of many views without reactions. Local online news service Echo Publications, with its associated regional newspapers, picked up the story. As a result of the whole process from practice "mockades" to protest blockade and then protester acquittal, KNAG were successful in exploiting their performative activism knit-in NVDA formula to gain social media visibility and credibility amongst anti-fracking activists and even the general public. As described previously in Section 4.2, they were concurrently profiled in traditional media through local, regional and state newspapers.

KNAG identified themselves as an older women's movement with vitality, adding their visibility and voices to the GFNR movement. After approximately 18 months, the key elements of identity formation were in place - a uniform, the Nanna persona, and visual branding (online through social media and a website) including logos and banners. The changes in appearance are easily tracked in their postings, as shown in Figure 7.1. Compared to their first Facebook post on 20 June, 2012, in 2013 there was a smattering of the signature yellow and black. By 20 January, 2014, each woman wore their variation of the colours with matching berets. True to their Nannafesto, they are everyday women, not extremists, presenting their protest. The image records a photoshoot for the Sydney annual short film festival, "Flickerfest" in which their documentary film "Knitting Nannas" was shown (O'Keefe and Brown, 2014).

Figure 7.1: Two examples of KNAG Facebook postings from 2013 (left) and 2014 (right) showing development of their identity.
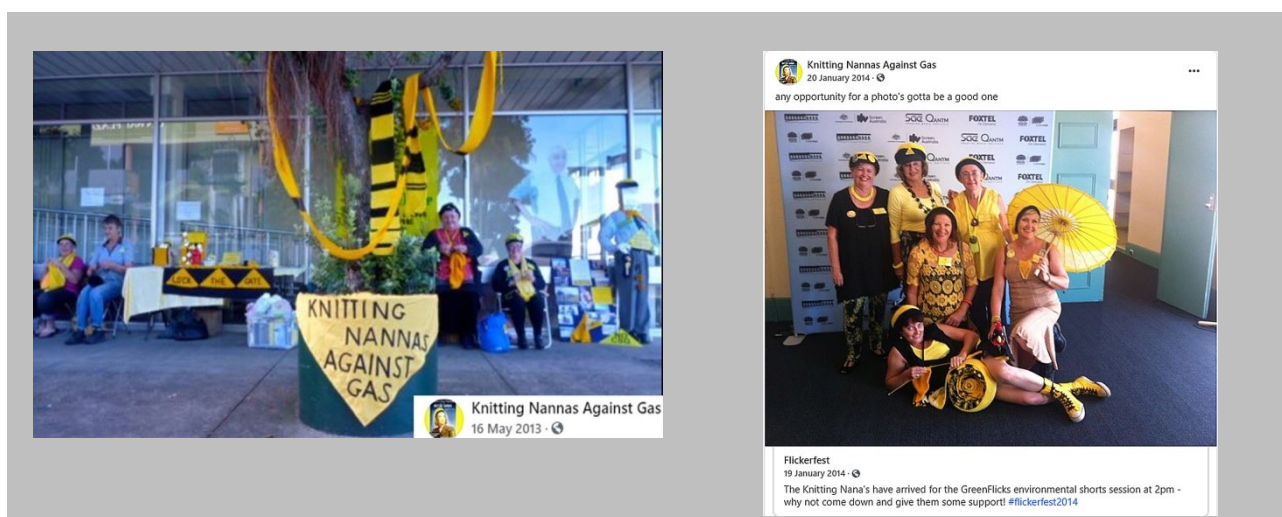
7.3   Overcoming the digital divide - extending digital literacy

In this section, how KNAG intentionally upskilled their digital literacy is considered. As indicated in Chapter 2, in particular in Section 2.4, there exists a significant gap in scholarship about activist social media use by senior citizens. The dominant discourse casts seniors in an ageist deficit model that presumes a digital divide exists between younger and older people (Trentham et al., 2014; Fotopolou, 2016).

Finding RQ2.16.   Many KNAG members entered the movement with computer email (Web 1.0) competence. Some women were also social media (Web 2.0) savvy and helped to upskill loop members. Loops also engaged experts to train and upskill them. The atmosphere in informal training was needs-based, learner-centred, collaborative, non-judgemental, and enjoyable. The older women showed they are adaptive, innovative, and competent in learning and applying new digital skills.

Data from the learner entry behaviour analysis in Section 4.5 identified many women entered KNAG with computer competence, having been through the digital revolution in their workplaces during the 1980's, 1990's and 2000's as teachers, nurses, health professionals, managers, secretaries, and office administrators. Some were journalists, photographers, and graphic artists. All these roles involved some degree of digital literacy. Many were farm-based homemakers responsible for computer-based financial and general record keeping and involved in computer-based decision-making information systems (Mackrell et al., 2009, p. 2). Some had greater expertise, like Nanna Rose, a computer programming teacher in vocational education colleges for many years, who easily took on the role of Loop Facebook Administrator. Nanna Vida, having been a library technician, was proficient in information systems and already an active smartphone user, who described her IT savviness in these words:

> … everything through my phone. I've got a 29 year history as a library technician and that helped. Right from the beginning I started in the library, pre-computers. So when they came in, our work changed enormously and a lot of what we once had to do by hand fell off. We were encouraged and paid to do courses. That really helped in the early Atari days, that was hilarious, to going right through to Windows and now Mac.

A number of women demonstrated their pre-KNAG use of social media by explaining this was one way they first heard about KNAG. Respondent S.46 heard about the Nannas "from friends who went to the Bentley Blockade and social media". S.64 came on board "through social media - Facebook. [where I saw…] the actions at Glenugie and Doubtful Creek, and in particular seeing Clare Twomey knitting whilst atop a tripod during a

blockade". S.63 heard about KNAG from Twitter and other women friends. In an interesting reversal, her attraction to the movement was the opportunity to move from online to become more visibly and physically active than just practising her "clicktivism", "not just 'liking' on Facebook – something I am actually doing".

Environmental activist learning in the KNAG CoP includes becoming digitally savvy. Realising they needed upskilling to network amongst themselves and other climate justice activists, Nanna loops initiated their own social media training sessions. Drawing on expertise within their loops, engaging more tech-savvy activists, or attending community education courses, KNAG have undertaken self-directed, needs-based learning. Data show the learning environment has been learner-centred, collaborative, non-judgemental and enjoyable. This is consistent with recommended best practice from critical feminist gerogogy (Findsen and Formosa, 2011) and older learner motivational theories (Wlodkowski and Ginsberg, 2017). The older women have proven to be adaptive, innovative, and competent in learning and applying new digital skills. In 2017, Nanna Vida explained how her loop, already familiar with email, upskilled in social media:

> We've had different training with people involved in the movement. We're going to have some more coming up now in a couple of weeks which has been asked for from the Nannas themselves, which is really good. One of the Nannas organised that. I have to send out an email about that.

When Nannas acquired new technology, such as smart phones or iPads, informal loop training covered the basic and more advanced functions. Nanna Vida described supportive learning spaces which were created to overcome any fears of new technologies and break through the digital divide. The women have been determined to gain digital literacy, enjoying the benefits of online activist networking. There were occasions where collaborative learning and sharing involved basic problem-solving and resulted in joyful amusement, such as this incident described by Nanna Vida:

> We had a hilarious incident where a couple of the Nannas were thinking they couldn't swipe on their phones and their iPads and we couldn't work out what was going on. Then we realised they daren't taken off their screen protector. So it was like opening up a whole world, everyone was just killing themselves laughing!

Finding RQ2.17. *Consistent with the literature, in loops, it is recognised that women have a range of confidence levels in digital formats, from being up-to-date with the latest social media technology to only using email. Loop members try to upskill other members. In the loop it is accepted that some women are less interested than others in acquiring new skills, beyond using email and smartphones.*

Being a disorganisation constituted by semi-autonomous loops, KNAG value online networking. A majority (79%, 46 of 58 survey respondents, KNAG survey data, 2017) agreed that networking was highly important and considered it valuable for connecting with other members. Women recognised the need for information sharing across loops, learning from one another's experiences and sharing strategic knowledge. "Communication is key to keeping everyone informed and involved. You can't take action if you aren't aware of what's taking place", stated Respondent S.23. Collaborative knowledge generation was emphasised by Respondent S.47, "we all learn from each other's experiences, and have different areas of expertise to bring". Loops have found social media an essential tool for partnership with one another and with other anti-CSG or environmental action groups. Respondent S.57 stated, "[we use social media …] both for support and sharing knowledge. Also in organising effective actions in partnership with other groups - both Nanna groups and other environmental organisations". Loops use a combination of email, Facebook, Messenger, and mobile phone SMS to connect digitally. Each loop has one or two women who are administrators and curators. Twitter and Instagram are used by only a few.

Connected through their back channels, loops promote letter writing campaigns, online learning in climate action, Zoom meetings, training sessions, KNAG protests, and those being held by other climate activist organisations. One loop that relies mostly on email for internal networking has around 100 addresses in its email group. The coordinator tries to send out a weekly message and starts each message with "Hi Nannas and Roadies". "Roadies" refers to the women's husbands or partners who help at actions.

More Nannas are confident about Facebook, Messenger and email than they are with online meeting technologies like Zoom. The adoption of online meeting technologies during the COVID-19 pandemic has varied across loops, depending on confidence levels and

women's preparedness to overcome the frustrations of learning new technologies. Nanna Rose reflected on KNAG's adoption of the technologies:

> In our loop it's mixed. We've had an interesting experience in lockdown with Zoom. I was like, we'll just go online with Zoom. And there was quite strong resistance from some of the Nannas. Some of them are quite happy, but there are a few who've got used to Facebook, but the move to Zoom was a step too far. They didn't trust the technology and they didn't want to be involved. So that didn't work too well in our loop, whereas the Sydney Nannas took to it like ducks to water, quite happy to Zoom away. The Sydney Nannas are interesting because they got on so well with Zoom. I think they'll keep on with it, have some Zoom meetings and some face-to-face meetings, even when they don't have to.

From March 2020, when physical knit-ins were not possible due to COVID-19 pandemic health orders instituting social distancing, digital technologies became the mainstay of KNAG networking and activist work. Confirming Nanna Rose's observation of Zoom adoption, my analysis of 2020 and 2021 loop Facebook pages found that the Lismore and Sydney loops were more active users, jubilantly documenting their Zoom antics on their Facebook pages. Other loops such as Gloucester and Illawarra posted about regretfully ceasing face-to-face meetings, but stressing they would continue providing environmental news issues and online CSG alliance actions.

The Sydney and Lismore loops have creatively expanded their online activist repertoire. The presented digital images of themselves online, dressed in their KNAG identities, relaxed, engaged, and enjoying the interactions. The Sydney Loop held Zoom meetings in lieu of their knit-ins and invited the general public. The text of their invitation was repeated for 30 weeks (see Figure 7.2), which shows their depth of commitment to fighting CSG. It included the statement that they "have been busier than ever" despite not being physically visible in their usual Martin Place location in the Sydney CBD. In this way, they extended their connective actiion, continuing to raise awareness and network with their followers. Along with supporting the transition to renewable energy and the young people's School Strike 4 Climate movement, issues of concern noted in the invitation included opposition to: the Santos' Narrabri CSG project in which 850 wells were planned to be built in the Pilliga

Forest, fracking in the Northern Territory affecting lands of traditional owners, and Adani coal mines in the Galilee basin (Queensland).

Figure 7.2: Sydney Loop invitation to followers of weekly online Zoom meetings (Sydney Knitting Nannas And Friends, Facebook Event, from 29 May to 18 December 2020)

Event by Sydney Knitting Nannas And Friends

Duration: 2 hr

Public   Anyone on or off Facebook

Sydney Knitting Nannas And Friends have stopped our weekly vigil in Martin Place in keeping with current health advice. We miss being out in the city drawing attention to the dangers of unconventional gas and coal mining, but we've been busier than ever with online activities.

This is a crucial time for actions to oppose Santos' Narrabri Gas Project, which will soon go to the Independent Planning Commission for determination. Especially when gas and fossil fuel developments are the basis of the federal government's plan for economic recovery.

We meet on Zoom every Friday 11am - 1pm for discussions on forthcoming webinars, the latest news and what we can do online to stop Narrabri Gas and ban unconventional gas mining.

We support traditional owners opposing shale gas fracking in the Northern Territory. We draw attention to the many proposed new coal mines or extensions in NSW which would cause more devastation than Adani in the Galilee Basin. And we oppose Adani too of course!

We support the school students and everyone calling for a swift transition from fossil fuel mining to renewable sources of energy. We still welcome visitors - but for the moment not in Martin Place but on our page or to our Zoom meeting!

If you'd like to join us, send us a message and include a phone number.

Twelve months later, the Sydney Loop celebrated the anniversary of their first online knit-in with a Zoom screenshot of loop members and the comment, "this time last year... Covid pushed us indoors, so we began meeting on Zoom" (Sydney Knitting Nannas And Friends, Facebook, 24 April, 2021). This loop invented the "home vigil" action. The first example shown in Figure 7.3 involved one Nanna putting a placard outside her house, suggesting to online followers "Let's yarn about a just transition from fossil fuels". Joining her on Zoom were loop members and friends, the three men pictured.

Figure 7.3: Sydney KNAG Loop public Zoom meeting supporting Nanna E's home vigil (Sydney Knitting Nannas And Friends, Facebook 20 April 2020, reproduced Fair Use)

Concerned to maintain hopefulness and engagement amongst KNAG and followers, the Sydney Loop devised their weekly "Good News" encapsulations of recent environmental successes as visual memes. For internet users, the word "meme" describes the rapid spread of a "particular idea presented as a written text, image, language 'move' or some other unit of cultural 'stuff'" (Knobel and Lankshear in Shifman, 2014, p. 13). Analysis was conducted over 16 months from 5 June, 2020 when the memes started to 6 September, 2021. Of the 31 active KNAG loops on Facebook, there were 15 that cross-shared the Good News memes to their own followers, demonstrating significant evidence of KNAG intra-loop online networking.

The impact of this connective action significantly increased the collective voice of KNAG and demonstrated their capacity for information dissemination through their networks. An impressionistic overview of the Good News memes indicated a range of shares, from two to 125. Two examples of the most shared memes were posted on 12 June, 2020 (59 likes, 10 comments, 225 shares) and 29 August, 2020 (81 likes, five comments, 122 shares), which are reproduced in Figure 7.4. George and Leidner (2019, p. 13) identify this as

"amplification" which "increases the volume of the collective voice of the cause". The strongest form of amplification is achieved by arousing emotional impacts in followers. There was not an immediately discernible pattern as to why some memes received more shares than others. This suggests fertile ground for future research to assist environmental social movements to determine attention grabbing topics. The examination of a small sample of the destinations of large scoring shares determined individuals were cross-sharing to their own pages and many different organisations. On 11 September, 2020, for example, a list of the 85 shares included a variety of organisations that Facebook made visible[10]: Psychologists For Peace, Nimbin Environment Centre, Abbot Point Action Group, Armidale Action on Coal Seam Gas and Mining, Children's Book Creators for Climate Action, NSW Gas Ban, South Coast Tribe NSW, Shoalhaven Transition, and Treading Lightly Inc.

The Good News memes are a mechanism for identifying and developing ecological and environmental literacy amongst KNAG and with their followers. Each item in the meme is also referenced with a link to the source, emphasising the legitimacy of the data and transparency of sources. KNAG are careful to maintain their commitment to evidence-based knowledge dissemination.

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[10] Basic Facebook analytics such as statistics on views, likes, and shares are dependent on people's choices of privacy settings. This means that shares may be counted but the destination may not be visible, due to the privacy choices of the account owner.

Figure 7.4: Sydney KNAG Loop examples of the two highest shared Good News memes (Sydney Knitting Nannas And Friends, Facebook 29 August, 2020 and 24 October, 2020, reproduced Fair Use)
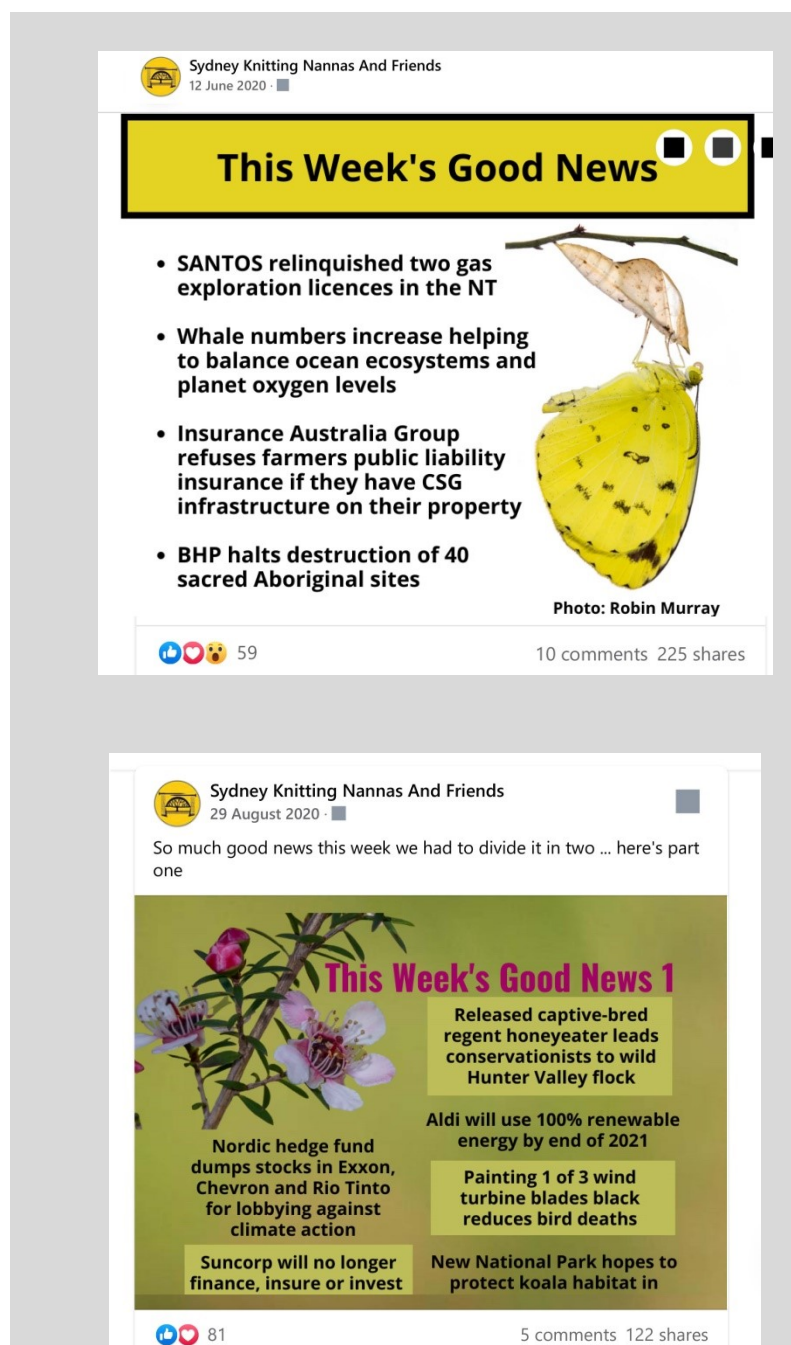
The Lismore Loop joyfully identified themselves as "#isoNannas" with Facebook posts of their Zoom meetings where they included captions like "Zoom zoom a zoom a zoom zoom. We Zoom therefore we are. Or something like that... #isoNannas are go! Nannas send their love to you all in iso land. #isowantagasfieldfreefuture #isolovecleanair #isothoughts #isomissgivingNannahugs #isowantarenewablesfutureforthekiddies" (see Figure 7.5 Zoom

screen capture of Lismore Loop meeting). The loop demonstrated their recently acquired Zoom skills videoing their contribution to the local School Strike 4 Climate online protest - a poignant Facebook video using sign language to communicate their signature KNAG byline, "saving the land, air and water for the kiddies". Figure 7.5 shows the women signing "air" (Knitting Nannas Against Gas Lismore, Facebook, 17 May, 2020). On 4 June, 2020 another Lismore Loop Facebook post showed how the women have made the best of their isolation by continuing to learn as much as they can about critical environmental issues, inviting guest speakers to their Zoom meetings:

> Zoom doesn't know what hit it when Nannas get in the Zoom room. We had special guests join us today talking about all sorts of things... coal extensions, gas moratoriums, logging moratoriums, koala conservation... there is plenty to do.

> Now, if we can just prise ourselves away from iso... it's so cosy under the doona knitting and eating lollies.

The reference to coming out from under the doona is a direct critique of Prime Minister Morrison who said "You can stay under the doona forever. You'll never face any danger, but we've got to get out from under the doona at some time." (Reuters, 2020, para. 4)

Figure 7.5: Zoom screen captures of Lismore KNAG meetings, 14 May, 2020 and 17 May, 2020 (Source: Facebook, copyright Fair Use)
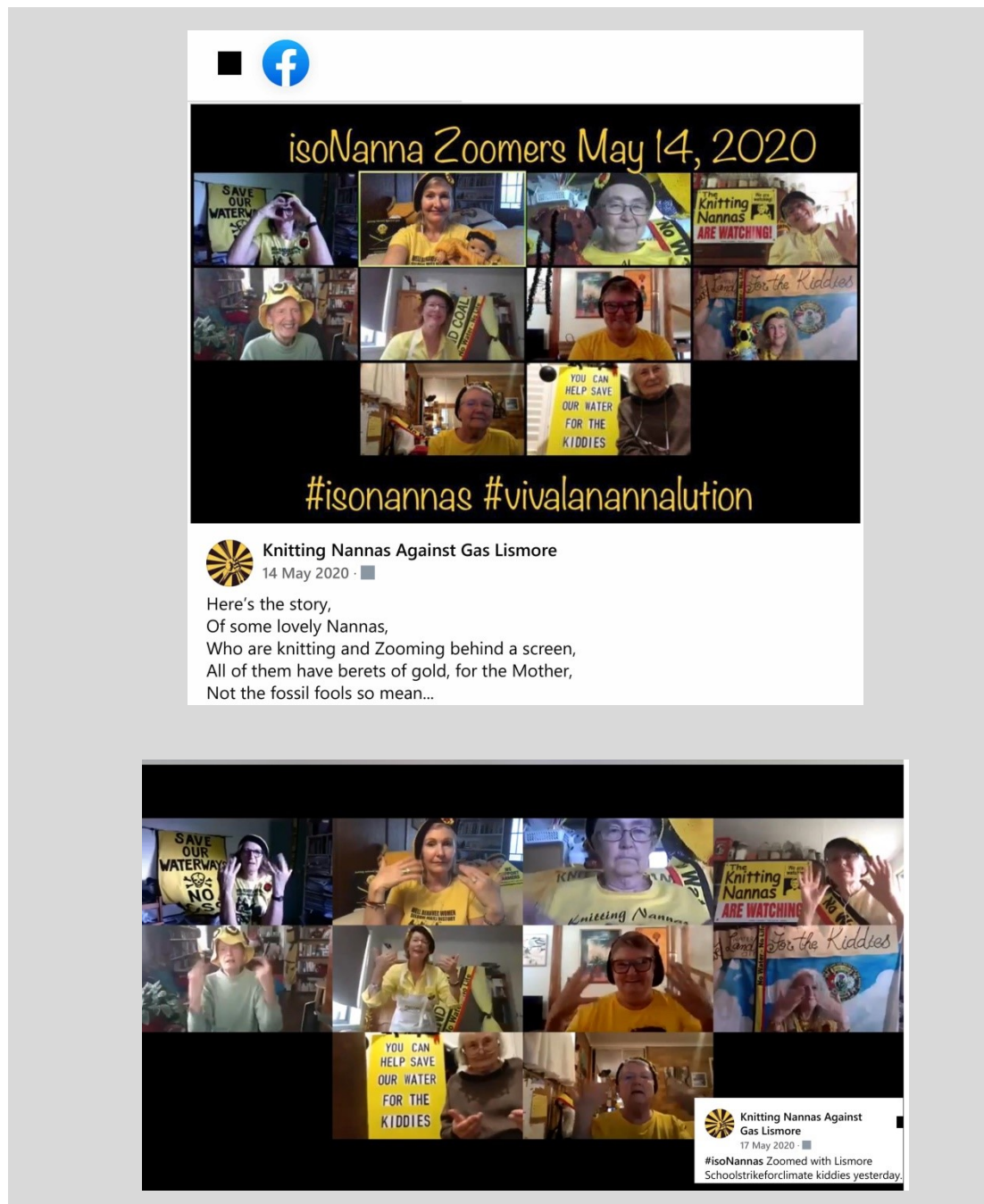
7.4   Collective identity and community

Finding RQ2.18.   Data from surveys and interviews confirms the existence of a social media enabled CoP across the KNAG movement, both intra- and inter-loop. Learning in the KNAG CoP includes becoming digitally savvy in

order to be more capable activists. Digital connectedness through environmental activism increases older women's well-being, adding value and purpose to their lives. Messenger is often used for planning actions and for social support.

In the next section, the ways KNAG prefer to connect are analysed. Through environmental activist digital connectedness, the KNAG CoP incorporates attributes that reinforce collective identity, enhance a sense of community and contribute to older women's well-being, adding value and purpose to their lives. The technical mechanism of a Facebook account, is a prerequisite for Messenger, which KNAG use for in-group communication planning actions and social support. The data show how connective action (George and Leidner, 2019) enhances older women's well-being. KNAG survey (2017) data emphasised the importance of networking for maintaining friendships and supporting one another in both protesting and personal lives. Respondent S.4 described how social media connectedness engender understanding and cooperation amongst the KNAG CoP and enhances purposeful well-ageing:

> I feel part of the group and valued when networking through Messenger and emails. My life, though busy, has taken on more purpose with the work we are doing. We can only be effective if everyone in the group understands each other and can cooperate willingly.

Messenger has proved beneficial as a more private channel within loops compared to Facebook which presents the public persona or brand of KNAG activism. Nanna Jessie told me how women in her loop have different daily routines for checking their smartphones for messages and emails. One Nanna only gets mobile reception by coming into town from her rural property. She checks her messages every morning when she picks up her newspaper. Nanna Jessie explained her loop use Messenger between themselves calling it "Nannachat". Women might discuss their health issues or current challenges and offer support. Nanna Joy gave an example about a Nanna having car trouble and being offered transport. According to Nanna Jessie, her loop use Messenger more than Facebook for keeping in touch:

[Messenger] happens more than Facebook now for our loop. And it's sort of like
Nannachat. A lot of it is interpersonal stuff as well as organisational stuff –
someone's sick or someone's been away and come back. They're welcomed back
home or catch up with things. It just goes on sometimes. I don't check my phone
until I stop at night and sometimes there's ten messages on it - chit chat about what
to bring the next day or who didn't understand what the message was. It just goes
on and on and on. Someone's forgotten it or can't do what they said they were going
to do. Or it's a variation of what we've decided.

Despite her background in journalism, Nanna Jeanette had only just begun to use social
media when she joined the Nannas. Through being a KNAG, her online competence and
confidence increased. Similarly to many Nannas, she lives outside a regional town, is
somewhat geographically isolated, and has found Facebook invaluable in creating a sense of
community and collective identity through in-group communication:

I think they've been great on the uptake of social media. I was only really starting to
use social media not long before I joined up with the Nannas myself. And so we've all
made good use of it. It's really essential for keeping us in touch with each other and
also with loops nationwide. It's really valuable. I don't think we'd function so well
without it, especially because we're all quite scattered geographically, even my loop.
There's people coming from an hour or more away in all different directions. So
having Facebook particularly, I don't actually do other social media except Facebook,
really helps keep us together and just share information.

KNAG have claimed space online though their many Facebook Loop pages. Analysis of
loops listed on the Knitting Nannas website (https://knitting-nannas.com) in January 2021
indicates 31 currently active loops on Facebook and a total of over 40,300 followers or
members[11]. See Table 7.1.

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[11] This total of followers or members does not represent unique individuals and is likely to include a small
percentage of people who follow more than one loop.

Table 7.1: Analysis of KNAG loops and their use of Facebook, February 2021

Year Facebook page began	Loop name	State / Territory	Rural or regional (R) Metropolitan (M)	Type of Facebook account [1] Page(P) Group (G)	Members or followers (number)	Date created
2012	Knitting Nannas Against Gas	NSW	R	G	13,729	20-Jun-12
2013	Knitting Nannas of Toolangi	Vic	R	G	5,922	1-Apr-13
	Knitting Nannas Armidale Group – KNAG NENW & Friends	NSW	R	G	1,332	3-Nov-13
	Frack Free Knitting Nanas Lancashire UK	UK	R	G	1,487	5-Nov-13
	Gloucester Knitting Nannas	NSW	R	G	1,074	11-Nov-14
2014	Knitting Nannas Against Gas Grafton	NSW	R	G	1,173	24-Mar-14
	Knitting Nannas In Bellingen	NSW	R	G	265	15-Apr-15
	Knitting Nannas Against Gas Blue Mountains Loop	NSW	R	G	112	10-May-14
	Knitting Nannas Hunter Loop	NSW	R	G	715	17-May-14
	Illawarra Knitting Nannas Against Greed	NSW	R	G	853	8-Jun-15
	Knitting Nannas of Gympie	Qld	R	G	75	14-Jun-14
	Knitting Nannas – Kyogle Loop	NSW	R	G	1,176	23-Jul-14
	Far North KNAGS	Qld	R	G	433	4-Aug-14
	Knitting Nannas of Pittwater	NSW	M	G	267	27-Aug-15
	Knitting Nannas Against Greed – Great Lakes	NSW	R	G	389	11-Dec-14
2015	Knitting Nannas Against Gas – Western Downs	Qld	R	G	874	28-May-15
	Knitting Nannas Against Gas Alice Springs	NT	R	P	866	11-Jun-15
	Nanashire	UK	R & M	G	3,554	17-Sep-15
2016	Knitting Nannas Against Gas Lismore	NSW	R	G	2,478	2-Jan-16

Year Facebook page began	Loop name	State / Territory	Rural or regional (R) Metropolitan (M)	Type of Facebook account [1] Page(P) Group (G)	Members or followers (number)	Date created
	Knitting Nannas of South Burnett	Qld	R	G	73	8-Mar-16
	Portland Knitting Nannas Against Gas Fields	Qld	R	G	20	21-Aug-16
	Knitting Nannas & Friends For Freedom From Fossil Fuels, Canberra	ACT	M	G	277	9-Jun-16
	Knitting Nannas Balonne Loop	Qld	R	P Personal Blog	208	28-Oct-16
	Knitting nannas Against Gas – Geraldton Loop	WA	R	G	171	11-May-16
2017	Sydney Knitting Nannas And Friends	NSW	M	G	1,400	1-Feb-17
	Knitting Nannas Brisbane	Qld	M	G	514	19-May-17
	Mid-Coast Nannas	NSW	R	G	434	6-Aug-17
	Knitting Nannas Adelaide South Australia	SA	M	G	143	10-Aug-17
2018	Knitting Nannas Central Coast	NSW	R	G	221	10-May-18
2020	Knitting Nannas in the MUD	NSW	R	G	60	4-Dec-20
	Albury Wodonga Knitting Nannas for Renewables	NSW / Vic	R	G	11	25-Jun-20
Total Followers or Members (not unique i.e. there may be people who follow more than one loop)					40,306	

Notes:

1. **"Types of Facebook account" anyone with a Facebook profile can create a page or a group. This data shows KNAG loops have chosen both formats. "Pages" are designed to connect with an audience, whereas "groups" allow discussion and interaction between members. Pages are always public, groups can be managed with different privacy controls. Pages are generally used to promote brands. Groups promote community (Ellis, 2018).**

Since access to Facebook analytics was not forthcoming, it was not possible to determine the gender and ages of followers. It is highly likely that the KNAG audience is predominantly women, based on my impressionistic viewing of the many comments where names are listed. Judging purely by names, there is also a significant group of male followers. I have noticed that many of the Nannas I have come to know by name are regular "metavoicers". As anyone who wants to follow, post, like, comment or share must already have their own Facebook account, this signifies there may well be many older women who are active social media users. Given the lack of statistical data on older women's use of social media as highlighted in Section 2.4, this indicates an opportunity for further research.

Facebook has been instrumental in confirming and strengthening the KNAG sense of community and collective identity. Online visibility enables followers to affirm their relationship to the cause and legitimises the cause to both followers and others (George and Leidner, 2019, p. 11). Even though the 40,300 followers may not be unique individuals, this is a substantial following that significantly amplifies the collective voice of KNAG, aiding women's identification with the movement (George and Leidner, 2019). By comparison, Australia's two major political parties, Labor and Liberal, each claim membership of around 60,000 (Anne Davies, 2020) and the Australian Greens claim 15,000 members (Harris, 2020). Nanna Rose's loop has a number of "active Nannas who frequently post" and "a large passive audience" who occasionally respond. Rose observed women had experienced loyalty shifts, from being sympathisers to becoming Nannas. The literature indicates NVDA has greater potential to achieve such shifts than aggression or repression (Stephan and Chenoweth, 2008).

Nanna Rose explained the shift is similar to a face-to-face induction to become familiar with the KNAG ethos where "…participation in the online group is seen as a precursor to becoming a Nanna". She considered that Facebook is "…the equivalent of bonding the group - the same as when you all stand in your Nanna gear out on the street and it's just an extension of that into the online world. It's very important for coherence of the loop. A sort of identity with what we're doing".

In the nine years since inception, over half the loops (17) began their Facebook pages within the first four years of the movement, thus demonstrating older women's enthusiasm

and capability for social media. All loops list a contact email address; two have Twitter accounts; one also uses Instagram. Almost all loops have used "group" rather than "page" formats in Facebook, indicating a stronger emphasis on community networking and community administration of posts. As the movement continues to grow so does their Facebook presence, with new loops establishing themselves online. This and other data confirms the literature that older people prefer to use email and Facebook (Haukka and Hegarty, 2011; Australian Bureau of Statistics , 2018; Yellow Social Media Report, 2020; Wiesslitz, 2019)

7.5   A media movement overcoming ageist sexism and climate scepticism

Finding RQ2.19.   KNAGs have become a media movement. They are sophisticated media managers upskilling women as "spokesnannas," media liaison representatives presenting a clearly articulated media profile to the broader media landscape - both legacy (traditional forms) and social media. KNAG developed skills in multi-channel social and traditional media management. Skills in the strategic use of Facebook were gained through experiential learning that combines involvement with more experienced alliance partners, critical reflection and experimentation with the impact of skilfully amplifying the KNAG identity and cause.

Over time, KNAG actions have become carefully choreographed images purposefully pre-arranged as content in social media and broadcast using media releases written by ex-journalist Nannas (confirmed by Nannas Evelyn and Jessie). Using their knit-in and Nanna strategic essentialism, they eschew violence, insisting on NVDA. They challenge the hegemonic power of ageist sexism through their vigilant online and offline presence which draws on traditions of feminist performative activism (Jouët, 2018). In the next part of this chapter, three examples are analysed to show how mainstream media attention, which generally reports aggression through patriarchal language (Newlands, 2018), has been successfully garnered by KNAG for peaceful activism, using their Nanna identity. These are: (1) 2013 - Naughty knitting at Doubtful Creek; (2) 2015 – Call the cops! It's the Knitting Nannas!; and (3) 2016 – Anti-protester legislation vigils. Following these, is a discussion on the KNAG approach to evidence-based information dissemination on environmental issues.

7.5.1   2013 - Naughty knitting at Doubtful Creek

The Doubtful Creek blockade (February 2013) was the third mass protest against Metgasco in the Northern Rivers Campaign. An alliance of protesters including Nanna Clare Twomey agreed to take arrestable non-violent actions to frustrate the mining company and block the access point for Metgasco's latest drilling operation at the Eden State Forest. An estimated 350 protesters and 30 police were present. One woman locked herself to a car wreck, a man buried himself, and others lay across the road in front of huge trucks. Seated metres above the ground on a tripod platform, Nanna Clare knitted calmly for hours, working on an increasingly longer black and yellow scarf. Each time she finished a ball, another would be secured to her scarf and hoisted up as onlookers cheered, singing songs of protest and solidarity. Eventually all the other locked-on protesters were removed by the Police Rescue Squad and Clare was next. A cherry picker was brought in and police evicted the compliant Nanna to chants of "hands off our Nanna" and "shame on the police!" Figure 7.6 shows two Facebook posts, one of the tripod and the other of the extraction. This led to Clare's arrest and subsequent court appearance eight months later.

Figure 7.6: Doubtful Creek action on 7 February, 2013 (Knitting Nannas Against Gas, Facebook, 15 October and 6 November, 2013)
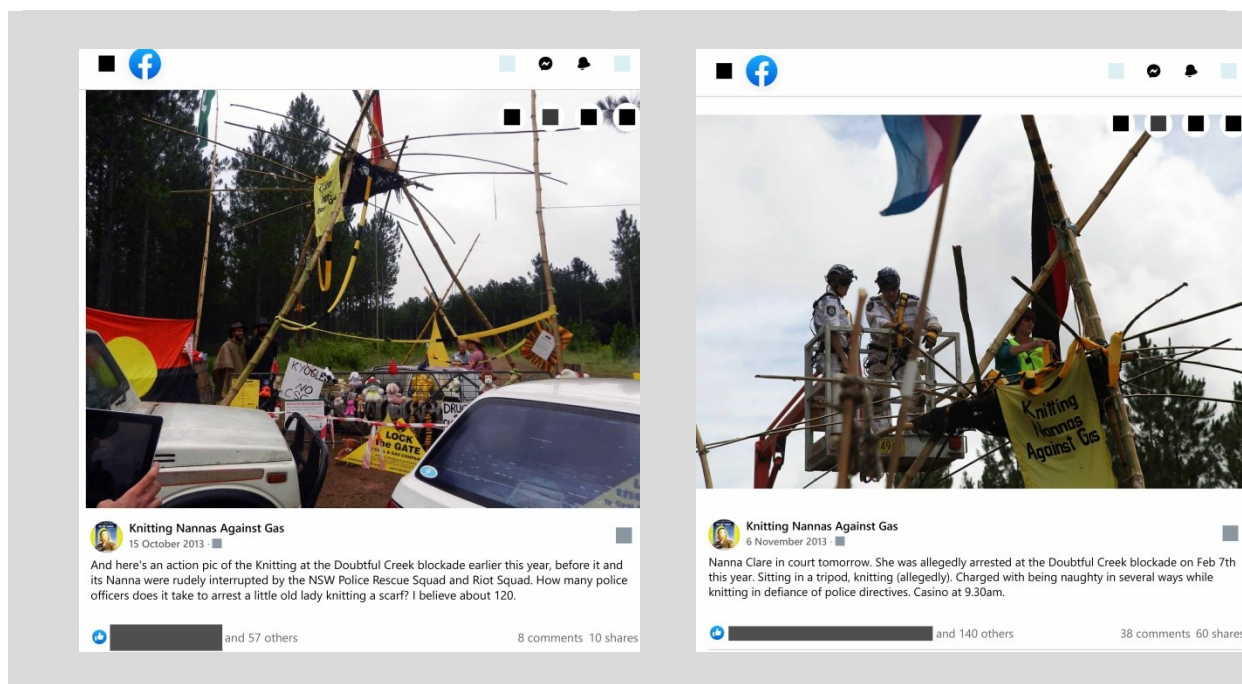
The tripod was demolished and the very long scarf symbolic of the peaceful protest removed and ripped apart. Back on the ground, the knitting was rescued and repaired by a group of Nannas as Nanna Clare philosophically joked, "this piece of knitting has been smashed down by a front-end loader when it was up on the tripod because it was trespassing; it was very naughty knitting!" (O'Keefe and Brown, 2014, final scene 20:50; Larri and Newlands, 2017, p. 3).

This short video segment signals the inclusivity of the KNAG as they came together to repair the broken scarf. The scarf is anthropomorphised into an activist and part of the team. The iconography symbolises symbiosis with the past and collaboration between like-minded women learning about CSG, protest tactics, and strategies. No longer silenced, KNAG used their Facebook to spread the story which was viewed by 931 people and covered by over five different regional media outlets and the national broadcaster[12]. The story continued when Nanna Clare appeared in court and was acquitted. This was celebrated on Facebook (6 November, 2013), garnering increased visibility through 142 likes, 38 comments and 60 shares. Comments in this small sample showed the followers understood the seriousness and humour inherent in the differential power plays. In contributing their content, they added moral weight to counter the hegemony of state-sanctioned control over the peaceful protesters. The effect further strengthened followers' frame alignment with the KNAG identity. One comment pointed out the challenge to public sensibilities posed by an older women being visible while practising domestic arts: "You can't knit in public, it's not nice!!"

The power differential between the peaceful knitter with her yarn and needles compared to the numerous police (120 according to the Facebook post, 15 October, 2013) with their guns in holsters and body armour vests was emphasised by this comment: "Have a look at the coppers, do they have riot gear on?" Another comment highlighted the

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[12] Sources of online videos and information on Doubtful Creek protest: ABC News online *Three arrested as northern CSG protests heat up* - 7 Feb, 2013 https://www.abc.net.au/news/2013-02-07/three-arrested-as-northern-csg-protests-heat-up/4506046 ; MyCrafts website - YouTube video http://mycrafts.com/diy/knitting-nanna-arrested-at-csg-blockade-doubtful-creek-7-february-2013/ ; Farmonline National *KNAGs a growing force* https://www.farmonline.com.au/story/3586808/knags-a-growing-force/; EchoNetDaily *Community confronts CSG* https://www.echo.net.au/2013/02/community-confronts-csg/ 11 February, 2013; Stanthorpe Border Post 8 Feb, 2013 *Huge police presence gets trucks through* https://www.stanthorpeborderpost.com.au/news/huge-police-presence-gets-trucks-through/1747956/).

humorous use of knitting metaphors to emphasise the Nannas have more credibility than the police, "It is plain to me, this is a pearler I think any charges should decrease and be cast off!"

7.5.2   2015 - "Call the cops! It's the Knitting Nannas!"

In April 2015, when the Lismore Nannas were confronted by three local police and asked to move on during their weekly knit-in outside the office of their local state representative, Thomas George, they were initially amazed and confused (Figure 7.7). Why was this happening now after three years, they wondered?

Figure 7.7: Knitting Nannas being asked to move on outside office of Thomas George, local state parliamentarian (Knitting Nannas Against Gas, Facebook, 9 April, 2015, Fair Use)
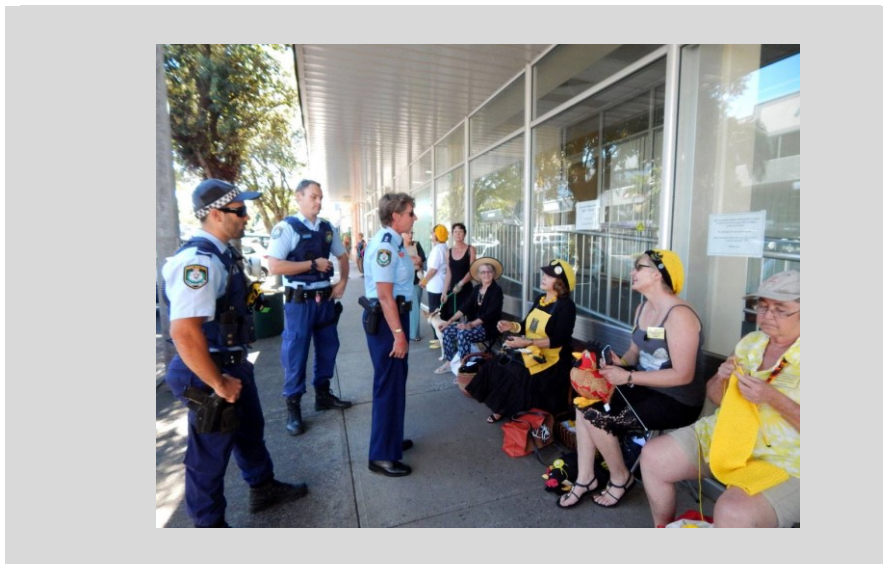
The police insisted they were blocking pedestrian access but the women were sitting as they always had with their backs against the office wall. Having previously learned their legal rights during the GFNR campaign at Shannon Brook, Doubtful Creek, Glenugie and culminating in Bentley (2012 to 2014), the women countered that "in fact it was the police who were holding up pedestrian traffic". Learning from other activists, the Nannas had their designated media representatives who were confident in public speaking. Nanna Vida explained the "spokesnanna" role involves staying on message:

So we have media cards that we had done up saying "spokesnanna". Just in case if you were out and about. We have to stay on message. We have to be very careful for

the Coalition [currently in government] and anyone else like the coal and gas guys
and girls who would like to undo us.

In their Facebook post, *Call the cops! It's the Knitting Nannas!* (Knitting Nannas Against
Gas, Facebook, 9 April, 2015), they used a call to action tactic, asking their followers "what
do you think, should the police arrest the Nannas or should they be allowed to continue to
sit and knit and exercise their right to peacefully protest? LIKE and SHARE to support the
Knitting Nannas!" This aroused a massive reaction. It was viewed by 53,312 people, with
1,700 likes, 535 comments and 1,500 shares. By the time it was cross-shared as *Knitting
Nannas Under Fire!* to alliance partners LTG and the Great Artesian Basin Protection Group
(GABP) four days later on 13 April, it had gained a further 231 shares and 2,753 likes. The
535 comments from the original post included a mix of women's and men's names and the
intent echoed the Doubtful Creek comments. These were overwhelmingly supportive of the
Nannas and critical of the politician and the local police. Figure 7.8 provides a sample of the
comments.

*Figure 7.8: Sample of comments from Knitting Nannas being asked to move on (Knitting
Nannas Against Gas, Facebook, 9 April, 2015)*

All I see is a group of women sitting peacefully knitting together, since when did knitting
 become a crime? It is time the police left peaceful people alone and started doing
 something useful for a change.
Loitering with the intent to knit?   Seriously... tell me when the Nannas are back there.
 Because I want to stand with them.
I love you ladies, every one of you... thanks so much for being so staunch and so brave ❤
So very cool, and more than that - women in their power acting on what they know to be
 important... Love to all... way to go Nannas - and those police should be ashamed
 to treat Nannas badly.
If knitting in public really is illegal, we're all in big trouble!
Don't be intimidated, Nannas!! You have a right to be there!
Meth and ice deals going on all around the place and three cops blocking the footpath to
 harass Knitting Nannas.
I appreciate the Nannas. Shame on the police protecting corrupt politicians, yet bullying our
 elders who are doing what the politicians should be doing... protecting our water
 and our health. NSW is now a police state that instead of protecting its true
 citizens, puts them in danger!
Well they are wielding sharp pointy things and enough string to tie all of them up, they must
 feel threatened! Lol why don't they go and catch some real criminals?

The story was picked up by *The Project, a* national current affairs TV program (Network 10, 10 April, 2015) and posted on the KNAG Facebook (Knitting Nannas Against Gas, Facebook, 11 April, 2015) with a link to view the excerpt on YouTube which had 1,214 views. Media spokesnannas Judi Summers and Clare Twomey were asked why they were knitting. Emphasising the power differential between the police and Nannas, *The Project* commentators wondered why the police were concerned when Nannas were sitting knitting peacefully, and whether they had considered brokering a deal by knitting something useful for police, like a Form 1 request to hold a legal protest. Nannas explained their anti-CSG rationale whilst background footage of the event emphasised the non-violent action.

7.5.3   2016 – Anti-protester legislation vigils

Finding RQ2.20.   KNAG strategically use their essentialist Nanna identity combined with the witness bearing tactics of locking on and vigils to gain significant social media impact, inspiring engagement from an extensive online viewer base. Online participation through connective action has reinforced the KNAG identity as heroic, courageous, and trustworthy.

KNAG's growing political literacy led to greater risk-taking by more of the women such as locking on and holding vigils. These strategies of bearing witness are designed to allow activists to peacefully accentuate the emotional intensity of their convictions (della Porta and Diani, 2006). Lock ons are more often used as disruptive delaying tactics, preventing a mining company's access to contested sites. Vigils were adopted from religious groups as a peaceful form of public demonstration.

The examples so far of the KNAG CoP's learnings about media management share an underlying thread of the dissatisfaction felt by Nannas about the police's use of undue force in moving peaceful protesters on. In February 2018 during our interview, Nanna Julia and I discussed the growing cynicism amongst KNAG about government, police, and mining corporations. As mentioned previously in Section 4.5 which concerns KNAG-ing facts, survey data indicated that Nannas reported learning about the interplay of power dynamics between mining companies, politicians, and government bureaucracies. Nanna Julia agreed that she felt "the vast majority of us were very law abiding citizens and butter wouldn't melt

in our mouths." She felt her mother "would be mortified" to know she now considered herself to be an environmental activist motivated by anger to challenge injustice and fight for sustainability. Nanna Julia described her transformative shift from community involvement to activism as having been radicalised:

> It feels different. There's much more anger involved, I think, in activism. When I organised that sleep over at Parliament House, I organised it because when I read the news I realised that I was so angry I literally shook for half an hour. I think that's the difference. I never felt that anger. Even when there were issues within the P&C [Parents and Citizens school group] or within the mother's groups, or playgroups or what have you. You were still everybody working for one goal, there wasn't an 'us and them'. Whereas with activism, there's an 'us and them'. I think what initially gets a lot of people going is that anger. It's very tiring.

The realisation of an adversarial "us and them" developed due to Nanna Julia's participation in successive protests at local mining sites around Gloucester (on the NSW Mid-North Coast). She described this as unforgettable: "there comes a time, once your eyes have been opened you can't close them."

Nanna Julia referred to an example where Nannas and members of the community held daily protests at the site. There was always a police presence, which the protesters jokingly called "breakfast with the police" since police often outnumbered protesters. Despite being told that police were there to protect them, Nanna Julia considered that to be "absolute bullshit" and was sure they were there:

> … to make sure that AGL could do what they wanted to do and destroy our valley. And I don't necessarily blame them individually because I have no doubt that those orders came from above. But they're not there as peacekeepers. They're there as an arm of the government.

Nanna Julia talked about how she now perceived the controls being exercised by governments as similar to those operating in a fascist state. She wished she had enough courage to lock on, but instead Julia felt able to "get up and speak" or to support Nannas who locked on by being a "buddy", sitting with them during the duration of their action. Even Julia's peaceful activism required resolute fearlessness. I was told by a number of

Nannas that they knew they were under surveillance, having been followed on a number of occasions. They suspected they were being monitored by either the Australian Federal Police or the Australian Security and Intelligence Organisation.

KNAG have become progressively skilled in translating their real world actions into connective action and in strengthening their followers frame alignment. In January 2016, three KNAG members supported by around twenty other Nannas, used bike locks to chain themselves by their necks to a Santos (mining company) wastewater plant gate at the Leewood site (Narrabri, north-western New South Wales). The protest was part of the ongoing campaign of activism against Santos. The Nannas posted the lock on and arrest (see Figure 7.9). This received 195 'likes' and 20 comments that recognised the important role older women were playing in asserting democratic rights to protest unjust laws (Knitting Nannas Against Gas, Facebook, 18 January, 2016). One woman linked the Nannas with the late nineteenth and early twentieth century suffragette movement when she wrote, "my great grannie got herself arrested for chaining herself to the fence at Buckingham Palace but women have had the vote now for many years. Good on the grannies!!! Keep protesting," which was liked by 10 people. Turning the tables on power, another follower felt the politicians and not the Nannas were in the wrong, "lock up the corrupt polly that allowed this." Another characterised the "good Nanna" as someone who exercises their status as an elder by maintaining moral and ethical standards, "thank you Nannas! Amazing and inspiring, reminding Australia of what is right and worthy and good… as all good Nannas should do."

When loops engage in peaceful actions, they make sure they take photos and document their activities for use as content in social and traditional media. Evidence of Nannas carefully planning their visual identity media strategies can be seen in the way Australia's free to air national broadcaster, the ABC, covered the story in its *News Online* (Tarasov, 2016). Knitting Nannas were credited with supplying the photos, indicating KNAG had provided media releases to outlets. Nanna Jessie confirmed that KNAG loops plan their actions for visual effect in social media posts and have a number of props like knitted banners, placards, and objects for being "a bit street theatre-ish", in their performative activism.

The story's reach was amplfied by the Nature Conservation Council (NCC) and Great Artesian Basin Protection Group (GABPG) cross-sharing to their Facebook pages. Emotionally titled, *Gutsy ladies doing their bit to save the Pilliga from CSG*, the NCC post generated 95 likes, one comment, and 20 shares to other organisations and individuals (data on views were not available). The GABPG generated 35 likes and seven shares (data on views not available). The arrested women were described as "a mother of seven" and "a grandmother of 21 children" who had never before been arrested. The article gave them an opportunity to voice their passion for protecting the environment and water resources in the face of what they perceived as government failures. One of the Nannas is quoted remarking she had done nothing wrong. She added, "the law is wrong and the police are protecting these companies, the law needs to change, so that this can't happen to our country." The law referred to was the legal rights of mining companies to prospect on farming and forest lands as well as the police powers to break up peaceful protests. Protesters knew that new NSW legislation was in the planning stages that would strengthen these powers.

Figure 7.9: KNAG protest in the Pilliga Forest against Santos (Knitting Nannas Against Gas, Facebook, 18 January, 2016, Fair Use)

Later that year in March 2016, despite significant public opposition, the NSW government passed the *Inclosed Lands, Crimes and Law Enforcement Legislation Amendment (Interference) Bill 2016*. This law gave police new powers to break up protests, search and destroy property, and fine protesters up to $5,000 or jail them for up to seven years for opposing mining activity. It was claimed that the legislation was the result of an election promise to mining companies to help reduce disruption caused by citizen actions (Hodgson, 2016). Peaceful protesters like the KNAG were effectively put on notice that they might incur heavy penalties for their activities, in some cases greater than the environmental polluters themselves. To raise awareness of this anti-democratic unfairness, KNAG staged two events. The first was Nanna Clare Twomey locking on to the gates of NSW Parliament from midday for over eight hours on 1 April. The second was a 48 hour vigil (3 to 5 May) by Nannas primarily from the Gloucester Loop.

No April fool's joke, Nanna Clare and her supporters were deadly serious as she first sat and then stood when police removed her chair, whilst chained to the gates of NSW Parliament House. The Facebook post (Knitting Nannas Against Gas, 1 April, 2016) stated she was "exercising her right to silence and refusing to unlock. She has spoken to the nice ABC and other media and lots of politicians. Not [Premier] Mike Baird. He's nowhere to be seen of course". Photos that accompanied the post documented various moments over the eight hours. Octogenarian and WW2 Kokoda Trail veteran and environmental activist, Bill Ryan, and others were present in support.

Police attempted to negotiate with Clare to unlock herself and then left her on her own for some time. One of the Nannas' favourite knitted banners was draped across the gated entry with the words "*CRIME SCENE DO NOT CROSS",* parodying police tape. This functioned as a piece of performative activism. Anyone passing through the gate would have had to step over the knitting or choose a different entrance. This banner thus invited others to participate in the action. Online observers were also invited by this installation to wonder about what access to Parliament House meant and what took place inside it.

The statistics for the post showed a significantly sized audience was watching and engaging with the KNAG identity and their NVDA activism. There were 951 likes, 100 comments, 348 shares and 39,559 views. Comments from women and men expressed

admiration and respect for Clare, describing her as a "hero", "brave", "fearless", "courageous", and "gutsy". There were thanks and blessings for representing the many who agreed with her determination to challenge the unjust law. One person commented, "respect for the conviction and bravery of this lady". Another recognised the action as intrepid, "love your work Clare and thank you for having the courage to stand up for all of us who value life over profit". Yet another stressed intergenerational concerns, "so much gratitude to you Nana Clare from my grandchildren and their children. 🙏 [thanks / pray]❤️ [love]". This comment (by a man) shows appreciation of all that being a grandmother meant to him "staunch, Nanna, isn't just a word it's an attitude to life".

Figure 7.10: Photos from Nanna Clare Twomey's 2016 NSW Parliament House lock on, 1 April, 2016
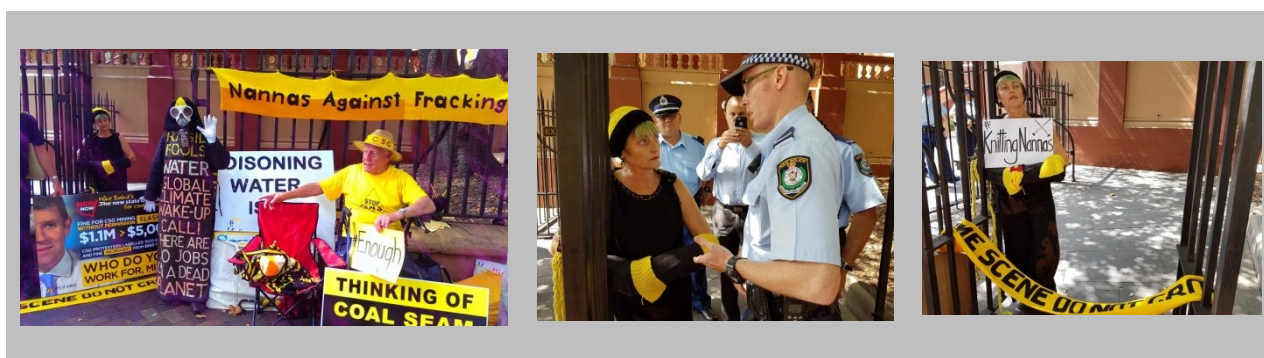
Not content with the April Fool's Day action, the KNAG continued to raise awareness about the new anti-protester legislation. Nanna Julia was one of the organisers of the 48 hour vigil outside NSW Parliament House from 3rd to 5th May, 2016. Her anger about what she perceived as the increasing totalitarian state, fuelled her determination to promote the message. She told me:

> Once you see how much is being done that is so wrong and it's so blatant. You have to do what you can to stop that, I mean. It might sound a bit tough, I now believe we now live in a fascist society, we're going the way of Nazi Germany. It's how the individual rights are being undermined by legislation all the time, especially here in New South Wales. Like the time I organised that sleep over outside Parliament House because I'm so incensed about what's happening. And that was when they actually started passing through that legislation. It's just wrong and people don't realise. So

that's why you have to stand up and bring it to the attention of the vast number of

the public who have no idea what's going on because it doesn't concern them.

Drawing on the emotional content of the older women participating at this vigil, alliance partner LTG supported the action by videoing and interviewing Nannas during the days and nights. Three videos were uploaded to Facebook (Lock the Gate Alliance, Facebook, 3 May, 2016 and 4 May, 2016). The Nannas generated a significant social media reaction, including a total of 3,000 likes, 580 comments, 559 shares, and 30,000 views. Thematic analysis of comments indicated a focus on thanking Nannas for their peaceful protest in defence of people's democratic rights to protest and characterising the Nannas as brave, courageous, and inspiring. Once again, the connective action drew positive reactions to the Nanna's action, indicating strong frame alignment, brand awareness of KNAG, and engagement with the Knitting Nannas' form of activism.

Online audience participation in KNAG actions affirms the KNAG identity described earlier by Nanna Vida as "heroic" defenders of democratic and environmental rights who inspire others. Many international and national followers commented, including the Lancashire (UK) Nannas, "bless you all! For your peaceful protest, standing up for individual's rights. May the movement grow, peace & love from Lancashire!" The intensity and range of reactions gained by the KNAG showed the strength of their strategic essentialist identity in generating support for their cause. Not only were there 580 comments, but many received multiple "likes," amplifying the emotional impact of the Nannas' actions by showing the audience reach was extensive. The fight for protecting democracy and freedom of speech was much appreciated.

Analysis of the comments listed in Figure 7.11 that achieved between ten and 82 likes showed that followers had strong frame alignment and there was a significant grassroots following. People were consistently concerned about the erosion of citizens' rights to free speech and peaceful protest and very critical of the NSW government for passing the anti-protester legislation. This comment gained 82 likes, "while we have our military in other countries supposedly fighting for their democracy, our own is being subverted by people we elected. You better take heed of the Knitting Nannas, Baird, because next come the Pissed off Voters!!" The next most popular comment criticising the government for suppressing

free speech gained 59 likes, "well done ladies! It is unbelievable that our human rights of freedom of speech are being taken away from us here in NSW". Similarly this comment described the Nannas as tireless defenders of democratic rights against the state government, "sad to see our Nannas have to protest against a government that has done the wrong thing to our own people. Thank you so much for doing this. God bless" (43 likes).

Comments expressing wishes for Nannas' safety and warmth over the cold night showed an empathic caring for the older women. Examples include: "thank you Knitting Nannas, may you stay warm & safe tonight. Everyone should be able to protest peacefully" (15 likes) and "go Knitting Nannas! Thank you so much for your dedication to protecting our land and water. Stay warm, sending big warm hugs from VIC. Much love and admiration xxoo" (47 likes). Other supporters expressed admiration for the Nannas and saw them as role models inspiring others, "to all the lovely Knitting Nannas, thank you! How wonderfully brave you all are to stand up to this injustice. Courageous, inspiring women. Love it!! Keep up the good work. Strength in numbers" (10 likes).

Figure 7.11: Facebook comments greater than 10 likes in response to Lock the Gate videos of KNAG vigil, 3-6 May, 2016

While we have our military in other countries supposedly fighting for their democracy our own's being subverted by people we elected.You better take heed of Knitting Nanna's, Baird, because next comes Pissed off Voters! (82 likes) — 14%

Well done ladies ! It is unbelievable that our human rights of freedom of speech are being taken away from us here in NSW (59 likes) — 10%

Go Nanna's!! I'm there with you in spirit - SHAME on the Baird Government! (56 likes) — 10%

Go knitting nannas! Thankyou so much for your dedication to protecting our land and water. Stay warm, sending big warm hugs from VIC. Much love and admiration xxoo (47 likes) — 8%

Sad to see our nanas have to protest against a government that has done the wrong thing to our own people. Thank you so much for doing this. God bless (43 likes) — 7%

When you can't protest or strike you are living in a dictatorship not a democracy. (27 likes) — 5%

Good on you Nanna's, let's hope Baird has to walk over you to get to his cosy little (big office) that he makes all his ludicrous decisions in. One for the Nanna's, go girls xxx (23 likes) — 4%

Thank you Knitting Nannas for your tireless fight to protect our country for young Australians, and for your current battle to uphold our democratic rights. Shame on the Baird government - their latest move to ban and fine protests is an absolute disgrace — 3%

Thank you knitting nanas, may you stay warm & safe tonight. Everyone should be able to protest peacefully. (15 likes) — 3%

Good on YOU, knitting Nannas. Hope the weather is good to you! (15 likes) — 3%

What kind of a Government makes protesting being the peoples 'voice' illegal ? (14 likes) — 2%

Onya Nannas. Caring for Country and each other is what it's all about. Thanks for your courageous, clever, active care. (13 likes) — 2%

We are no longer represented by this government, its interests are not in the best interest of Australians, nor the country we stand on. (13 likes) — 2%

Thanks for standing up for our right to a peaceful protest and showing us all how it is done. Especially against something as despicable as the process of Fracking our land. (12 likes) — 2%

Much love & support on a chilly cold night, huge thank you for standing up for our rights to protest! The government doesn't represent the people when it takes away right to say we don't agree and our right to band together to support together! (12 likes) — 2%

Go knitting Nanna's I'm with you. Shame on you NSW government, certainly hope that this doesn't happen in Vic whenever the Lib's get back in. Freedoms being slowly eroded by "bullies". (11 likes) — 2%

7.5.4   *Evidence-based information dissemination*

Finding RQ2.21.   Through their connectivism, KNAG have developed an extensive knowledge-base of fossil fuel related and environmental issues which they have used to build their environmental and political literacy. By disseminating their evidence-based knowledge, KNAG have also enhanced their identity as a credible source of information for their followers.

KNAG use a mix of media channels as they research and disseminate information about Australia's fossil fuel industry and its environmental impacts within their movement and across a broader audience. Adhering to their Nannafesto in presenting evidence-based material, they are conscious of their role as a credible information source in order to break through the confusion and disinformation that characterises climate change and fossil fuel debates in Australia (Taylor, 2015; Rudd and Woodroofe, 2021; Seccombe, 2021). Educating and communicating through social media are amplification strategies that also contribute to the KNAG identity by reinforcing their claim to be a credible source (George and Leidner, 2019). Drawing on their strategic essentialism, the phrase "listen to your Nannas" occasionally appears in loop Facebook posts as an encouragement to followers that Nannas are trustworthy (see Figure 7.12 last paragraph Illawarra Knitting Nannas Against Greed, Facebook, 18 March, 2019; Knitting Nannas Against Gas, Facebook, 20 June 2015, 11 April 2017, 17 April 2017, 19 May 2017).

7.5.4.1   Developing a knowledge base in environmental literacy

For the first six and a half years, KNAG relied on individual members' internet research and sharing relevant fossil fuel and extractive industry information via Facebook. One way of determining the level of engagement in information being shared is to review Nannas' and followers' clicktivist responses. When I asked some of the interviewee Nannas what they were indicating with their likes there was a range of actions, indicating a variety of meanings. Using a thumbs up could mean "I'm with you on this, or I'm letting you know I've read this" (from Nanna Jessie); it could mean "I agree with and like the content that was shared or I agree with the critical commentary [that went with] the content shared" (from Nanna Rose); or "I agree with it or find the information useful, such as clicking through to a

good article, and I make a point of liking posts from sources I want to hear more from, as liking stuff means the algorithm sends you more of the same" (from Nanna Jeanette).

The women also use the other Facebook emojis, the small graphic images that denote different emotional responses to content. Nanna Jessie said she used the heart to show "more support for the post" and Nanna Jeanette who used the angry or sad icon "if it's about bad things happening." Nanna Rose considered her loop would use the angry emoticon for "a simple share of an article [with minimal commentary] that we disagree with". Determining the level of educative engagement was not possible within the scope of this research as it would have required conducting in-depth interviews on this topic alone. In the absence of more detailed data, I have concluded that the information posts were being read and shared with the likelihood of meaningful knowledge being gained. This suggests fertile ground for further post-doctoral research.

Many topics were responded to. These include a broad range of issues relating to ecological and environmental literacy about fossil fuels and climate change such as: toxicology and health effects of CSG, renewable energy developments, traditional owners' concerns, new government approvals of coal and SCG mining, logging of old growth forests, threats by mining companies (Metgasco, Adani, Santos, Dendrobium, and Shenhua) to agriculture and water resources, and environmental human rights issues. Issues dealing with developing activist skills included:opportunities for activist training and supporting initiatives of other protesters (School Strike 4 Climate), and changes to legislation affecting protesters and mining.

As previously discussed in Section 7.3 which dealt with overcoming barriers to digital activism, during the first year of the COVID-19 pandemic (in 2020) the Sydney Loop instituted a weekly *Good News* meme. This has been a mechanism for developing ecological and environmental literacy amongst KNAG and their followers. A similar more extensive and detailed initiative has been the free weekly email *Fossil Fool Bulletin* (*FFB*) begun in November 2017. This was devised by Northern Rivers Nanna Eve Sinton, a semi-retired journalist specialising in environmental issues. She stated her aim was to save people time and provide access to information on "media coverage of fossil fuels in the context of the

battle between fossil proponents and people working for a cleaner, more sustainable future" (Sinton, 2017).

According to Nanna Rose, most Nannas read the *FFB* because it is sent by email and is considered a valuable resource for keeping up to date with issues and campaigns. "The less IT savvy ones can still read that," she said, "it brings together all of the news. She's amazing - blows my mind. Maybe half of it I've seen in my own browsing, and there's other stuff, [I'm amazed at] how you would do it". Each *FFB* news item is referenced with a link to the source. Current subscription figures show a readership of about 500, with two thirds likely to be women, based on email address names (Eve Sinton, personal communication, 11 August 2020).

A different mechanism of KNAG knowledge generation consists of attempts to raise political literacy within communities by holding local politicians to account for the ways they represent their electorates. Loops refer to this as "needling", "nagging" and "pollivanting" (defined previously in Nannalingo, see Figure 5.6). Examples discussed below relate to political accountability during the pre-election period. The first comprises pre-election requests to candidates to declare their policies on fossil fuel mining, renewable energy use, and other local environmental issues. The second consists of publicising the incumbent politician's voting record on legislation regarding environmental protections and social justice issues. In communities represented by conservative politicians, their contrast to those with a progressive agenda is stark. KNAG seek to expose this in relation to climate change denialism that favours mining companies.

7.5.4.2   Developing political literacy

The KNAG CoP has developed strategies to build their capacity in political literacy and to present researched information to their followers that raises their knowledge of politicians' positions on environmental and social issues. Details are given below of two examples: gathering a candidate's pre-election environmental policies and recording an incumbent politician's legislation voting patterns.

In the lead up to the NSW State elections on 23 March, 2019, the Illawarra Loop (I-KNAG) contacted each Kiama (South Coast, NSW) candidate asking their policy on the impact of long wall coal mining under the Greater Sydney's drinking water catchment

designated special areas (Water NSW, n.d.). Coal mining had been found to create subsidence and reduce the amount of water being collected in dams to furnish Sydney's water supply, therefore threatening Sydney's water supply in times of drought. The loop disseminated an analysis of the candidates' responses on their Facebook page (Illawarra Knitting Nannas Against Greed, Facebook, 18 March, 2019) and at their pre-election knit-in. Using knitting metaphors, the I-KNAG women gave candidates ratings in numbers of stiches cast on, gained, and dropped. The post did not receive a significant response, with only 28 likes, 6 comments and 13 shares. However, comments indicated strong support for the activity. One follower commented, "go Nanna's! Thank you for this pattern report on local Kiama candidates. It has me in stitches 🙂 [smiley]". Another wrote "thankyou Nannas! Ryan Park for Keira [another electorate more closely affected by water catchment issues] refuses to answer questions on his support for water! If he won't protect our water, not getting my vote!" Another person congratulated the Nannas, "the Nannas know what it's all about, well done as always ladies 💚 [green heart indicating sustainability] 🙌 [raised hands – celebration, praise] love your actions ✨[star] 👏 [clapping hands]." The full text of the I-KNAG post is reproduced in Figure 7.12.

Figure 7.12: Illawarra Knitting Nannas Against Greed's analysis of Kiama candidates' pre-election policies (Illawarra Knitting Nannas Against Greed, Facebook, 18 March, 2019)

Nannas had responses from four of the five Kiama candidates at the knit-in today. We tallied their responses in terms that are familiar to us,

Andy Higgins for Labor "… seems to have a big hole in his knitting. We didn't hear back from him at all."

John Kadwell, Christian Democrats "… tangled his wool a bit, like his leader did a few years ago when he did and then last minute didn't support the 'No CSG' in Parliament. John wants good water but seems to want coal mining in the water catchment too."

Gareth Ward, Liberal Party and sitting member for Kiama "… got his purls and plains muddled. Hadn't actually read the email or the question, though he says he will. Says he wants to protect the 'interests' of the water. Not sure what that is but might be a slipped stitch we can forgive. But we can't forgive the ongoing actions of his government that has allowed continuing damage from coal mining to our water catchment, and approves mining expansion under a licensing system that at best is erratic and at worst no environmental protection at all. It does this knowing that coal mining damage is happening, is accumulative & most likely permanent."

Anne Whatman, Sustainable Australia Party "… not sure whether her party is casting on enough stitches for the job. It's the first time any polly, potential or otherwise, has talked about the Precautionary Principle, that's definitely worth a lot of stitches. Her party position supports '… a moratorium to reassess the viability of coal mining in the catchment.' For which we thought she might need a stitch holder, because while we wait for yet more assessment the water loss and pollution gets worse and we are doing nothing about learning how to mend the damage already done. It seems there is no current technology to mend the holes made by the mines in nature's knitting. How do you fill those huge rock fissures? How do you replace the 1000 years of peat in the Upland Swamps, those great sponges so necessary to hold our water? We have yet to do the research.

Nina Digiglio, Greens Party "… seems to have most of her stitches counted. She says it's Greens Party policy to protect water catchment from mining and extractive industry. She says she supports Water NSW's view that no further long wall mining should be approved in the special areas. No dropped stitches there. It would be so good to see government listen to the knowledgeable advice from its own water authority."

"People," say the Illawarra Knitting Nannas Against Greed, "listen to your Nannas. Keep the coal seam stitched up. Coal mines are the holes in nature's knitting. Whilst water is our most vital resource and should be above politics, listen carefully to what your candidates say before you vote on Saturday."

Local Channel Nine TV News report covered the I-KNAG knit-in where they publicly shared their analysis of the candidates. They were located outside local State MP Gareth Ward's office, March 18, 2019. Reporter Brittany Hughes showed how the media had caught onto the craft language of the Nannas in her report which gained 29 likes, eight comments and 1,900 views (9 News Illawarra, Facebook, 18 March, 2019):

Protesters have spun a yarn in the hope of unearthing the effects of underground mining. A group of Knitting Nannas gathered outside MP Gareth Ward's office in Kiama today – calling to protect the region's water supply. It may look like a peaceful protest but these women mean business… The group says residents are being stitched up [video of KNAGS holding up their very long yellow and black knitting] concerned [that] long wall mining is affecting Sydney's drinking water catchment which supplies water to 5 million people in towns such as Kiama [video of Warragamba Dam].

For some years, the Lismore Loop had been using their knit-in tactic outside the offices of their local State representative Thomas George and Federal representative, Kevin Hogan. Both are conservative politicians whom the Nannas have challenged for advocating for and promoting mining to the detriment of supporting renewable energy. In the lead up to the 18 May, 2019 Federal election the loop researched and listed Hogan's voting record on legislation which they presented to the public at their regular knit-ins outside his office and on Facebook. Demonstrating the Nannas' research skills, Nanna Jessie explained they obtained their data from a federal government website "that tells you all the things he's voted for and against". Conscious of leveraging on their visual impact, the loop constructed the list to look like "a long roll of news or toilet paper and then rolling it up on a scroll" around a wooden spoon, as shown in Figure 7.13. They regularly use the prop to initiate conversations with passers-by, as Nanna Jessie told me:

> Some people going in to see Kevin Hogan, they often have a little chat to us, people walking along because it's the main street… So now we have, a couple of times, hung that outside his office and sort of pulled it down like a big lot of newspaper roll. a Then with people walking by, it's quite a busy street, we engage in some sort of conversation and we say, "oh do you know he voted against this?" and you just show it to them. [It] looked really funny on social media, because it looked like a big roll of toilet paper.

The Facebook post on 9 January, 2020 documented the ongoing use of the voting scroll and collected 71 likes, 14 comments, and 17 shares. Comments were supportive of the Nannas efforts, "absolutely. Go you good things. Accountability needs to return. You are hopefully bringing it."

Figure 7.13: Lismore Loop holding their Federal member of Parliament, Kevin Hogan to account for his legislative voting and views on climate change. (Lismore Knitting Nannas, Facebook, 9 January, 2020, Fair Use)
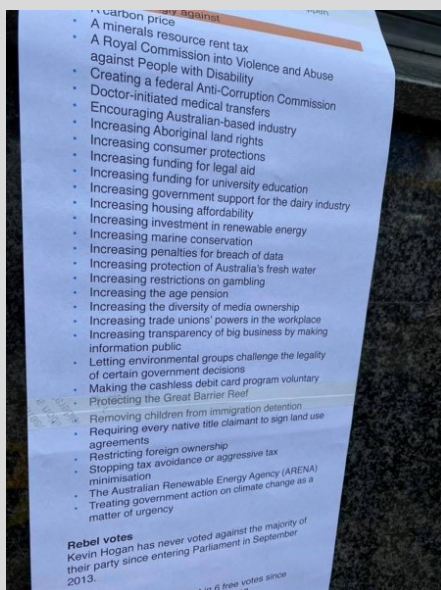
List of what K. Hogan MP voted against

Challenge to K. Hogan MP to stop denying climate change

After seven years of their fortnightly knit-ins, the Lismore Nannas were eventually successful in their bid to replace Thomas George when progressive Labor politician Janelle Saffin won the seat at the 23rd March, 2019 election. Instead of holding knit-ins, the Nannas were invited into Ms Saffin's office each month to brief her on local environmental issues. In her regular column for *The Lismore Echo* (4 July, 2019) the new member of Parliament quoted from the Nannas:

> Spokesnanna Judi Summers said the Nannas had met with all State election candidates to present a Knagging list to gauge their position on our key issues, and when Ms Saffin provided positive responses on all the issues they knew she would be open to regular meetings.

As shown in the preceding example, where possible, KNAG use their knowledge to make representations to the government. This includes representations to government inquiries and policy forums, and they make sure they let their online followers know about their actions. Examples include submissions to: (1) the Select Committee on Unconventional

Gas Mining (Parliament of Australia, 2016) where six Nannas contributed separate papers, one presented in person at the public hearing on behalf of KNAG (Submissions 27, 38, 70, 74, 75 and 313); (2) the Independent Planning Commission of NSW consideration of the Narrabri Gas Project (2020) where three KNAG loops put forward representatives who spoke of their concerns in person and online (New South Wales Government Independent Planning Commission, 2020) and numerous individual loop members wrote submissions; and (3) the United Nations Human Rights Council's *Analytical study on the promotion and protection of the rights of older persons in the context of climate change (A/HRC/47/46)* (2021, p. 14) in which the Knitting Nannas were named as one of three examples of how "many older persons are using their skills, knowledge, experience, resources, and resilience to help stop climate change and address its worst impacts for the benefit of us all" (Bachelet, 2021, p. 5).

The KNAG network's contribution to the consideration of the Santos Narrabri Gas Project in the Independent Planning Commission of NSW involved significant effort and planning, with networking and notifications by loops through Facebook (Knitting Nannas Hunter Loop, Facebook, 12 June, 2020; Sydney Knitting Nannas And Friends, Facebook, 3 July, 2020; Knitting Nannas Against Gas Grafton Loop, Facebook, 8 July, 2020; Knitting Nannas Against Gas, Facebook, 20 July, 2020). In Narrabri, the Nannas demonstrated outside Santos with a videoed explanation of their objections to the project which achieved 51 likes and 2,000 views (see Figure 7.14). As a testament to the impact of their visibility, KNAG were acknowledged in NSW Parliament by the Member for Blue Mountains, Trish Doyle, for their work in gathering over 10,000[13] petition signatures against the Narrabri Gas Project, which can be viewed as a post by the Sydney Loop of the LTG video (Sydney Knitting Nannas And Friends, Facebook, 7 August, 2020, 00:06).

When the IPCN determined the Narrabri project could go ahead, Nannas were "incensed" and "devastated" and expressed their anger, as the KNAG media statement and comments in

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[13] The NSW Parliament's Legislative Assembly will only consider paper-based petitions of over 500 signatories.

Figure 7.15 show. Spokesnanna Judi Summers articulated her cynicism of government and mining company interests, writing "this country is being led by GovCorp - greed and corruption overrule democracy and the environment. As a Knitting Nanna I will be 'taking action' to counter this decision, for our children and grandchildren's future," and in a call to action, she asked "will you do the same?" Reactions to the post included 82 likes, 27 comments and 45 shares (Judi Summers, Facebook, 30 September, 2020).

Figure 7.14: KNAG demonstrate and explain their opposition to the Santos Narrabri Gas Project (Knitting Nannas Against Gas, Facebook, 20 July, 2020
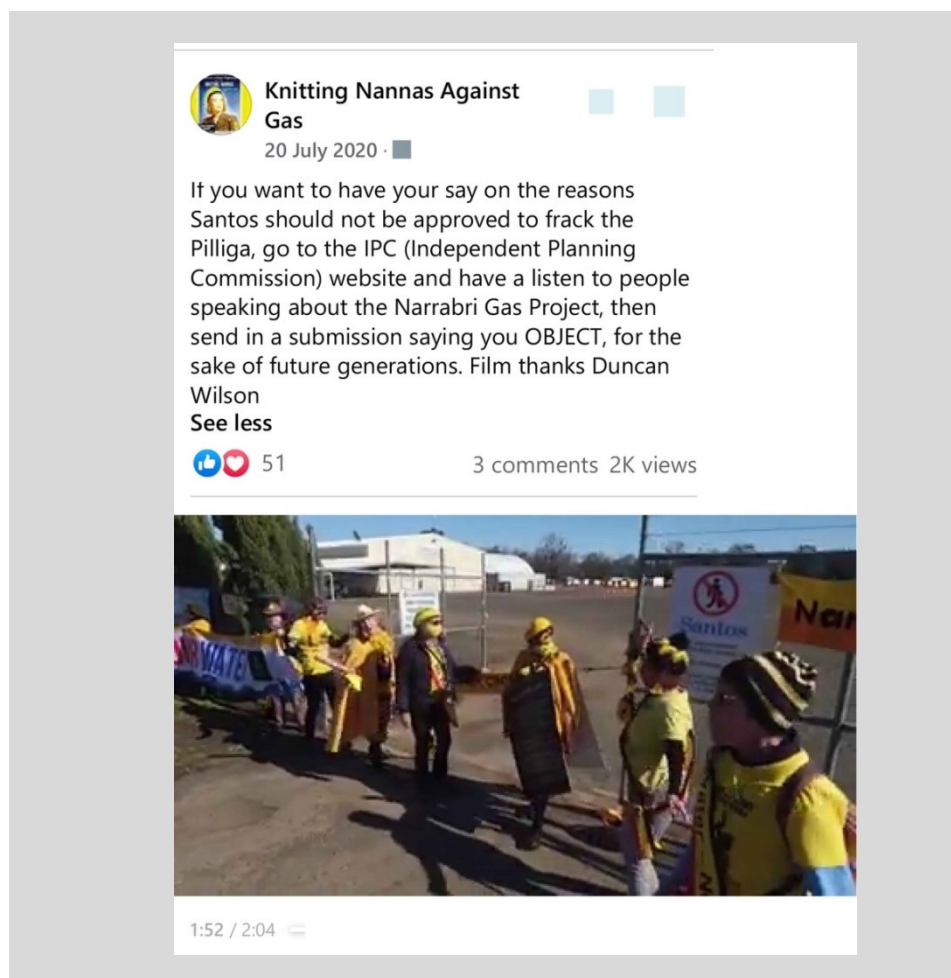
Figure 7.15: KNAG media statement commenting on the approval of the Santos Narrabri Gas Project (Judi Summers, Facebook, 30 September, 2020)

7.6   Summary

Integrating 21st century online and offline activism has enabled KNAG to successfully craft a dynamic phenomenon that has become its own vibrant and valued social movement. The KNAG virtual presence complements, promotes, and documents their offline real world protest activities. Using social media, the KNAG CoP established and strengthened their brand, and created a networked community of practice able to reach out to other anti-CSG groups and the broader community. Being digitally literate has enabled KNAG to use their ecological and environmental knowledge to contribute to policy through government inquiries and policy forums. Achieving older women's environmental activism online has involved drawing on existing information communication and technology skills and overcoming barriers to the adoption of social media digital technologies through learning on the job from one another and from experts.

This research challenges conventional wisdom that older women are caught behind a digital divide. Findings show they are a cohort who lived and worked through the knowledge economy transition and experienced first-hand, in their workplaces and homes, the upskilling involved in the digital revolution of the late 20th and early 21st centuries. As a result of their KNAG activist identities, many have moved from Web 1.0 to Web 2.0 technologies. While Facebook and email remain the staple platforms of choice, the women have become active users of Messenger and Zoom.

Data drawn from surveys, interviews and Facebook confirms the existence of a social media enabled CoP across the KNAG movement. Social movement learning includes becoming digitally savvy in order to be more capable activists. Having social media visibility has contributed to building the KNAG identity and has strengthened this activist community, with the added social benefits of increasing older women's well-being and adding value and purpose to their lives. KNAG are a movement well versed in exploiting various forms of media. They have proved their expertise in presenting a clearly articulated media profile, using digital online tools to complement their offline environmental activism.

Part 3: Discussion and Conclusion

Overview

Part 3 concludes this dissertation with Chapters 8 and 9. The final chapter 8 *Defining Nannagogy: A community of practice in older women's activism* synthesises findings to Research Questions 1 and 2, by presenting an interpretive model that combines the dynamics of transformative environmental adult education and social movement learning as they apply to older women in the KNAG movement. This is characterised as the KNAG community of practice where individuals participate in collective social learning activities in order to generate knowledge, negotiate meaning, form identities, and develop agreed cultural norms (Lave and Wenger, 1991; Curnow, 2013; Farnsworth et al, 2016). Research Question 3 is addressed in the final Section 8.2 which considers the contribution and implications of this research to transformative environmental adult education, social movement learning theory, learning later in life, ageing well, and the human rights of older women in climate change.

Chapter 9 *Conclusion* is a reflection and synthesis on the research journey and offers final remarks.

Chapter 8.   Discussion: Defining Nannagogy – a community of practice in older women's activism

8.1   Summary of key findings, interpretation, opportunities for further research

The overarching question of this research project was:

What educational processes enable older women to experience personal transformation that leads them to become environmental champions actively contributing to the transition to a low-carbon economy?

Three research questions were investigated. In Section 8.1 findings are discussed in relation to RQ1 and RQ2. In order to understand the social movement learning dynamics of an older women's environmental activist movement, RQ1 considered the motivation for

learning which was related to initiating the movement, and RQ2 focused on the learning that sustained the movement. Findings from Chapter 4 provided answers to RQ1. RQ2 was answered in Chapters 5, 6 and 7. An interpretive model is now proposed as a way of summarising the findings and demonstrating the dynamics of Nannagogy. The final question, RQ3 dealt with the implications of the findings and these are discussed in Section 8.2.

8.1.1   *Interpretive model*

Nannagogy is framed as an Australian community of practice (CoP) in older women's environmental activism. The collected research data revealed much similarity with elements of the social movement learning theory frameworks proposed by Branagan and Boughton (2003) based on Newman's taxonomy, Scandrett et al. (2010) and Kluttz and Walter (2018), as described in Section 2.2.7. Building on existing frameworks has assisted in summarising the key findings of this research and indicating their application to the KNAG CoP. Therefore, in this section an interpretive model for conceptualising Nannagogy is proposed, based on a combination of components from the three existing frameworks.

The model includes an additional element to the previous frameworks in order to recognise the influence of learners' entry behaviours and prior capabilities on their motivation in relation to activist skill acquisition. The three levels (micro, meso, and macro) drawn from Scandrett et al. (2010) and Kluttz and Walter (2018) are reinterpreted as distinct elements. Rather than being seen as levels, they are couched in terms of learning cognition. In the presented model these are: (1) *Cognitive – Instrumental learning*; (2) *Metacognitive – Interpretive learning*; and (3) *Epistemic and axiological – Emancipatory critical learning.*

Whilst the term "element" implies discrete separation, findings indicated that, in practice, these elements overlapped and were interdependent. As Kluttz and Walter (2018), point out, social movement learning is complex and dynamic.

My proposed interpretive model is presented in Figure 8.1. In this model, drawing from Kluttz and Walter (2018), learning can occur across a continuum of two distinct vectors. The first, from left to right, recognises the different way learning can be structured from unstructured, informal, unplanned to structured, formal or planned. The second vector, from top to bottom, acknowledges that learning can comprise inquiry that is directed by the self (individual), the loop (group) and the collective (whole of movement). Numbered boxes

are placed in the model which demonstrate the evidence of an element, the structure of learning, and whether it involved individuals or different sized groups. The placement of each number in each box is an attempt to locate the nature of learning. For example, in Figure 8.2, regarding the formation phase, Box 2 is located in both cognitive and metacognitive learning, it is semi-structured in format and within the group setting of the Gasfield Free Northern Rivers CoP.

8.1.1.1 *Cognitive – Instrumental learning*

The term "cognitive" is understood as thinking that uses "cognitive strategies to achieve a goal" or task (Mahdavi, 2014, p. 532). The cognitive element looks at the achievement of cognitive change through instrumental learning relevant to activist skill development. This can occur individually, (such as through online research) or by interacting with others through observation and dialogue (in information sessions at conferences, or situated experiences such as field trips or knit-ins). Learning builds on prior experience and abilities and can be unstructured or structured. For KNAGs this includes learning about the environmental impacts of extractive fossil fuel industries, non-violent direct action, legal rights as activists, and their Nanna-ness, which I have analysed as the use of strategic essentialism (see Section 2.3.2).

8.1.1.2 *Metacognitive – Interpretive learning*

"Metacognition" involves higher order cognitive processing than the cognitive – instrumental learning. Metacognition refers to "thinking about thinking" (Mahdavi, 2014, p. 530; Merrriam and Baumgartner, 2020, p. 164). Applied to learning, this indicates a critical awareness and understanding about thinking and learning processes, in other words, learning about learning and developing critical reflection skills (Merriam and Baumgartner, 2020). In this element, people connect their life experiences before they joined this particular social movement with their social movement activist skill development in a collective space of critical dialogue and reflection. This enables the development of communal understandings through collaborative interpretation and the reframing of knowledge and experiences. Transformative learning processes are utilised in learning that results in knowledge production, the development of movement praxis, and conscientisation, challenging preconceived paradigms. For Nannas, this includes, identity

formation, repertoires of activist tactics, collective agency (empowerment through collective identity), and the development of ecological systems thinking in line with transformative learning for sustainability and a change in worldviews. Much of this learning is unstructured.

8.1.1.3   *Epistemic and axiological – Emancipatory critical learning*

"Epistemic" means the knowledge of knowing and "how individuals gain and use knowledge including their learning styles" (Merriam and Baumgartner, 2020, p. 128) and "axiological" indicates that which is valued (Merriam-Webster, n.d.). These are considered to comprise one element since the resulting re-conceptualising of worldviews and values seem interlinked. This epistemic and axiological element is a further extension of the shifts in paradigmatic thinking realised in the metacognitive element. As activists interact with socio-political and cultural structures (institutions, corporations, and bureaucracies), they gain new understandings of power dynamics and recalibrate their perceptions of reality. This is likely to result in shifts in worldviews and/or ideologies and a greater determination to achieve systemic social change. Linked with the interpretive learning described above, this element can be analysed as emancipatory critical learning through forms of collective conscientisation that are largely unstructured. This critical consciousness creates social action (Clover, 2002).

Figure 8.1: Model for conceptualising Nannagogy social movement learning adapted from Branagan and Boughton (2003), Scandrett et al. (2010) and Kluttz and Walter (2018)
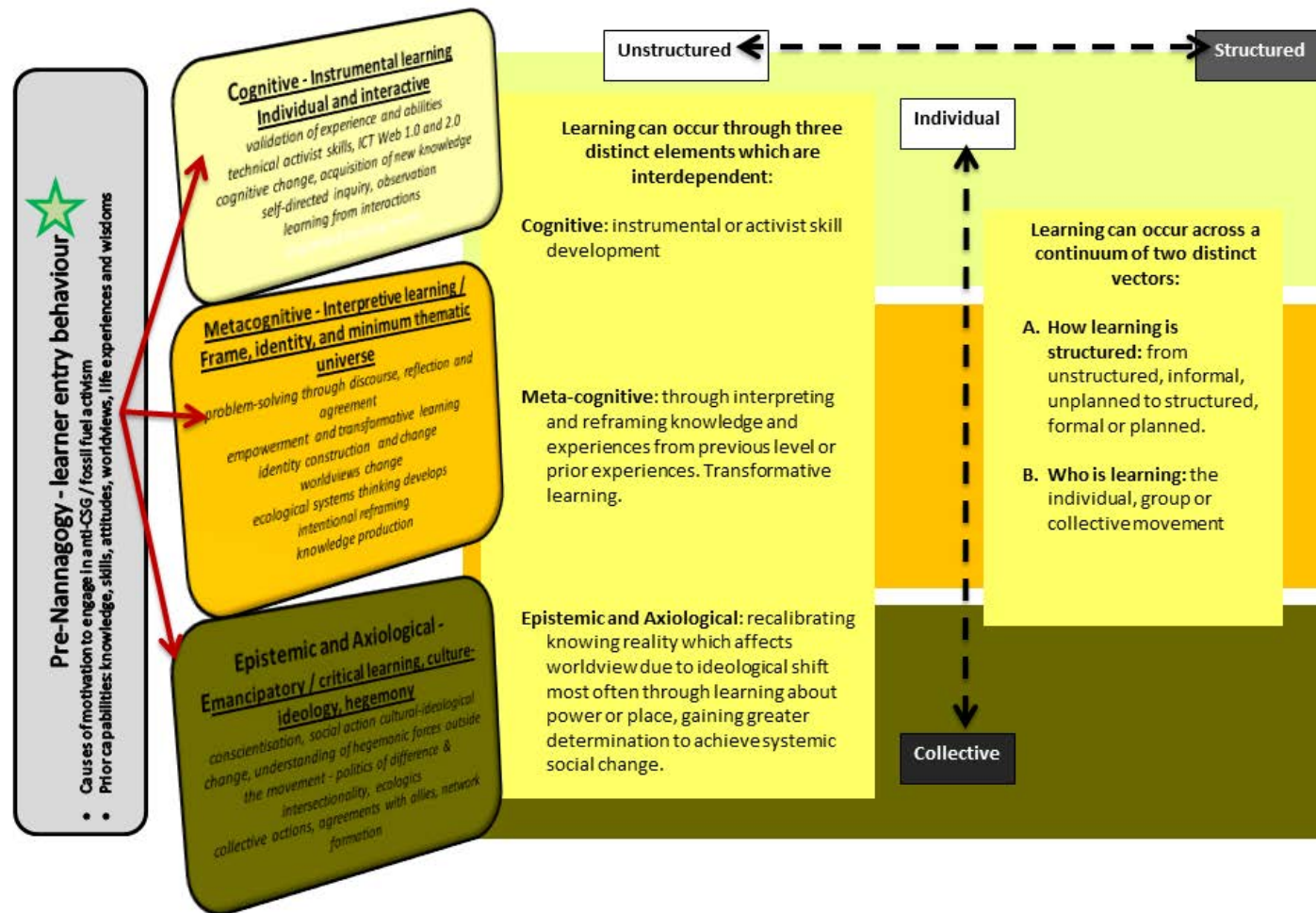
The following sections comprise discussions of findings relevant to each of the research questions, as located within the proposed interpretive model in Figure 8.1. The model is further developed to describe and map the dynamics of two identifiable phases of Nannagogy. These are: (a) the formation phase, shown in Figure 8.2; and (b) the expansion phase, displayed in Figure 8.3. Whilst the two phases were found to be discrete, there was a point in the development of the movement when the phases overlapped. This occurred after the first loop established the KNAG identity and as women began to form new loops in different locations. I have estimated this coincided with the emergence of the written *Nannafesto*, approximately six months after the first loop's inception.

8.1.2   *RQ1: What have the older women learned about starting and growing their movement to 40 or so groups in just four years, from 2012 to 2016?*

The first research question was designed to understand the motivations and learning that led to developing the older women's environmental activist identity. Findings from Chapter 4 provided answers to RQ1.

In terms of the initial motivation to create the movement (RQ1a, see Section 1.1.3), it was found that a majority of the Nannas were circumstantial activists (described by Ollis, 2012; Ollis and Hamel-Green, 2015; Ollis, 2020) and novice campaigners who were intrinsically motivated to establish and join KNAG due to their pre-existing mobilisation and commitment to fighting fracking. This finding is located in Boxes 1 and 2 in Figure 8.2 and Figure 8.3 as a blend of cognitive and metacognitive elements when the women initially sought empowerment as anti-fracking activists.

Being older and intrinsically motivated to become activists further illuminates Fox and Quinn's (2012) study of older Irish activists and is consistent with the neuroscience of learning motivation (Wlodkowski and Ginsberg, 2017) . Drawing from social movement theory (della Porta and Diani, 2006; Snow et al., 2014) the Nannas' pre-existing frame alignment and key motivation was a strong emotional commitment to protecting environmental values for future generations and seeking a legacy of social and intergenerational justice.

The recognition of ageist sexism in the broader anti-fracking movement stimulated the mostly retired women to want to develop their activism in a supportive inclusive milieu of older women (in the model this is located in Boxes 3 and 4 of Figure 8.2 and Box 2 of Figure 8.3). Age, gender, and purposeful retirement were significant contributing factors in both intrinsic motivation and frame alignment. A pre-existing interest in knitting or crafting was shown to be peripheral. Interpreted in adult learning motivation terms, the Nannas' identity aligned with the older women's worldviews by offering respectful inclusion fostering involvement and co-learning (Wlodkowski and Ginsberg, 2017). An older women's form of non-confrontational social action valuing each woman's individuality and capabilities was appealing.

Whilst few Nannas had a background as feminist activists, they had an awareness of sexism in their lives as "everyday feminists" (Schuster, 2017, p. 651) that explains their attraction to KNAG. Motivation to join KNAG was not influenced by the views of their significant others, such as family members. The need which these older women felt for an activist culture that appreciated their experiences of oppression, engendering respectful, empowering relations in place of denigration, illuminates the claims of critical feminist gerogogy (Garner, 1999; Findsen and Formosa, 2011; Schuster, 2017). This finding contributes to the under-researched and recurring theme of sexism in social movements (Roy, 2003; McHugh, 2012; Jenkins, 2015; Tosh and Gislason, 2016; Velasquez, 2017) and begins to address gender blindness by adding the intersectional dimensions of gender and age to frame alignment.

Research Question 1b (see Section 1.1.3) was posed to understand the capabilities these older women brought with them, in terms of knowledge, skills, attitudes, and world views, that enabled their activist learning. By applying learner entry behaviour analysis, the older women were found to have entered the anti-fracking movement with an extensive range of skills easily transferrable to their activism. The skills with which women entered KNAG were drawn from mostly stereotypically female occupations. The combined capabilities of the older women were located in organising, planning, coordinating, managing, creating, performing publicly, and crafting. The fact that many Nannas had been involved in environmental activism supported the view that women of all ages have contributed to many eco-movements (Gaard, 2011). It was found that many women entered the movement

with computer email (Web 1.0) competence and varying degrees of digital literacy including social media (Web 2.0) competence, which aligns with previous research (Haukka and Hegarty, 2011; Australian Bureau of Statistics , 2018; Wiesslitz, 2019; Yellow Social Media Report, 2020).

What women lacked were non-violent direct action strategies, specific knowledge of coal seam gas extraction, and understandings of hegemonic power relations within extractive industries and government. Martin and Coy (2017) identified the lack of a formal definition of activist skills and postulated that social activism involves diverse skills found in many occupations. They did not consider a gender dimension to occupations, or the skills developed by women as homemakers and carers. Nor did they gather data on what occupational skills contribute to activist skills and which learning and skills gaps may need to be addressed. This aspect of the research into KNAG has begun to address this gap and has opened up a new line of enquiry likely to involve detailed skills mapping, consultation, and validation against other activist groups.

Analysis of the initial stages of the KNAG movement's formation phase indicated the ways in which the women used their pre-existing skills to generate their activist identity. Data about the process indicated a series of informal, situated, experiential, and transformative learning steps beginning firstly, with semi-structured instrumental learning (Branagan and Boughton, 2003) of mock blockade and then an actual blockade in the Gasfield Free Northern Rivers Alliance non-violent direct action community of practice (GFNR NVDA CoP).

Interpretive learning (Branagan and Boughton, 2003) involving collaborative critical reflection and creative group problem-solving occurred as the women began to construct their identity. The pivotal "activating event" (Cranton, 2002, p. 66) of recognising unanticipated ageist sexism in the Gasfield Free Northern Rivers (GFNR NVDA) non-violent direct action CoP was interpreted as stimulating transformative learning by drawing on Freirean conscientisation (Mayo, 1994). This was when the women recognised the patriarchal power differential within the GFNR NVDA CoP. The Nannas made a self-defining emancipatory move as older women who refused to accept this gender and age-based stereotyping from others and preferred to determine their own form of anti-fracking

activism. Mezirow's "disorienting dilemma" (Merriam and Baumgartner, 2020, pp. 130-131; Cranton, 2002, p. 66) is applicable here as is Scandrett et al.'s (2010, p. 137) transformative paradigm shifts resulting from "making sense of unexplained experiences …stimulated by discursive encounters". Kluttz and Walter (2018, p. 97) recognised that considering "intersectional and interlocking oppressions" illuminates the transformative effect of adult learning but their work did not take ageism into account.

Data show the Nannas collectively devised the CoP's "domain of competence" which comprises the core values, knowledge, and skills in defining their older women's environmental activism. Within 20 days of distancing themselves from the broader anti-fracking alliance, the original loop used their knitting and yarning circle to construct their own identity. They learned that the knit-in as an activity was conducive to group learning processes towards defining their older women's way of protesting. Thus it was possible to determine that the formation phase involved the development of a CoP as understood by Lave and Wenger (1991). This is represented by Boxes 4 and 5 in Figure 8.2.

The participatory collaborative creation of the Knitting Nannas Against Gas and Greed as an identity was fun, socially engaging, and therefore motivating as the women realised they were getting to know one another as they participated in purposeful environmental activism. On Facebook, the Nannas celebrated the early recognition they gained from the media and other anti-fracking activists as a nascent movement. Claiming credibility and visibility as older women activists was another significant emancipatory step that demonstrates McHugh's (2012, p. 288) analysis that older women engaged in activism are both socially active and challenge "cultural constructions of older women".

These older women discovered a collective creativity that engendered positivity in overcoming the challenges of activism, and ageing, in a supportive and inclusive learning environment, consistent with adult learning motivational conditions (Wlodkowski and Ginsberg, 2017) and critical feminist gerogogy (Findsen and Formosa, 2011). This was a liberating, collective, negotiated learning enterprise that recognised the extensive life experience of older women. Similar to Curnow's (2013, see Section 2.2.6) case study, women shared personal experiences that led to a transformative collective understanding of patriarchal power structures in society.

Figure 8.2: Mapping Nannagogy during the development of the KNAG formation phase

1. Women are mobilised by GFNR to join a grassroots anti-CSG movement.

Pre-Nannagogy - learner entry behaviour
- Causes of motivation to engage in anti-CSG / fossil fuel activism
- Prior capabilities: knowledge, skills, attitudes, worldviews, life experiences and wisdoms

Cognitive - Instrumental learning
Individual and interactive
validation of experience and abilities
technical activist skills, ICT Web 1.0 and 2.0
cognitive change, acquisition of new knowledge
self-directed inquiry, observation
learning from interactions

Metacognitive - Interpretive learning /
Frame, identity, and minimum thematic
universe
problem-solving through discourse, reflection and agreement
empowerment and transformative learning
identity construction and change
worldviews change
ecological systems thinking develops
intentional reframing
knowledge production

Epistemic and Axiological -
Emancipatory / critical learning, culture-
ideology, hegemony
conscientisation, social action cultural-ideological change, understanding of hegemonic forces outside the movement - politics of difference & intersectionality, ecologics
collective actions, agreements with allies, network formation

Unstructured ↔ **Structured**

Individual

Essential Learnings supporting 5, 6, 7, 8.
KNAG learn CSG, NVDA, activist legal rights, strategic essentialism, through: self-directed research, listening to others, conducting information sessions, situated experiences at knit-ins, blockades, field trips, creating non-hierarchical networked structure "disorganisation". They learn social media and web page tools to broadcast their brand, disseminate information, network with alliance groups. Collective and connective action skills develop. Women practice public speaking skills and learn media /police liaison skills.

2. Women learn NVDA through joining GFNR NVDA CoP

3. Critical reflection by some older women identifies GFNR NVDA CoP as alienating older women.

5. Identity construction begins through yarning circle experiential learning. Surveillance guerrilla "Jane Bonds" become Knitting Nanna Against Gas and Greed (KNAG). CoP emerges in older women's activism.

6.
KNAG CoP develops identity through action learning / yarning circle processes. Transformative intentional reframing and ecological systems thinking leads to knowledge creation of Facebook page, uniform colours, Nannafesto, Nannalingo, disorganisation, craftivism, Nanna Way, web site, memes, graphic communication. Later in life learning and social connection contributes to ageing well.

4.
Transformative learning and conscientisation enables ageist sexism relegating older women to a subsidiary carer/support role privileging younger or male activists

7a. Women critically reflect on their experiences, new knowledge and become radicalised by perceiving systemic vested interests. Some feel so strongly that they choose to be arrested for civil disobedience.

7b. KNAG establish network alliances and engage in collective actions with Lock The Gate, GFNR, and others

Collective

Figure 8.3: Mapping Nannagogy during the development of the KNAG expansion phase

Unstructured ← → **Structured**

Individual

Collective

1. Older women are mobilised by local incursion of CSG or fossil fuel mining, or by another environmental concern.

Pre-Nannagogy - learner entry behaviour
- Causes of motivation to engage in anti-CSG / fossil fuel activism
- Prior capabilities: knowledge, skills, attitudes, worldviews, life experiences and wisdoms

Cognitive - Instrumental learning
Individual and interactive
validation of experience and abilities
technical activist skills, ICT Web 1.0 and 2.0
cognitive change, acquisition of new knowledge
self-directed inquiry, observation
learning from interactions

Metacognitive - Interpretive learning /
Frame, identity, and minimum thematic
universe
problem-solving through discourse, reflection and agreement
empowerment and transformative learning
identity construction and change
worldviews change
ecological systems thinking develops
intentional reframing
knowledge production

Epistemic and Axiological -
Emancipatory / critical learning, culture-
ideology, hegemony
conscientisation, social action cultural-ideological
change, understanding of hegemonic forces outside
the movement - politics of difference &
intersectionality, ecologies
collective actions, agreements with allies, network
formation

Essential Learnings supporting 4, 5 KNAG learn about CSG, NVDA, activist legal rights, public speaking, media / police liaison, strategic essentialism, through: self-directed research, situated experiences at knit-ins / blockades, listening to and observing other expert Nannas & passers-by, information and skills training sessions, participating in KNAG Conferences, field trips, experience benefits of later in life learning social connection and ageing well.

2. Older women observe KNAGs enacting their form of NVDA and are attracted to join by recognising the way KNAGs challenge ageist sexism.

3. Women are inducted into the CoP through knit-ins, reading and discussing the Nannafesto; understanding the flexibility afforded by disorganisation (non-hierarchical, network of autonomous groups in which women are encouraged to be agentic activists); the Nanna Way, Nannalingo, and Nannafying.

4. Novice Nannas construct their individual KNAG identity through situated transformative learning by participating in yarning circles, critical reflection, action learning, knit-ins, meetings, blockades, and social media.

5. KNAG grow in their identity, competence and confidence as activists asserting their democratic rights to protest, their worldviews begin to change. They critically reflect on their experiences of challenging power of police, mining companies, politicians & others with vested interests and become radicalised. This may manifest in more systemic social action including participating in broader actions against patriarchal ageist and sexist attitudes; or as environmentalists, climate change and climate justice activists. Some women choose to be arrested for their civil disobedience.

8.1.3   *RQ 2:* What learning processes have enabled older women to sustain motivation and ongoing engagement in activism supporting the transition to a low-carbon future?

Research Question 2 investigated learning processes for maintaining and sustaining engagement and commitment to the causes KNAG sought to address. Findings from Chapters 5, 6 and 7 provided answers to RQ2.

The data show development of the KNAG CoP sustained ongoing motivation and engagement in KNAG learning that consequently led to older women becoming more expert environmental activists. This finding is located as interpretive learning in Box 5 of Figure 8.2 and Boxes 3 and 4 in Figure 8.3. Integrating theories of situated learning (Merriam and Baumgartner, 2020) and CoP (Lave and Wenger, 1991) builds on Ollis's (2011) analysis of anti-fracking activist learning by adding gender and age dimensions. For KNAG, craftivism was found to be the core learning process of their CoP. Craftivism is a tool for instrumental, communicative, interpretive, transformative, and emancipatory learning. My analysis identifies that craftivism has significance as a social movement learning strategy in certain contexts. It has worked well for older Australian women; it may be applicable in other contexts. There is potential for this to be explored further.

Identity formation can be understood through both CoP and social movement theories (see Section 2.2.6; della Porta and Diani, 2006; Snow et al., 2014; Holst, 2018). The KNAG identity construction, located in Box 5 of Figure 8.2, was found to be craftivist and integrated with the older women's essentialised Nanna persona. KNAG learned and interpreted their NVDA through this bifocal lens in a way that was attractive to other older women and stimulated engagement that sustained their motivation for environmental activism. Crafting and conversation were used as motivational tools during induction, encouraging self-confidence and agency (see Boxes 3 and 4 of Figure 8.3). The existence of a KNAG enculturation process of induction where people move from novice to full practitioner supports Lave and Wenger's (1991, p. 16) concept of "legitimate peripheral participation".

The KNAG CoP was found to involve using the tools of "knitting" and being a "Nanna," with the attention seeking uniform and KNAG persona, to stimulate the engagement of passers-by and opportunistically educate them. These tools fostered the KNAG's skill in

activating social change. This established the KNAG CoP ethos of educating those within and outside the movement. It provides a valuable case study in adhering to Hall and Clover's (2005) definition of social movement learning.

No evidence was found of formal learning and yet the women have learned much through situated experiential learning, social learning, and informal unstructured needs-based learner-directed learning. It is likely that experience in teaching, communication, management, and mothering would have contributed to devising such needs-based learning.

The research identified numerous cognitive instrumental skills acquired by the Nannas which underpin their metacognitive interpretive learning and / or epistemic or axiological shifts. These skills are represented as essential learnings, located in the pink boxes in Figures 8.2 and 8.3.

A key feature in the learning culture of the KNAG CoP was the emphasis on creativity and humour. Having fun as older learners and enjoying meaningful, purposeful social contact was an unanticipated and much valued by-product that can be considered to promote ageing well. This finding is recognised in Box 6 of Figure 8.2 as a realisation of learning in the formation phase that involved metacognitive and emancipatory learning. This knowledge was passed on to novice Nannas as an essential learning during the expansion phase, as shown in the pink box in Figure 8.3.

Niesz (2019) emphasised that cognitive praxis based on situated experience results in knowledge production in social movements. Consistent with Niesz, this researcher found the KNAG CoP generated forms of knowledge that codified guiding principles critical to structuring the movement and motivating its activist praxis, see Box 6 in Figure 8.2 and Box 3 in Figure 8.3. This included the Nannafesto, the Nanna Way, nannafying, Nannuals and Nannalingo. For example, by adhering to the Nannafesto, KNAG have had a reference point for activist learning about their collective identity. They also have had a framework for engaging in transformative environmental adult education, meaning the Nannafesto guided Nanna's decision-making in their development of ecological and environmental literacy, and activist skills. Conceiving the KNAG movement's structure as a non-hierarchical network, a "disorganisation" of autonomous groups, is consistent with one strand of new environmental social movements (Newlands, 2018) and with ecofeminism (Plumwood, 1993;

Glazebrook, 2002). KNAG embody much of Glazebrook's (2005) concept of gynocentric eco-logics which values reciprocity, care, nourishment, guidance, and gender inclusivity, with an openness to and respect for difference that displaces the logic of domination. This positionality was interpreted in this study as transformative learning and constituted an opportunity to experience an emancipatory shift in the older women's worldviews.

Challenging an ageist deficit model that presumed a digital divide between younger and older people (Trentham et al., 2014; Fotopolou, 2016), Nannas demonstrated their ability to upskill their digital literacy by successfully combining collective action with connective activion (see Section 7.1). These older women adapted to and embraced technology, finding that information communications technologies enhanced their social support networks and quality of life by reducing isolation. These skills are located in the pink boxes of Figures 8.2 and 8.3 as essential learnings. The wealth of visual documentation available online provided by the Nannas' social media presence is indicative of their ability to claim ownership of t virtual real estate in the digital landscape.

Thus far, findings have been mapped onto cognitive, metacognitive and epistemic and axiological elements. The final set of findings is concerned with the evidence of emancipatory critical learning that has opened women's eyes to seeing their realities differently.

Data show multiple instances of the ways in which the KNAG CoP has skilled women to express their democratic citizenship rights to challenge the systemic vested interests of politicians, police, and mining companies. The culture of non-violent nagging pester power fostered critical reflection; KNAG realised their effectiveness in practising non-violence. Represented in Box 7a of Figure 8.2 and Box 5 of Figure 8.3 are the shifts in epistemic and axiological worldviews that occurred as the Nannas experimented with various strategies for bearing witness. In recognition of the safety and authority endowed by their physical presence, the women devised the three Nanna rule. In social movement theory, the Nannas mastered the logic and power of numbers (della Porta and Diani, 2006) both offline and online.

These findings agree with Walter's (2007) view that transformational insights gained as a result of experiential learning are the crux of transformative environmental adult

education contextualised in social movement learning. The transformational shift to challenge injustice and fight for sustainability was evident in the Nannas' realisation of the adversarial dynamics of protest actions typified by Nanna Julia's words, "there comes a time, once your eyes have been opened you can't close them."

8.2   Implications and recommendations

8.2.1   RQ3: What contribution does this research into older women's transformative environmental adult education, 'Nannagogy', make to the fields of adult learning and social movement learning?

Answering the final research question affords an opportunity to reflect holistically on the findings and encapsulate the usefulness of Nannagogy and its potential contribution to academia and society. Implications of this research are discussed and some recommendations made.

In this case study, it was identified that the critical success factors that enabled older women's engagement in climate change and environmental activism (RQ3a) were found in the emancipatory shifts achieved by the women themselves as a result of critical group reflection on situated experiences.

First and foremost was the ethos of older women's empowerment that underpinned the KNAG CoP. The initial and most critical shift was to segregate themselves and place boundaries around the external control of their activist identity. Such a move represented a refusal to be complicit in their oppression. The next shift was valuing and drawing on the combined life experiences and knowledges of the older women to articulate the many aspects of their specific form of 21st century collective and connective environmental activism. KNAG intuitively and explicitly embraced a hybrid of learning strategies to achieve outcomes in ecological and environmental literacy, and activist skills that led to epistemic and axiological shifts in personal worldviews. Both these shifts were foreshadowed by Darlene Clover (1995) in her seminal work, *Gender Transformative Learning and Environmental Action,* and subsequently documented in a number of studies (see Roy, 2003; Jenkins, 2015; Tosh and Gislason, 2016; Velasquez, 2017).

Sadly, this research confirms the ongoing challenge of overcoming oppressive gender and now age-based stereotypes in new environmental social movements. Happily, the Nannas have shown us a model where older women's wisdom has successfully achieved older women-centred power shifting, which does not exclude men, but equally does not privilege them.

Overcoming ageist sexism in social movement learning generally and, more specifically, in environmental new social movements is an important form of social justice. Going forward, it is my hope that researchers can now more easily recognise the theoretical and practical transdisciplinary dimensions involved. Older women are more likely to be attracted to non-violent direct action that combines creativity, humour, and collaborative, productive, and purposeful activity. In the case of KNAG, craftivism within the frame of Nannagogy provides this, which is not to say this is the only way to achieve this outcome. When motivated by needs and interest, older people are no different to any other age group of learners in being capable, adaptive, and able to acquire new skills in collective and connective action. A positive, inclusive learning environment that affirms life experiences is essential, as is meaningful social interaction and supportive networks.

Incorporating critical feminist gerogogy with transformative environmental adult education in this interpretive model demonstrates the usefulness of social movement learning as a transdisciplinary analytical tool. This further raises the profile of transformative learning in social movements and challenges tertiary education institutions to integrate social movement learning in their programs. Social movements rely on situated collaborative experiential learning that is primarily peer to peer. What then could be the role of an educator skilled in facilitating experiential learning? This presumes that expertise and qualifications have been gained and recognised, which further presumes that educational institutions incorporate social movement and transformative learning into undergraduate and postgraduate fields of study. I do not advocate the institutionalisation of social movement learning, rather I seek to support the democratic rights of citizens to work for social justice, and ecological and environmental sustainability. In order to achieve this, capacity building is required in Australia's tertiary institutions; one likely starting place is their faculties of education.

The research has added to the knowledge about older women's environmental activist learning, but more work is required to fill this significant gap. One suggestion is to refine understandings of the prerequisite skills for activism and better define domains of competence in activist skills.

As an Australian CoP in older women's environmental activism, Nannagogy has successfully enabled older women to be acknowledged as a vital force in the Australian environmental movement. Across the continent, Nannas have compelled people who are not older women to consider the attributes older women bring to social movements and be inspired by their commitment to facts, courage, determination, wisdom, and wit. They have engaged thousands of people in identifying the value of older women to democratic society. By implication, hopefully, people of all ages in social movements have learned to value one another's voices and capabilities.

The theoretical basis for interpreting the findings to my questions was not found in one single discipline. This research addressing Macdonald and Rich's calls (1984; 1985; and in Lipscomb, 2006) for a theoretical base for ageism to reflect on women's ageing and organising for social change emphasises the need for transdisciplinary critical dialogue to advance understanding about overcoming ageist sexism and attendant intersectionalities. In this way, the current study contributes to the emerging social justice movement of ageivism (Doron, 2018).

Data show how the Knitting Nannas have effectively advocated for policies of ecological sustainability. The United Nations Human Rights Council's *Analytical Study on the Promotion and Protection of the Rights of Older Persons in the Context of Climate Change (A/HRC/47/46)* (2021, p. 14) named the Knitting Nannas as one example of how "many older persons are using their skills, knowledge, experience, resources, and resilience to help stop climate change and address its worst impacts for the benefit of us all" (Bachelet, 2021, p. 5). The combined policy directions of the UN's Decades on Ecosystem Restoration and Healthy Ageing (2020 – 2030) offer overlapping opportunities for nations to embrace older citizens' right to quality learning later in life, seeking ways to build capacity in local communities for ecological and economic sustainability. The Nannas have proven ageist sexism robs society

of leadership, expertise, elder wisdom, and resilience in the challenge to address the impacts of fossil fuel extraction.

8.3   Research limitations

Undertaking this descriptive case study of a "disorganisation" was the first systematic PhD study of its kind in Australia. Therefore there are likely to be research gaps in need of further exploration. It was challenging to find a way of systematically investigating a disorganisation composed of an undocumented membership across a number of sites and geographically distanced groups. I did my best to apply a robust mixed method for data collection and analysis in consultation with advisers and by interrogating the published literature. I applied my education program evaluation skills to this project and am aware that there may be aspects of Nannagogy I have overlooked. There may be great value in other researchers turning their attention to the Nannas to further explore aspects of their practice.

Ageist sexism has emerged as a double jeopardy for older women. There is some evidence that this has been encountered before in social movements, as shown by Roy (2003) in relation to the Raging Grannies (see Section 2.3.2). This issue is under-researched, which meant there was little possibility of comparison to determine more than a passing similarity. A comparison of the Raging Grannies and the Knitting Nannas women's movements may be worthwhile for furthering knowledge on this topic alone. Another suggestion might be to identify older women in social movements with a range of ages and undertake an analysis of their experiences to see how critical the issue of ageist sexism may be for their activism.

During the research I realised the difficulty of gathering statistical population data on older women. This was particularly limiting in relation to older women's use of social media due to lack of comparability across data sources. Data for older people are not disaggregated by gender. This suggested a lack of interest in this cohort, a suggestion that was not possible to verify. Despite repeated attempts to communicate with Facebook about data on older women's social media use, none was forthcoming. This would have provided a useful baseline. Some of the Facebook analytics used in this research are basic data. It would have been preferable to have gained access to some more detailed analytics to better track high response events. This would have required the greater involvement of KNAG page

administrators and also depended on whether they were using the analytics available to them.

8.4   Summary

In this chapter, Nannagogy has been defined as a community of practice in older women's activism. The research findings were discussed using an interpretive model that combined the dynamics of transformative environmental adult education and of social movement learning. Two phases of movement learning, formation and then expansion, were identified and mapped using the model. Critical group reflection on situated experiences led to the development of the KNAG CoP; this Cop was underpinned by a motivational ethos of older women's empowerment. The KNAG CoP was found to foster emancipatory and axiological shifts that resulted in the Nannas gaining expertise as environmental activists.

Three recommendations emerged from the discussion of findings and their and implications:

1. <u>Social movements</u> are advised to value their participant's voice and capabilities. Specifically, when wanting to attract older women, organisers are advised to promote non-violent activism and to overcome ageist and sexist stereotyping. This is best achieved by providing positive, creative, purposeful, inclusive, and collaborative learning environments that affirm and draw on life experiences, meaningful social interaction, and supportive networks.

2. <u>Tertiary education institutions</u> are encouraged to: (1) advance transdisciplinary critical dialogue towards further development of a theoretical base that addresses gender and other intersectionalities within ageism; (2) consider the usefulness of social movement learning as a transdisciplinary analytical tool; (3) consider the usefulness of communities of practice as an analytical tool for social movement learning; and (4) further develop understandings of the prerequisite skills for activism by better defining domains of competence in activist skills.

3. <u>Governments</u> are encouraged to implement strategies that support the policy directions of the UN's Decades on Ecosystem Restoration and Healthy Ageing (2020 – 2030) by embracing older citizens' right to quality learning later in life

and their capacity for leadership, expertise, elder wisdom, and resilience in the challenge to address the impacts of transitioning to a low carbon economy.

Chapter 9.   Conclusion

The purpose of this PhD research has been to address a gap in knowledge by describing and analysing a previously undocumented aspect of older women's informal environmental activist learning through the experiences of the Knitting Nannas. The research project was approved in 2016 after the Nannas had been in existence for only four years. At that time, no-one had described what the Knitting Nannas were doing in terms of transformative environmental adult education or social movement learning. I realised that knowledge of older women's environmental activist learning is a lacuna in environmental education, adult learning, and social movement learning. Filling this gap required something greater than I had expected - a transdisciplinary approach that drew together considerations of gender, critical gerontology, environmental climate activism, new and traditional media, and craftivism. This made it possible to disentangle the threads of the different learning processes involved in Nannagogy.

Feminist poststructuralism informed the research in order to analyse older women's emancipatory learning journeys in overcoming ageist sexism amongst the broader anti-coal seam gas movement. The Nannas created themselves; they talked and crafted themselves into existence. They play with words and text (discourse) to establish and maintain their unique identity in online and physical spaces across Australia

Since this education research focuses on older women learning to be environmental activists, a descriptive approach was deemed necessary. This included visual evidence to support the textual description and analysis. Seeing the Nannas as they wanted to be seen, and documenting their words were the only ways I felt able to honour their experiences and help others appreciate their achievement. Not only has this approach revealed the breadth and depth of the Nannas' learning, it highlights a significant issue for feminist researchers – the ongoing challenge of putting women's experience on the public record. As elsewhere, gender blindness continues to be an issue in environmental education practice and research (Gough, Russell and Whitehouse, 2017; Larri and Newlands, 2017). Nannagogy is a challenge to social movement learning theorists and those working in social movements. It points out the need to be vigilant and inclusive, and to properly see older women as powerful practitioners of activism.

I set out on my PhD research fascinated to learn how an environmental activist movement of older women had grown from one small group to around 40 in its first four years. As an educator, I suspected this growth had much to do with learning. What I found were women marginalised due to their age and gender who were determined to be productive and creative as social change agents taking action for a low-carbon future. Many women in this study had never been activists before becoming a Nanna. Drawing on one another's strengths, learning from one another, taking time to critically reflect as they "sit, knit, and plot", these women have built an identifiable learning system consistent with the domains of learning reported in previous literature and social movement learning theory frameworks. Nannagogy, the hybrid form of Nannas' informal learning, expresses an interplay and intersectionality of gender, identity, and environmental activism.

Addressing the effects of anthropogenic climate change and global warming have become an imperative that Australia has been slow to embrace. As humans, we learned our way into this mess and now we are challenged to learn our way through it. I was inspired by the then UN Secretary General Ban Ki-moon's address to delegates at Climate Week (New York City, 2014) urging the world to commit to transformative action and his now famous prophetic statement, "If we can't all swim together we will sink. There is no Plan B, because we do not have a Planet B"[14]. Achieving transformation is not elusive, it happens regularly to us as children and adults through human learning processes.

This thesis illuminates older women as capable and adept at managing their own experiential situated learning to achieve transformational change in becoming environmental activists and effective contributors to social change for transitioning to a low-carbon economy. For a majority of the participants in this case study, the identity shift from caregivers, home makers, and breadwinners, as wives and partners, mothers, and grandmothers to environmental activists was a transformation they had never envisaged previously. Older female environmental activists encountered unexpected ageist sexism that sought to silence them. Instead they created spaces in which they would be seen and heard.

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[14] Ban Ki-Moon's address to the Climate Week New York City delegates in 2014, YouTube
https://www.youtube.com/watch?v=ivuudknkewk

There is nothing new in women sharing crafting, being productive, and enjoying one another's companionship in domestic settings. What was new was the very public educative performative activism that the Nannas created for themselves. Older women felt secure and emboldened to join in this non-violent activism and thus a critical mass of Nannas was knitted. Craftivism is a means to an end, a strategy for induction, empowerment, and an opportunity to initiate conversation, leading the often unwitting bystander into informal learning. When you see a knit-in, know that the KNAG Community College is open for business!

KNAG use a multiplicity of media channels to research and spread knowledge: from fundraiser forums to frontline face-to-face explanations, social media postings, letter writing campaigns to politicians, representations to government enquiries, and online email bulletins. Their online social media savvy-ness is evidence of connectivist learning in and through a digitised world of active participants in conversation. They adeptly learned how to combine collective action with connective action.

Ultimately, this is a movement of older women activists who have proved their claim that you're never too old to be an activist. In doing so, they have crafted their special niche in a galaxy of environmental activist organisations where they are admired for their bravery and courage – a far cry from their beginnings.

Women and older women have always been activists. What has been lacking is the acknowledgement and recognition of women's capabilities. In Australia, KNAG have broken the older women's environmental activist glass ceiling. So much of how they have done this seems serendipitous and intuitive. In actuality, it was predictable once these women's extensive capabilities were recognised by themselves, by one another, and by those observing and interacting with them.

These are women of consequence because they have come to believe in their agentic selves. The Nannas have supported me in this endeavour. They have been more than generous in graciously giving me their deepest insights into their motivations for wanting to become the best possible activists they could be. I am beyond grateful for their commitment to this research so that I could achieve my dream of writing them into history. I find it very

difficult to recommend anything other than the obvious: never underestimate the wisdom and power of older women.

References

"What's the difference between 'elder' and 'older'?". (2021). Merriam-Webster.com. Retrieved from https://www.merriam-webster.com/words-at-play/difference-between-elder-eldest-and-older-oldest

'No gas nannas'. (2012, June 28). *The Northern Star*. Retrieved from https://www.northernstar.com.au/news/no-gas-nannas/1433252/

ABC News online. (2014, 10 July). Carbon tax: a timeline of its tortuous history in Australia. Retrieved from https://www.abc.net.au/news/2014-07-10/carbon-tax-timeline/5569118

Acosta, C. L., Horwitt, D., Kelly, A., Lyons, A., Theytaz-Bergman, L., & Willmott-Harrop, E. (2015). *A Guide to Rights-Based Advocacy: International Human Rights Law and Fracking*: Sisters of Mercy (NGO), Mercy International Association: Global Action.

Aidt, M. (Producer). (2015). Three brave Australians' sustainability pilgrimages: MaryBeth Gundrum [Audio podcast]. *The Sustainable Hour*. Retrieved from https://climatesafety.info/thesustainablehour81/#gundrum

Aitken, M. (2017). Feminism: A fourth to be reckoned with? Reviving community education feminist pedagogies in a digital age. *Concept, 8*(1), 18-18.

Albrecht, G. A. (2019). *Earth Emotions: New Words for a New World*: Cornell University Press.

APA Dictionary of Psychology. (n.d.). Adulthood. Retrieved from https://dictionary.apa.org/adulthood

Australian Academy of Science. (2015). *The science of climate change: Questions and answers*. Retrieved from Canberra:

Australian Academy of Science. (2021). *The risks to Australia of a 3°C warmer world*. Retrieved from www.science.org.au/warmerworld

Australian Bureau of Statistics. (2018a). Disability, ageing and carers, Australia: Summary of findings. Retrieved from https://www.abs.gov.au/statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/2018#older-people

Australian Bureau of Statistics. (2018b). Use of information technology by people with disability, older people and primary carers. Retrieved from https://www.abs.gov.au/articles/use-information-technology-people-disability-older-people-and-primary-carers#use-of-technology-to-contact-family-and-friends

Australian Government Department of the Environment, Water, Heritage and the Arts (DEWHA),. (2009). *Living sustainably : the Australian Government's National Action Plan for Education for Sustainability.* Canberra: Dept. of the Environment, Water, Heritage and the Arts,.

Bachelet, M. (2021). Panel discussion on the human rights of older persons in the context of climate change Human Rights Council 47th Session. Statement by Michelle Bachelet, UN High Commissioner for Human Rights. Retrieved from https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=27237

Bacon, W., & Jegan, A. (2020). *Lies, Debates, and Silences. How News Corp produces climate scepticism in Australia*. Retrieved from

Baer, H. (2016). Redoing feminism: Digital activism, body politics, and neoliberalism. *Feminist Media Studies, 16*(1), 17-34. doi:10.1080/14680777.2015.1093070

Barron, I. (2007). An exploration of young children's ethnic identities as communities of practice. *British Journal of Sociology of Education, 28*(6), 739-752.

Bartlett, A. (2013). Feminist protest in the desert: Researching the 1983 Pine Gap women's peace camp. *Gender, Place & Culture, 20*(7), 914-926. doi:10.1080/0966369X.2012.753585

Bazeley, P. (1999). The bricoleur with a computer: Piecing together qualitative and quantitative data. *Qualitative Health Research, 9*(2), 279-287.

Bazeley, P. (2018). *Integrating analyses in mixed methods research*. London: Sage Publications, Ltd.

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university*: McGraw-Hill Education (UK).

Boulton-Lewis, G. M., & Buys, L. (2015). Learning choices, older Australians and active ageing. *Educational gerontology, 41*(11), 757-766.

Branagan, M. (2007). The last laugh: Humour in community activism. *Community Development Journal, 42*(4), 470-481.

Branagan, M., & Boughton, B. (2003). How do you learn how to change the world?: learning and teaching in Australian protest movements. *Australian Journal of Adult Learning, 43*(3), 346.

Brown, R. (2019). Watershed [Video] [Video]: Frogmouth Films.

Brown, R. (Producer). (2020). Water is life: Knitting Nannas, International Women's Day 2019 [Video]. [Video] Retrieved from https://vimeo.com/frogmouthfilms

Brú Bistuer, J., & Aguera Cabo, M. (2004). A gendered politics of the environment. In L. A. Staeheli, E. Kofman, & L. Peake (Eds.), *Mapping*

women, making politics: Feminist perspectives on political geography. (pp. 209-225). London: Routledge.

Burgmann, V. (2003). Power, Profit and Protest. Australian Social Movements and Globalisation.

Burns, R. (1995). The adult learner at work. In: Sydney: Business and Professional Publishing.

Burton, R., & Reddy, H. (1972). *I Am Woman*: Rondor Music.

Campbell, J. (2015, 19 June 2015). Nannas Against Gas (KNAGS) hiking to Cape York to protest coal seam gas. *Cairns Post*.

Carlo, S., & Rebelo, C. (2018). *Technology: a bridge or a wall? The inter (intra) generational use of ICTs among Italian grandmothers.* Paper presented at the international conference on human aspects of IT for the aged population.

Carlson, B., & Frazer, R. (2018). Yarning circles and social media activism. *Media International Australia, 169*(1), 43-53.

Check, J., & Schutt, R. K. (2011). *Research methods in education*: Sage Publications.

Christenson, S. L., Reschly, A. L., & Wylie, C. (2012). *Handbook of Research on Student Engagement*. Boston, MA: Springer-Verlag.

Chudoba, B. (n.d.). How much time are respondents willing to spend on your survey? Retrieved from https://www.surveymonkey.com/curiosity/survey_completion_times/

Clarke, K. (2016). Willful knitting? Contemporary Australian craftivism and feminist histories. *Continuum, 30*(3), 298-306. doi:10.1080/10304312.2016.1166557

Close, S. (2018). Knitting activism, knitting gender, knitting race. *International Journal of Communication, 12*, 23.

Clover, D. E. (1995). Gender Transformative Learning and Environmental Action. *Gender and Education, 7*(3), 243-258. doi:10.1080/09540259550038988

Clover, D. E., de O. Jayme, B., Hall, B. L., & Follen, S. (2012). *International Issues in Adult Education : The Nature of Transformation : Environmental Adult Education* (S. Garvis & R. Dwyer Eds.). Rotterdam, NLD: Sense Publishers.

Clover, D. E., & Hill, R. (2013). Adult Learning, Education, and the Environment. *New Directions for Adult and Continuing Education, 2013*(138), 49-59. doi:10.1002/ace.20053

Cohen, L., Manion, L., & Morrison, K. (2013). *Research Methods in Education* (Vol. 7th). Hoboken: Taylor and Francis.

Cohen, L., Manion, L., Morrison, K., Bell, R., & ProQuest. (2011). *Research methods in education* (7th ed.). London;New York; U6 - ctx_ver=Z39.88-

2004&ctx_enc=info%3Aofi%2Fenc%3AUTF-
8&rfr_id=info%3Asid%2Fsummon.serialssolutions.com&rft_val_fmt=info
%3Aofi%2Ffmt%3Akev%3Amtx%3Abook&rft.genre=book&rft.title=Resea
rch+methods+in+education&rft.au=Cohen%2C+Louis&rft.au=Manion%2
C+Lawrence&rft.au=Morrison%2C+Keith&rft.au=Bell%2C+Richard&rft.se
ries=ProQuest+Ebook+Central&rft.date=2011-01-
01&rft.pub=Routledge&rft.externalDocID=1571205&paramdict=en-US
U7 - eBook: Routledge.

Conference of the Parties. (2013). *Report of the Conference of the Parties on its eighteenth session, held in Doha from 26 November to 8 December 2012*. Retrieved from
https://unfccc.int/sites/default/files/resource/docs/2012/cop18/eng/08 a03.pdf

Cranton, P. (2002). Teaching for transformation. *New Directions for Adult and Continuing Education, 2002*(93), 63-72.

Cruikshank, M. (2013). *Learning to be old: Gender, culture, and aging*: Rowman & Littlefield Publishers.

Curnow, J. (2013). Fight the power: Situated learning and conscientisation in a gendered community of practice. *Gender and Education, 25*(7), 834-850. doi:10.1080/09540253.2013.845649

Daniels, A. K. (1987). Invisible work. *Social Problems, 34*(5), 403-415.

Davies, A. (2018, 31 July 2018). Mining expansion under Sydney water catchment approved without full data. *The Guardian*. Retrieved from https://www.theguardian.com/australia-news/2018/jul/31/mining-expansion-under-sydney-water-catchment-approved-without-full-data

Davies, A. (2020). Party hardly: Why Australia's big political parties are struggling to compete with grassroots campaigns. *The Guardian*. Retrieved from https://www.theguardian.com/australia-news/2020/dec/13/party-hardly-why-australias-big-political-parties-are-struggling-to-compete-with-grassroots-campaigns?CMP=soc_567&fbclid=IwAR3Z2_JIQjIa9_Wqi3hZTczU257_DV xq_UY2XI9LE9Viv2YwLixPtagOgTo

Della Porta, D., & Diani, M. (2006). *Social movements: An introduction* (Second ed.). Carlton, Victoria Australia: Blackwell Publishing Ltd.

DeVault, M. L., & Gross, G. (2012). Experience, Talk, and Knowledge. *Handbook of Feminist Research: Theory and Praxis*, 206.

Doron, I. (2018). *Re-thinking old age: Time for ageivism* (Vol. 27): Australian Human Rights Centre.

Doucet, A., & Mauthner, N. (2008). Qualitative interviewing and feminist research. *The Sage handbook of social research methods*, 328-343.

Downes, S. (2012). *Connectivism and connective knowledge: Essays on meaning and learning networks*. Book published online.

Edis, T. (2014). Abbott's kinda right – coal was 'good for humanity'. *The Australian - Business Review*, Online. Retrieved from https://www.theaustralian.com.au/business/business-spectator/news-story/abbotts-kinda-right--coal-was-good-for-humanity/2796f7d8077751fe758fc2926d4a7292#

Ellicott, J. (2017, May 25, 2017). CWA makes it policy to ban Coal Seam Gas as Nationals declare they want to expand industry. *The Land*. Retrieved from https://www.theland.com.au/story/4686569/coal-seam-gas-cwa-votes-to-ban-it/

Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: An overview. *Historical Social Research/Historische Sozialforschung*, 273-290.

Ellis, M. (2018). Facebook Page vs. Group: Which One Is Right for You? *Make Use Of*. Retrieved from MUO website: https://www.makeuseof.com/tag/facebook-page-vs-group/

Emery, L. (2018). *Working With Crafty Hands: Crafting as Feminist Methodology in the Australian Context.* Paper presented at the Women Art and Feminism in Australia Since 1970, Victorian College of the Arts, University of melbourne, Southbank Campus.

Engelbrecht, C., & Skladzien, E. (2010). *Later Life Learning: Unlocking the Potential for Productive Ageing*. Retrieved from https://library.bsl.org.au/jspui/bitstream/1/2430/1/2010%20National%20Seniors%20Report.pdf

Environment Australia. (2000). Environmental education for a sustainable future: National action plan. In: Commonwealth of Australia Canberra.

Extinction Rebellion. (n.d.). *The how-to guide to planning effective NVDA (Nonviolent direct action)*. In. Retrieved from https://rebeltoolkit.extinctionrebellion.uk/books/upskilling-rebels/page/nvda

Eyerman, R., & Jamison, A. (1991). *Social movements: A cognitive approach*: Penn State Press.

Falvo, A. (2015, 23 April 2015). Win for traditional owners as coal seam gas permit for Mt Mulligan revoked. *Cairns Post*. Retrieved from https://www.cairnspost.com.au/news/cairns/win-for-traditional-owners-as-coal-seam-gas-permit-for-mt-mulligan-revoked/news-story/324d906ad67e687efa1009fe0a52ca36

Farnsworth, V., Kleanthous, I., & Wenger-Trayner, E. (2016). Communities of practice as a social theory of learning: A conversation with Etienne Wenger. *British journal of educational studies, 64*(2), 139-160.

Feigenbaum, A. (2008). *Tactics and Technology: Cultural Resistance at the Greenham Common Women's Peace Camp.* McGill University,

Feigenbaum, A. (2015). From cyborg feminism to drone feminism: Remembering women's anti-nuclear activisms. *Feminist Theory, 16*(3), 265-288. doi:10.1177/1464700115604132

Field, J. (2011). Lifelong Learning, Welfare and Mental Well-being intro Older Age: Trends and Policies in Europe. In G. Boulton-Lewis & M. Tam (Eds.), *Active ageing, active learning: Issues and challenges* (Vol. 15). Dordrecht, Netherlands: Springer Netherlands.

Findsen, B. (2018). Learning in Later Adulthood: A Critical Perspective. In M. Milana, S. Webb, J. Holford, R. Waller, & P. Jarvis (Eds.), *The Palgrave international handbook on adult and lifelong education and learning*. London, UK: Springer.

Findsen, B., & Formosa, M. (2011). *Lifelong learning in later life: A handbook on older adult learning*. Rotterdam: Sense Publishers.

Fisher, A. (2013). Ecopsychology at the crossroads: Contesting the nature of a field. *Ecopsychology, 5*(3), 167-176.

Fitzpatrick, T. (2018). Craftivism: A manifesto / methodology. 2nd. Retrieved from https://www.dropbox.com/s/k42i51ng1ebiibm/Craftivism-Tal-Fitzpatrick.pdf?dl=0

Fitzpatrick, T., & Kontturi, K.-K. (2015). Crafting change: Practicing activism in contemporary Australia. *Harlot: A Revealing Look at the Arts of Persuasion, 1*(14).

Fotopoulou, A. (2016). Digital and networked by default? Women's organisations and the social imaginary of networked feminism. *New Media & Society, 18*(6), 989-1005.

Fox, J., & Quinn, S. (2012). The meaning of social activism to older adults in Ireland. *Journal of Occupational Science, 19*(4), 358-370.

Fox, N. J., & Alldred, P. (2018). Mixed methods, materialism and the micropolitics of the research-assemblage. *International Journal of Social Research Methodology, 21*(2), 191-204.

Fracking. (n.d.). *Merriam-Webster.com dictionary [online].* Retrieved from https://www.merriam-webster.com/dictionary/fracking

Gaard, G. (2011). Ecofeminism Revisited: Rejecting Essentialism and Re-Placing Species in a Material Feminist Environmentalism. *Feminist Formations, 23*(2), 26.

Garber, E. (2013). Craft as activism. *The Journal of Social Theory in Art Education, 33*, 53-66.

Garner, J. D. (1999). Feminism and Feminist Gerontology. *Journal of Women & Aging, 11*(2-3), 3-12. doi:10.1300/J074v11n02_02

George, J. J., & Leidner, D. E. (2019). From clicktivism to hacktivism: Understanding digital activism. *Information and Organization, 29*(3), 100249.

Geoscience Australia. (n.d.). Great Artesian Basin. Retrieved from http://www.ga.gov.au/scientific-topics/water/groundwater/gab

Glazebrook, T. (2005). Gynocentric eco-logics. *Ethics & The Environment, 10*(2), 75-99.

Gough, A. (2013). Chapter 35 Researching Differently: Generating a Gender Agenda for Research in Environmental Education. In *International handbook of research on environmental education* (pp. 375-383): Routledge.

Gough, A., Russell, C., & Whitehouse, H. (2017). Moving gender from margin to center in environmental education. In: Taylor & Francis.

Gough, A., & Whitehouse, H. (2019). Centering gender on the agenda for environmental education research. *The Journal of Environmental Education, 50*(4-6), 332-347. doi:10.1080/00958964.2019.1703622

Greer, B. (2014). *Craftivism: The art of craft and activism*: Arsenal Pulp Press.

Grubert, E., & Skinner, W. (2017). A town divided: Community values and attitudes towards coal seam gas development in Gloucester, Australia. *Energy Research & Social Science, 30*(Supplement C), 43-52. doi:https://doi.org/10.1016/j.erss.2017.05.041

Hall, B., Turay, T., Chow, W., Dragne, C., & Parks, E. (2006). State of the field report: Social movement learning [Electronic version]. *University of British Columbia*.

Hall, B. L., & Clover, D. (2005). *"Social Movement Learning"* Oxford: Pergammon.

Halupka, M. (2018). The legitimisation of clicktivism. *Australian Journal of Political Science, 53*(1), 130-141.

Hamilton, C. (2017). That Lump of Coal. *The Conversation*. Retrieved from https://theconversation.com/that-lump-of-coal-73046

Hamilton, M. (Producer). (2016, June 20, 2019). On Being a Weaver. Retrieved from https://www.youtube.com/watch?v=kyKkQOWWn3U

Hanson, C. Pedagogical Experiences from Development Work in Gender Equality. *Connected Understandings: Women, Gender and Education*, 24.

Harlum, S. (2012, June27). CSG pond 'dozer rally ends. *The Daily Telegraph*. Retrieved from https://www.dailytelegraph.com.au/news/nsw/lismore/csg-pond-dozer-rally-ends/news-story/825f1c2c9ac95ddae56c9cc417d01b4b

Harris, R. (2020). Old Greens wounds reopen as members vote on directly electing leader. *The Sydney Morning Herald*. Retrieved from

https://www.smh.com.au/politics/federal/old-greens-wounds-reopen-as-members-vote-on-directly-electing-leader-20200422-p54m5r.html

Hibbard, W. (2003). Ecopsychology: A review. *The Trumpeter, 19*(2).

Hirsch, J. K., Bryant Smalley, K., Selby-Nelson, E. M., Hamel-Lambert, J. M., Rosmann, M. R., Barnes, T. A., . . . LaFromboise, T. (2018). Psychosocial Impact of Fracking: a Review of the Literature on the Mental Health Consequences of Hydraulic Fracturing. *International Journal of Mental Health and Addiction, 16*(1), 1-15. doi:10.1007/s11469-017-9792-5

Hodges, D. C. (1998). Participation as dis-identification with/in a community of practice. *Mind, culture, and activity, 5*(4), 272-290.

Hodgson, N. (2016, 15 March 2016). Mike Baird's anti-protest laws risk turning NSW into Bjelke-Petersen's Queensland, in press. *The Sydney Morning Herald*. Retrieved from https://www.smh.com.au/opinion/mike-bairds-anti-protest-laws-risk-turning-nsw-into-bjelke-petersens-queensland-20160315-gnj4to.html

Holmes, D. (2017). Playing politics with renewables: how the right is losing its way. *The Conversation*. Retrieved from The Conversation website: https://theconversation.com/playing-politics-with-renewables-how-the-right-is-losing-its-way-73351

Holst, J. D. (2018). From radical adult education to social movement learning. In *The Palgrave international handbook on adult and lifelong education and learning* (pp. 75-92): Springer.

Hoskins, B. L., & Crick, R. D. (2010). Competences for Learning to Learn and Active Citizenship: different currencies or two sides of the same coin? *European Journal of Education, 45*(1), 121-137. doi:10.1111/j.1465-3435.2009.01419.x

Hughes, J., Jewson, N., & Unwin, L. (2007). Further developments and unresolved issues. *Communities of practice: Critical perspectives*, 171-179.

Huva, A. (2014). Lessons from the Field: Global Community Organizing Against Fracking. Retrieved from https://climateaccess.org/blog/lessons-field-global-community-organizing-against-fracking

IPCC. (2014). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Retrieved from IPCC, Geneva, Switzerland: https://www.ipcc.ch/report/ar5/syr/

Ireri, B. N., & Omwenga, E. I. (2014). Mobile Learning: A Bridging Technology for varying Learner Entry Behavior. *Journal of Education and Practice, 5*(31), 119-124.

Irving, C. J., & English, L. M. (2011). Community in Cyberspace: Gender, Social Movement Learning, and the Internet. *Adult Education Quarterly, 61*(3), 262-278. doi:10.1177/0741713610380448

Johnson, T. (Producer). (2016). The Ground Beneath Our Hearts - September 12, 2015. [YouTube video] Retrieved from https://www.youtube.com/watch?v=HPh8Rvlp_EM&t=59s

Jouët, J., & unav. (2018). Digital Feminism: Questioning the Renewal of Activism. *Journal of Research in Gender Studies, 8*(1), 133-157. doi:10.22381/jrgs8120187

Kelly, M. (2014). Knitting as a feminist project? *Women's Studies International Forum, 44*, 133-144. doi:https://doi.org/10.1016/j.wsif.2013.10.011

Kent, J. (2016). *Community action and climate change*: Routledge.

Khillar, S. (2020). Difference Between Social Media and Traditional Media *Difference Between Similar Terms and Objects*. Retrieved from http://www.differencebetween.net/technology/difference-between-social-media-and-traditional-media/.

Kia, A., & Ricketts, A. (2018). Enabling emergence: the Bentley blockade and the struggle for a gasfield in the Northern Rivers. *Southern Cross University Law Review, 19*, 49-74.

Kluttz, J., & Walter, P. (2018). Conceptualizing Learning in the Climate Justice Movement. *Adult Education Quarterly, 68*(2), 91-107. doi:10.1177/0741713617751043

Kozinets, R. V. (2015). *Netnography: redefined* (Vol. 2nd). Los Angeles: Sage.

Kraja, E. (2018). Eco-activism: what it is and why it is relevant. Retrieved from https://www.wecf.org/eco-activism-what-it-is-and-why-it-is-relevant/#:~:text=Just%20like%20any%20other%20form,preventing%20damage%20to%20the%20environment.&text=As%20a%20matter%20of%20fact,environmental%20protection%20and%20human%20rights.

Krien, A. (2017). *Quarterly Essay 66 The Long Goodbye: Coal, Coral and Australia's Climate Deadlock* (Vol. 66): Quarterly Essay.

Kydd, A., Fleming, A., Gardner, S., & Hafford-Letchfield, T. (2018). Ageism in the Third Age. In L. Ayalon & C. Tesch-Römer (Eds.), *Contemporary Perspectives on Ageism* (pp. 115-130). Cham: Springer International Publishing.

Larri, L., & Whitehouse, H. (2019). Nannagogy: Social movement learning for older women's activism in the gas fields of Australia. *Australian Journal of Adult Learning, 59*(1).

Larri, L. J., & Newlands, M. (2017). Knitting Nannas and Frackman: A gender analysis of Australian anti-coal seam gas documentaries (CSG) and implications for environmental adult education. *The Journal of*

Environmental Education, 48(1), 35-45.
doi:10.1080/00958964.2016.1249325

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Lipscomb, V. B. (2006). "We Need a Theoretical Base": Cynthia Rich, Women's Studies, and Ageism. *NWSA Journal, 18*(1), 3-12.
doi:10.2979/NWS.2006.18.1.3

Lock the dozer action 'a success'. (2012, June 21). *The Echo*. Retrieved from https://www.echo.net.au/2012/06/lock-the-dozer-action-a-success/

Lothian, S. (Producer). (2017, 19/08/2021). Craftivism now - Craftivism 101. [YouTube video] Retrieved from https://www.youtube.com/watch?v=Bet86jFUpa4

Lothian, S. (2018). *Guerrilla Kindness & Other Acts of Creative Resistance: Making A Better World Through Craftivism*: Mango Media Inc.

Macdonald, B., & Rich, C. (1984). *Look Me in the Eye: Old Women, Aging and Ageism*.

Maddison, S., & Shaw, F. (2012). Feminist perspectives on social movement research. In S. N. Hesse-Biber (Ed.), Handbook of Feminist Research: Theory and Praxis (2 ed., pp. 413-433). Thousand Oaks, California: SAGE Publications, Inc. Retrieved from https://methods.sagepub.com/book/handbook-of-feminist-research.
doi:10.4135/9781483384740

Magnet, S., Mason, C. L., & Trevenen, K. (2014). Feminism, pedagogy, and the politics of kindness. *Feminist Teacher, 25*(1), 1-22.

Mahdavi, M. (2014). An overview: Metacognition in education. *International Journal of Multidisciplinary and current research, 2*(6), 529-535.

Marsh, A. (2017). Art and feminism: Generations and practice. *Artlink, 37*(4), 8.

Martin, B., & Coy, P. G. (2017). Skills, training, and activism. *Reflective Practice, 18*(4), 515-525. doi:10.1080/14623943.2017.1323730

Mayhall, L. E. N. (2000). Defining militancy: radical protest, the constitutional idiom, and women's suffrage in Britain, 1908–1909. *Journal of British Studies, 39*(3), 340-371.

Mayo, P. (1994). Synthesizing Gramsci and Freire: possibilities for a theory of radical adult education. *International Journal of Lifelong Education, 13*(2), 125-148. doi:10.1080/0260137940130204

Mayoh, J., & Onwuegbuzie, A. J. (2015). Toward a conceptualization of mixed methods phenomenological research. *Journal of Mixed Methods Research, 9*(1), 91-107.

McAllister, P. (2014). Women's Pentagon Action. Retrieved from http://activistswithattitude.com/womens-pentagon-action/

McDonald, M. (2015, 23 July 2015). Aloha, Mr Grant. *Mudgee Guardian*. Retrieved from https://www.mudgeeguardian.com.au/story/3231985/aloha-mr-grant/

McGill, I., & Beaty, L. (2001). *Action Learning: a guide for professional, management & educational development*: Psychology Press.

McHugh, M. C. (2012). Aging, Agency, and Activism: Older Women as Social Change Agents. *Women & Therapy, 35*(3-4), 279-295. doi:10.1080/02703149.2012.684544

McKinnon, A. (2014). Knitting Nannas and Vaginal Scarves: Why Craftivism is your new favourite thing. *Junkee*. Retrieved from https://junkee.com/craftivism-is-your-new-favourite-thing/30962

Merriam-Webster. (n.d.). Axiology. *In Merriam-Webster.com dictionary.* Retrieved from https://www.merriam-webster.com/dictionary/axiology

Merriam, S. B., & Baumgartner, L. M. (2020). *Learning in adulthood: A comprehensive guide*: John Wiley & Sons.

Munro, A. (2019). Manifesto. Retrieved from https://www.britannica.com/topic/manifesto

Murray, S. (2010). Taking the toys from the boys. *Australian Feminist Studies, 25*(63), 3-15. doi:10.1080/08164640903499893

New South Wales Government Independent Planning Commission. (2020). *Narrabri Gas Project Hearing Schedule*. Sydney, NSW, Australia Retrieved from https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2020/03/narrabri-gas-project/public-hearing/public-hearing-speaker-schedule/200801-final-narrabri-public-hearing-schedule-combined.pdf.

Newlands, M. (2018). *Environmental activism and the media: the politics of protest*. New York: Peter Lang.

Ngara-Institute. (2018). *Ngara Institute's 2018 Annual Lecture and Australian Activist of the Year Award* [Video podcast]. Retrieved from https://www.ngarainstitute.org.au/videos/

Nicolescu, B. (2014). Methodology of transdisciplinarity. *World Futures, 70*(3-4), 186-199.

Niesz, T., Korora, A. M., Walkuski, C. B., & Foot, R. E. (2018). Social movements and educational research: Toward a united field of scholarship. *Teachers College Record, 120*(3), 1-41.

O'Keefe, S. P., & Brown, R. D. (2014). Knitting Nannas [Motion Picture]. Australia: Frogmmouth Films.

O'Toole, G. (2017). Practice Random Acts of Kindness and Senseless Acts of Beauty. Retrieved from https://quoteinvestigator.com/2017/11/22/kindness/

Ollis, T. (2011). Learning in social action: The informal and social learning dimensions of circumstantial and lifelong activists. *Australian Journal of Adult Learning, 51*(2), 248-268.

Ollis, T. (2012). *A critical pedagogy of embodied education: Learning to become an activist*: Springer.

Ollis, T., & Hamel-Green, M. (2015). Adult education and radical habitus in an environmental campaign: Learning in the coal seam gas protests in Australia. *Australian Journal of Adult Learning, 55*(2), 204-221. doi:http://search.proquest.com.elibrary.jcu.edu.au/docview/170209880 2?accountid=16285

Ollis, T. A. (2020). Adult learning and circumstantial activism in the coal seam gas protests: Informal and incidental learning in an environmental justice movement. *Studies in the Education of Adults*, 1-17. doi:10.1080/02660830.2020.1750828

Onghena, P., Maes, B., & Heyvaert, M. (2019). Mixed methods single case research: State of the art and future directions. *Journal of Mixed Methods Research, 13*(4), 461-480.

Paechter, C. (2006). *Power, knowledge and embodiment in communities of sex/gender practice.* Paper presented at the Women's Studies International Forum.

Peavey, F. (1994). *By life's grace: Musings on the essence of social change*: New Society Pub.

Plumwood, V. (1993). *Feminism and the Mastery of Nature*. London, GBR: Routledge.

Preskill, H. S., & Catsambas, T. T. (2006). *Reframing Evaluation Through Appreciative Inquiry*. Thousand Oaks, CA: Sage.

Rich, A. (2013). *The dream of a common language: Poems 1974-1977*: WW Norton & Company.

Riedy, C., Ryan, R., Ahmed, S., Faure-Brac, A., Fahey, G., McKenna, K., & Daly, M. (2018). *Evaluation of NSW Education Environmental Trust Grants*. Retrieved from Sydney, NSW, Australia:

Rosenthal, E. R. (2014). *Women, aging, and ageism*: Routledge.

Roy, C. (2003). *The Raging Grannies: Meddlesome Crones, Humour, Daring, and Education.* (Doctor of Philosophy

Department of Adult Education, Community Development, and Counselling), University of Toronto, unpublished.

Rudd, K., & Woodroofe, T. (2021). A foreign policy for the climate, Opionion. *The Saturday Paper*.

Saleh, A., & Bista, K. (2017). Examining factors impacting online survey response rates in educational research: Perceptions of graduate students. *Online Submission, 13*(2), 63-74.

Salminen-Karlsson, M. (2006). Situating gender in situated learning. *Scandinavian Journal of Management, 22*(1), 31-48. doi:10.1016/j.scaman.2005.05.005

Scandrett, E., Crowther, J., Hemmi, A., Mukherjee, S., Shah, D., & Sen, T. (2010). Theorising education and learning in social movements: environmental justice campaigns in Scotland and India. *Studies in the Education of Adults, 42*(2), 124-140. doi:10.1080/02660830.2010.11661593

Schuster, J. (2017). Why the personal remained political: comparing second and third wave perspectives on everyday feminism. *Social Movement Studies, 16*(6), 647-659. doi:10.1080/14742837.2017.1285223

Seccombe, M. (2021, April 17). US climate summit to be a reckoning for Morrison, News. *The Saturday Paper*.

Shefer, T. (2019a). Activist performance and performative activism towards intersectional gender and sexual justice in contemporary South Africa. *International sociology, 34*(4), 418-434. doi:10.1177/0268580919851430

Shefer, T. (2019b). Performative activism and activist performance: Young people engaging in decolonial feminist community psychology in contemporary South African contexts. In *Decolonial feminist community psychology* (pp. 143-154): Springer.

Shifman, L. (2014). *Memes in digital culture*: MIT press.

Siemens, G. (2008). New structures and spaces of learning: The systemic impact of connective knowledge, connectivism, and networked learning. *Retrieved on May, 25*, 2013.

Sinton, E. (2021). Fossil Fool Bulletin. Retrieved from https://fossilfool.com.au/about/

Snow, D., Benford, R., McCammon, H., Hewitt, L., & Fitzgerald, S. (2014). The emergence, development, and future of the framing perspective: 25+ years since" frame alignment". *Mobilization: An International Quarterly, 19*(1), 23-46.

Speers, D. (2021). The International Energy Agency's shift away from coal and gas makesthings awkward for the government. Retrieved from ABC News website: https://www.abc.net.au/news/2021-05-20/international-energy-agency-report-shift-gas-coal-government/100150296

Spender, D. (1995). *Nattering on the net: Women, power and cyberspace*: Spinifex Press Melbourne.

State Library of New South Wales. (2012). Country Women's Association. Retrieved from

https://www2.sl.nsw.gov.au/archive/discover_collections/history_nation/agriculture/communities/cwa.html#:~:text=The%20CWA%20grew%20out%20of,a%20grazier%20with%20four%20children.

Stephan, M. J., & Chenoweth, E. (2008). Why civil resistance works: The strategic logic of nonviolent conflict. *International security, 33*(1), 7-44.

Stops, L. (2014). Les Tricoteuses: The plain and purl of solidarity and protest. *Craft design enquiry, 6*, 7.

Tarasov, A. (2016). Knitting Nannas arrested at coal seam gas protest in northern New South Wales. Retrieved from https://www.abc.net.au/news/2016-01-18/knitting-nannas-arrested-protesters-arrested-in-northern-nsw/7096486?fbclid=IwAR3DStic6tHYAdDt4RKRIOlnQ8_OGkKbeHJjSUSp7bCytgB9DDKU733e17Q

Taylor, M. (2015). *Global warming and climate change: what Australia knew and buried... then framed a new reality for the public*: ANU Press.

Thomas, S. (2014, Ausgust 5). Carbon pricing is still the best way to cut emissions, if we get it right, Opinion. *The Conversation*. Retrieved from https://theconversation.com/carbon-pricing-is-still-the-best-way-to-cut-emissions-if-we-get-it-right-29894

Toepoel, V. (2016). *Doing surveys online*. London: Sage Publications Ltd.

Tosh, J., & Gislason, M. (2016). Fracking is a feminist issue: an intersectional ecofeminist commentary on natural resource extraction and rape. *Psychology of Women Section Review, 18*(1), 54-59.

Trentham, B., Sokoloff, S., Tsang, A., & Neysmith, S. (2015). Social media and senior citizen advocacy: an inclusive tool to resist ageism? *Politics, Groups, and Identities, 3*(3), 558-571.

United Nations Human Rights Council. (2021). *Analytical study on the promotion and protection of the rights of older persons in the context of climate change (A/HRC/47/46)*. Retrieved from Geneva, Switzerland: https://undocs.org/A/HRC/47/46

Walter, P. (2007). Adult Learning in New Social Movements: Environmental Protest and the Struggle for the Clayoquot Sound Rainforest. *Adult Education Quarterly, 57*(3), 248-263. doi:10.1177/0741713606297444

Wardle, C., & Derakhshan, H. (2017). Information disorder: Toward an interdisciplinary framework for research and policy making. *Council of Europe report, 27*, 1-107.

Wiesslitz, C. (2019). *Internet democracy and social change: The case of Israel*: Rowman & Littlefield.

Wilińska, M. (2016). Proud to be a woman: Womanhood, old age, and emotions. *Journal of Women & Aging, 28*(4), 334-345. doi:10.1080/08952841.2015.1017431

Wilkinson, M. (2020). *The Carbon Club : How a Network of Influential Climate Sceptics, Politicians and Business Leaders Fought to Control Australia's Climate Policy*. Sydney, Australia: Allen & Unwin.

Wlodkowski, R. J., & Ginsberg, M. B. (2017). *Enhancing Adult Motivation to Learn : A Comprehensive Guide for Teaching All Adults*. Newark, United States: John Wiley & Sons, Incorporated.

Women and life on earth. (n.d.). The Women's Pentagon Action: Unity statement of the Women's Pentagon Action, November 1980,. *Women and life on earth - women in international cooperation for peace, ecology and social justice.* Retrieved from http://www.wloe.org/women-s-pentagon-action.77.0.html

World Health Organisation. (2020). *Decade of Healthy Ageing 2020–2030*. Geneva Retrieved from https://www.who.int/initiatives/decade-of-healthy-ageing.

Yachin, M., & Nimrod, G. (2020). Innovation in Later Life: A Study of Grandmothers and Facebook. *The International Journal of Aging and Human Development*, 0091415020940200.

Yellow Pages. (2020). *Yellow Social Media Report 2020 - Consumers*. Retrieved from https://www.yellow.com.au/social-media-report/

Appendix 1: James Cook University Ethics Committee Approval Letter

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Appendix 2: KNAG 2017 Online survey

KNAG 2017

Researching the Knitting Nannas Against Gas to find out what attracts older women to become a KNAG

Introduction – about this survey

Thank you for agreeing to do this survey about your involvement in the Knitting Nannas Against Gas (KNAG). You should already have seen an information sheet about this research, but in case you haven't, here is a bit about this survey.

The survey should take you around 20 minutes online. Please contact me by email if you have problems doing this and need my help.

My name is Larraine Larri and I'm doing this research as part of my PhD in Education at James Cook University. Very little is known about the ways in which older women become vocal and visible in expressing their concerns about environmental issues like coal seam gas extraction. I'm investigating whether being part of the Knitting Nannas has been a significant learning experience a for you.

If you would be interested in a follow-up interview, at the end of the questionnaire there is an option to leave your contact details.

Doing this survey is voluntary and you can stop at any time without explanation. I would like to assure you that you will not be personally identified. Your responses and any contact details you provide will be strictly confidential. The results from the study will be reported back to KNAG and used in research publications or conference presentations. You will not be identified in any way in these reports or publications.

The survey uses the online survey tool SurveyMonkey based in the USA. This means that the information you give is transferred to their secure server and then I download it to my computer here in Australia for analysis.

The first question of the survey is a mandatory consent form.

Could you please complete this survey as soon as possible, right now would be great! The survey will remain open until the end of June.

Questions with an asterisk (*) are mandatory so you may not be able to proceed if you leave out an answer. If this happens, please enter an answer and you will be able to proceed.

If you have questions or comments, please don't hesitate to contact me by email: larraine.larri@my.jcu.edu.au

With thanks,
Larraine J Larri

* 1. To confirm that you consent to participating as a respondent. Please note: you will not be able to proceed with the survey if you choose not to tick the box.

   ◯ I understand the purpose of this survey is to find out more about my experiences as a member of the Knitting Nannas Against Gas. I also understand that my participation is voluntary; and my privacy and confidentiality is assured. I agree to the transfer of my data to the SurveyMonkey server in the USA. I agree to the use of the research findings for reporting back to KNAG, research publications and conference presentations. I understand that when my information is submitted it will not be possible to identify me or to withdraw the data.

KNAG 2017

Firstly, some information about you

* 2. Location: Which KNAG Loop are you a member of?

* 3. Length of membership: What year did you join the Knitting Nannas?

◯ 2012

◯ 2013

◯ 2014

◯ 2015

◯ 2016

◯ 2017

* 4. Age: Which category below includes your age?

○ 40-44 years

○ 45-49 years

○ 50-54 years

○ 55-59 years

○ 60-64 years

○ 65-69 years

○ 70-74 years

○ 75-79 years

○ 80-84 years

○ 85-89 years

○ 90-94 years

○ 95 and over

KNAG 2017

Now some questions about being a KNAG

This next section is about how you got involved and some of the experiences you've had. I'd like to remind you that what you write is anonymous and confidential.

5. Are you an originator of a Loop, or did you join an existing Loop?

○ I began this Loop

○ I joined an existing Loop

Other? Please describe

[   ]

6. What sorts of activities have you been involved in since becoming a Knitting Nanna?

○ KNAG Knit-ins in public places e.g. outside offices (politicians or mining companies) – space to list some

○ Participation in Rallies with other environmental groups (e.g. Lock the Gate and other Alliances) – space to list some

○ Participation in Blockades to prevent mining or environmental damage - space to list some

○ Attending the KNAG National Conferences

○ KNAG fundraiser events

○ Creating art or crafted graphics or objects

○ Using social media (e.g. Facebook, Twitter) to connect with other KNAG members

○ Using social media (e.g. Facebook, Twitter) to educate others about coal seam gas (CSG), fracking and other environmental issues

○ Other - please describe ...

7. What experiences, if any, have you had with other groups or associations? These may or may not have been related to environmental issues. Please list the groups and briefly describe your involvement.

* 8. Have you ever done anything like this before?

○ Yes

○ No

9. What motivated or inspired you to be a Knitting Nanna?

10. How did you first hear about the Knitting Nannas?

KNAG 2017

What you're learning

This next section is about what you've learnt so far with the Knitting Nannas.
I'd like to remind you that what you write is anonymous and confidential.

* 11. Have you read the Nannafesto?

○ Yes

○ No

12. If you have read the Nannafesto, how has it influenced what you do as a member of the Knitting Nannas?

13. What has excited or surprised you most about being a Knitting Nanna?

14. What sorts of things have you learnt that you didn't know before?

15. How have you used the knowledge you've gained as a Knitting Nanna?

○ I tell friends and family (in person).

○ I talk to strangers I meet when I'm out and about.

○ I give presentations to groups of people.

○ I use social media (e.g. Facebook, Twitter)

Other - please describe ...

16. How important is it for you to network with other Knitting Nannas either in your Loop or in other Loops?

○ not important at all

○ slightly important

○ very important

○ extremely important

Can you please explain why you think this way?

17. What do see as the focus of your Loop this year? What future directions can you see for your Loop in the next 3 or 5 years? *There is limited space for answers so feel free to list ideas.*

Focus Now

Future focus

18. Thinking back, how has your life before becoming a Knitting Nanna helped in what you are now doing as a Knitting Nanna?

19. Based on your experience of being a Knitting Nanna, what would you like to learn more about?

20. Why do you think the KNAG movement has grown so quickly from one Loop in 2012 to over 40 Loops in just 4 years?

21. What 3 or 4 things do you value most about being a Knitting Nanna?

1.

2.

3.

4.

22. What do you your family and friends think about your involvement with the Knitting Nannas?

KNAG 2017

A few background details

---

* 23. What is your Indigenous status?

* 24. What country were you born in?

25. What is the highest level of education you have completed?

* 26. Please describe your current and previous occupation/s, whether unpaid or paid.

* 27. Which of these best decsribes you average weekly income?

28. Which of the following best describes you?

◯ Employed – working full time

◯ Employed – working part time

◯ Not employed – student

◯ Not employed – retired

◯ Not employed – looking for paid work

◯ Not employed – not looking for paid work

29. What is your gender?

◯ Female

◯ Male

◯ Trans / Inter

KNAG 2017

Invitation to a follow-up interview

This next section is an invitation to you to provide your contact details if you would like to do a follow-interview and talk to me about your experiences in more detail.

30. If you would like to do an interview & talk to me in more detail about your experiences please enter your contact details here:

Name	
Email	
Phone number/s	

31. Thank you again for your time and thoughtfulness in completing this survey. This space is for you to comment on this survey or to add anything else you may like to tell me about being a Knitting Nanna.

You've reached the end of this survey! Once again, thank you and best wishes with your activities! regards

Larri
larraine.larri@my.jcu.edu.au

Appendix 3: Activist skills mapping - comparison of Amnesty International, Extinction Rebellion, and Transformative Environmental adult Education

Domains of Identifiable Skills	Amnesty International	Extinction Rebellion	Principles for "Transformative Environmental Adult Education" (Hall et al 2006)
Adult learning processes and critical reflection			Awakening "Sleepy Knowledge" Learning skills Valuing messiness in learning;
Definition of activism	What is activism - definition	-	-
Team organisation, working in groups NVDA activist tactics and strategies	Organising and mobilising for successful activism strategy	Team organisation Mass mobilisation: tactics such as phone call campaigns, rallies, marches, social media campaigns, house meetings and flyposting	Acting and resisting
Enculturation into the movement's values and behaviours	Activism at Amnesty International Australia: values, behaviours, charter	Movement DNA: story, structure, strategy	Recovery of a sense of place Recognition of the importance of biodiversity Reconnection with nature Recognition of historical struggles and resistance
Activist action cycle and roles	Activist journey & circles of commitment: core, committed, engaged, supporter, community	Regenerative cycle	
Strategic thinking	Strategic thinking		Understanding relations of power

Domains of Identifiable Skills	Amnesty International	Extinction Rebellion	Principles for "Transformative Environmental Adult Education" (Hall et al 2006)
Effective communications	Effective communications		
	Structured conversations on campaigns		
Facilitation, networking, community engagement	Public narratives & relational meetings	Meeting and "Peoples' Assemblies" facilitation	Building alliances and relationships
	How to be a genuine ally: diversity, inclusivity, privilege		
Member well-being and safety	Sustainable activism & self-care	Police liaison Emotional and practical preparation for action or arrest Legal rights, arrest watch and recording, legal observer Arrestee welfare: post arrest liaison, court support, police station support Regenerative cultures: learning from nature integrating into social movement	
Social media use and messaging	Using digital tools for activism	Media and messaging: video, Facebook	
Planning and coordinating actions **Strategic thinking and critical**	Events & tactics: Planning and Coordination for distributed action and non-violent	Designing and carrying out actions: key principles of civil disobedience,	

Domains of Identifiable Skills	Amnesty International	Extinction Rebellion	Principles for "Transformative Environmental Adult Education" (Hall et al 2006)
reflection Visual communication graphics making Performative public actions	direct action	how XR's principle and values guide action design NVDA: embedding and de-escalation Arts: printmaking for banners, flags	
Engaging with Police, Politicians, Media	Partnerships & Community Mapping		
	How to engage with politicians		
	How to engage with the media		
Leadership	Activism leadership committee and regional coordination	Future democracy: engaging the community, community assembly – deliberative and participatory democracy	

Appendix 4: List of publications and presentations during the research

Publications

Larri, L. (2015). "Deeds and Words": how environmental education in Australia is active citizenship. *The Social Educator*, *33*, 4-17.
Cited by 2

Larri, L. J., & Newlands, M. (2017). Knitting Nannas and Frackman: A gender analysis of Australian anti-coal seam gas documentaries (CSG) and implications for environmental adult education. *The journal of environmental education*, *48*(1), 35-45.
Cited by 12

Larri, L., & Whitehouse, H. (2019). Nannagogy: Social Movement Learning for Older Women's Activism in the Gas Fields of Australia. *Australian journal of adult learning*, *59*(1), 27-52.
Cited by 10

Larri, L., & Colliver, A. (2020). Moving green to mainstream: Schools as models of sustainability for their communities–The Australian Sustainable Schools Initiative (AuSSI). In *Green Schools Globally* (pp. 61-83). Springer, Cham.
Cited by 3

Whitehouse, H., Colliver, A., Larri, L (2019) Ever wondered what our curriculum teaches kids about climate change? The answer is 'not much' The Conversation, September 19, 2019
> Analytics: 6,740 reads (56.7% or 3,822 from Australia; 8.6% or 579 from UK; 6.8% or 456 from USA); 91 comments; 39 Tweets; and 909 shares in Facebook. The article was republished by Phys.org; Flipboard; Newsify; News Republic; Inoreader; Newsblur and School News Australia (317 views).

Larri, L. J. (2020) "Viva La Nannalution!": Using craftivism to transform crisis into social movement. Demos Journal, Issue 10 – Crisis, http://demosjournal.com/article/viva-la-nannalution-using-craftivism-to-transform-crisis-into-social-movement/

Presentations

Larri, L J and Newlands, M (2014) *Social Media Savvy Environmental Education (EE) and Environmental Sustainability (ES): Implications for Knowledge Exchange and the Research Cycle.* Presentation combining face-to-face and online (Skype) with social media Twitter, Australian Association for Environmental Education Biennial Conference - Research Symposium, Hobart, 2014.

Larri, L J. (2015) *Connecting and collaborating from Manyana to Cairns and Townsville: doing a Professional Doctorate by Distance experiences in HDR learning*

through multiple modalities. Paper presented online at HDR ShowCASE Conference, Townsville, 2015.

Larri, L J. (2015) *Connecting Environmental Education and Education for Sustainability (EfS) with the Future.* Workshop co-presenter with A/Prof Hilary Whitehouse and Angela Colliver, Australian Association for Environmental Education NSW Chapter Biennial Conference, Kurri Kurri, 2015.

Larri, L J. (2016) *Reading the female in environmental activism: Defining Nannagogy: Investigating older women's environmental citizenship learning through the experiences of the Knitting Nannas Against Gas*. Paper presented at the Eco-Feminism, Educators and Climate Change Symposium, JCU Cairns Institute, 2016.

Larri, L J. and Newlands, M. (2016) *Foregrounding a gender agenda in environmental education – Panel Convenor Emerita Professor Annette Gough,* Knitting Nannas and Frackman: A gender analysis of Australian anti-coal seam gas documentaries (CSG) and implications for environmental adult education. Presentation to Australian Association for Environmental Education Biennial Conference, Adelaide, 2016.

Larri, L J. (2016) *Knitting Nannas – Engaging adults in environmental education through activism – 'drop-in' installation with Knitting Nannas.* Installation with information posters, videos and two representative of the Knitting Nannas Against Gas and Greed movement, Clare Twomey (co-originator, Lismore Loop) and Carol Bennett (Gloucester Loop) presentation to Australian Association for Environmental Education Biennial Conference, Adelaide, 2016.

Larri, L J. (2016) *The Epoch is Signed! Discussions in the Anthropocene...what do we need to know?* Workshop co-presenter with A/Prof Hilary Whitehouse and Angela Colliver, Australian Association for Environmental Education Biennial Conference, Adelaide, 2016.

Larri, L J. (2017) *Fighting Fracking Downunder an Older Women's Agenda: 'Nannagogy' - the Knitting Nannas Against Gas (Australia).* Poster presentation session, World Environmental Education Congress Biennial Conference, Vancouver, September 2017

Larri, L J. (2017) *Defining Nannagogy: e-tools researching the Knitting Nannas Against Gas & Greed.* Paper presented online at CASE HDR Conference, Townsville October, 2017

Larri, L J. (2018) *The Importance of Being 'Adult' in Environmental Education: Filling the Gap in Transformational Eco-activist Lifelong Learning.* 14th International Conference on Environmental, Cultural, Economic and Social Sustainability and the On Sustainability Research Network, Sustainability Conference 2018 - The Cairns Institute, James Cook University, January, 2018.

Larri, L J. (2018) *'Viva La Nannalution!': Crafty older women's anti-fracking educative eco-activism - the Knitting Nannas Against Gas and Greed.* Women, Art, and Feminism in Australia since 1970 Symposium, Melbourne, February, 2018.

Larri, L J. (2018) *"Keep Calm – Hug a Nanna!": Strategic essentialism and soothing solastalgia through older women's anti-fracking educative eco-activism – the Knitting Nannas Against Gas and Greed.* Narratives of Climate Change Symposium, Newcastle, July 2018

Larri, L J. (2019) *"Viva La Nannalution!" with the FN-KNAGs: Crafting social movement learning in Far North Queensland*. JCU College of Arts, Society and Education Higher Degree Research Conference 2019 (5-6 November)

Larri, L J. (2019) *"Viva La Nannalution!": Crafting social movement learning with the Knitting Nannas Against Gas and Greed.* What We Talk About When We Talk About Crisis: Social, Environmental, Institutional Symposium 5 - 6 Dec 2019, ANU, Canberra

Larri, L J. (2020) *"Viva La Nannalution": Crafting social movement learning with the Knitting Nannas Against Gas and Greed (KNAG)- Virtual Poster* On Sustainability 16 Annual Conference (29-31 January, Santiago, Chile) https://onsustainability.com/assets/downloads/sustainability/S20-Virtual-Posters_Updated.pdf

Appendix 5: Knitting Nannas and Frackman: A gender analysis of Australian anti-coal seam gas documentaries (CSG) and implications for environmental adult education.

Routledge

Knitting Nannas and Frackman: A gender analysis of Australian anti-coal seam gas documentaries (CSG) and implications for environmental adult education

Larraine J. Larri & Maxine Newlands

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RESEARCH ARTICLE

Knitting Nannas and *Frackman*: A gender analysis of Australian anti-coal seam gas documentaries (CSG) and implications for environmental adult education

Larraine J. Larri[a] and Maxine Newlands[b]

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ABSTRACT

Frackman (FM) and *Knitting Nannas* (KN) are two documentaries about the anti-coal seam gas movement in Australia. *Frackman* features a former construction worker turned eco-activist, Dayne Pratzky (DP), fighting coal seam gas extraction. *Knitting Nannas* follows a group of women also protesting fracking. In this article, we set a challenge to environmental adult educationists to expose gender agendas embedded in environmental education documentaries. A scene-by-scene analysis of these two documentaries through a poststructuralist ecofeminist evaluation reveals there are lessons to be learned because of the repetition of gender blindness in *FM*, whereas *KN* offers potential solutions for greater inclusivity in environmental education. The article concludes with recommendations for community-based approaches in environmental adult education.

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Appendix 6: Nannagogy: Social Movement Learning for Older Women's Activism in the Gas Fields of Australia

Nannagogy: Social movement learning for older women's activism in the gas fields of Australia

Larraine Larri
Hilary Whitehouse

James Cook University

In this paper, we explore the concept of Nannagogy, an innovative pedagogy of informal adult learning enacted by the activist 'disorganisation', the Knitting Nannas Against Gas and Greed (KNAGs). The 'Nannas' are predominantly older women who undertake non-violent direct action using fibre craft, knit-ins, lock-ons, and occasional street theatre to draw public attention to the negative environmental impacts of unconventional coal seam gas extraction ('fracking') and of fossil fuel mining. We identify the characteristics of Nannagogy as a hybrid system of lifelong / later-in-life learning and a complex pedagogy of informal learning that can be understood through social movement learning theory (SML) drawing on Paolo Freire's (1970) original concept of 'conscientisation'. Nannagogy is an act of radical adult education that has its antecedents in feminist collective learning strategies such as consciousness raising as well as the formal education strategies of action learning and communities of practice. Nannagogy is highly effective adult learning practice at the intersection of adult learning theory and social movement theory. Data presented in this paper were collected with active KNAG

28 *Larraine Larri and Hilary Whitehouse*

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 autoethnography. Framing activist adult learning as social movement learning locates environmental and climate justice struggles within lifelong learning practices and enables researchers to better understand the complex processes of informal, situated and often spontaneous adult learning for creating and sustaining movements for social, environmental and political change.

Keywords: *Knitting Nannas Against Gas, social movement learning, Nannagogy, activism, lifelong learning, informal learning, active ageing.*

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