

The 'Good Kiwi' and the 'Good Environmental Citizen'?: Dairy, national identity and complex consumption-related values in Aotearoa New Zealand

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Abstract

Alongside concerns for animal welfare, concerns for land, water, and climate are undermining established food identities in many parts of the world. In Aotearoa New Zealand, agrifood relations are bound tightly into national identities and the materialities of export dependence on dairying and agriculture more widely. Dairy/ing identities have been central to national development projects and the politics that underpin them for much of New Zealand's history. They are central to an intransigent agrifood political ontology. For the last decade, however, they have been challenged by the identity politics of ethical food consumption. This paper explores the ensuing contests and asks how they are reshaping agrifood identities. We draw on interviews with 15 participants in Aotearoa New Zealand who have made dietary transitions that reduce or exclude dairy products. Our aim is not to identify a new post-dairying identity or claim a reconfigured national identity, but to examine the collision of production-consumption values in the context of a dominant place-based food identity. We ask how participants navigate contradictory commitments to becoming 'good environmental citizens' whilst remaining 'good national citizens'. The paper offers insights for examining similar struggles elsewhere and the potential to shift agrifood relations and undermine entrenched political ontologies through ethical food consumption values.

Keywords Dairy · Identity · Patriotism · Environment · Climate change · Values

Introduction

Dairy/ing has been a core dimension of national identity in New Zealand, but this relationship is under challenge from the politics of animal welfare, environmental degradation, and climate change. Relationships between food and identity have been well rehearsed in social sciences literature (e.g. Rosenfeld and Burrow 2018; Mol 2009; Lockie 2001; Cook et al. 1999). However, in this paper, we ask what happens when food identity narratives are disturbed by a

shifting external politics. The paper explores the case of dairy/ing in Aotearoa New Zealand (herein, New Zealand), where consumers are giving up dairy products in response to the environmental damage done by dairying. Our aim is to examine the collision of production-consumption values in the context of a dominant place-based food identity. Interviewing New Zealanders who have made dietary transitions that reduce or exclude dairy products, we explore how they have navigated the contradictions between being good environmental citizens and good national citizens, or 'good Kiwis'. We examine the collisions between projects of national identity and local and global environmental citizenship. The paper offers insights for examining similar struggles elsewhere and the potential to shift agrifood relations and undermine entrenched political ontologies through ethical food consumption values.

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Dietary identities

People have dietary identities that are conditioned by multiple social and individual factors. These range from local



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and global dietary norms (Rosenfeld and Burrow 2018), to place-based social values and expectations (Lockie 2001), as well as individual taste and personal preferences, the materialities of access (income, price, and availability), and diverse personal politics (Sexton 2018). Dietary values are established along an array of multiple practice-based registers of valuing (Heuts and Mol 2013). Practice, politics, and affective dispositions towards food experiences will shape values and dietary identities. In a recent study on vegetarianism as social identity, Nezlek and Forestell (2020), for example, argue that transitioning to a plant-based diet reflects shifts in an individual's values, attitudes, beliefs, and well-being, but also in turn shapes their wider personal and social identities. Dietary practices both create and enact dietary identities, and can reinforce or shape new identities. They can perform a politics of entrenchment or disruption, especially where there exists actionable choice in food consumption.

Dietary identities shape food practice through food norms, affect, trends, fetishes, and rituals (Sutton 2001). At an individual level, dietary identity has been defined as a "food-choice identity – one that shapes how [different people] think, feel, and behave with respect to eating" (Rosenfeld and Burrow 2018 p. 182). As social identities, dietary identities are loaded with social, cultural and symbolic values, and the norms that perform and (re)produce them. They are place and time specific and give expression to shared values and meanings and bind people to places. Food, eating, place, and identity are thus tightly bound (Rosenfeld and Burrow 2018; Carfora et al. 2019).

Dietary identities are often made visible through food narratives that configure and give meaning to individual and/ or collective values and practices and bind eating to placebased identities and to a material politics of place (Cooks 2009). Food narratives can act to map dietary identities to food identities at different scales and the cultural, economic, and political projects that mobilise them. They give form to familiar ideas of food provenance and national cuisine (Monterrosa et al. 2020). However, scaling dietary identities from the individual to the nation can be problematic. Individual food identities commonly conflict with collective food identities, or other politics of consumption. National or other collective food identities can be undermined by politics at different scales, while individual food identities can become a site for politics at different scales. In social psychology these politics are considered as challenges to the 'vicarious licensing' (Kouchaki 2011) under which individuals and their social group commonly share and pursue common goals.

Contemporary environmentally conscious food movements have targeted this politics of vicarious licensing. Mostly focused on meat eating, they have practiced a politics of consumer choice to exhort individuals to make direct impacts on environmental degradation (e.g. Hyland et al. 2017). Notwithstanding the lack of choice for many as a result of cost, cultural factors or access, these initiatives have been shown to have affect and effects in many settings. Canadian research, for example, recognises that environmental ethics and identities play a significant role in consumer decision-making around plant-based meat consumption (Clark and Bogdan 2019). In other work, Fox and Ward (2008) have shown that people will also change their dietary choices and identities to become vegetarians in response to a wider politics to do with concerns about human health and the ethical treatment of animals. While irreducible to environmentalism per se, their findings collected across three countries are related to a politics of environmental ethics (Campbell 2018) and demonstrate the broader point that dietary identities can enact a material politics.

Environmental citizenship

Environmental citizenship is an enactment of collective environmental identity. Barry (2002) claims it is "an attempt to encourage and create an identity and mode of thinking and acting, and ultimately character traits and dispositions that accord with the standards and aims of ecological stewardship" (p. 145). Schild (2016) adds that where citizenship takes responsibility to work toward the common good, the environment is part of the commons, and therefore its protection is a citizen's responsibility. She argues that "citizens have three responsibilities: to work against anything that degrades civic identity and engagement, to remain mindful of individual and collective actions that affect the state of the environment, and to make decisions that promote the common good over individual interests" (p. 21). As with environmental ethics more generally, this argument about environmental citizenship can be extended to responsibility for the rights of non-human living beings such as animals (Baxter 2004; Doherty and de Geus 2003).

Environmental citizenship materialises in different ways, from individual responsibility and action to the cultivation of collective ethics and adoption of political projects at multiple scales. When enacted through personal responsibility and lifestyle choices it assumes that environmental problems can be solved through the "aggregation of individual acts" (Melo-Escrihuela 2008, p. 121). For many critics, however, this behavioural interpretation neither adequately captures the nature of social practice or social change, and will not be sufficient in itself to deliver environmental citizenship. It fails to recognise the role of social, economic and political institutions in shaping collective and individual action, and in turn to hold them accountable for environmental harms and assign them responsibility for initiating and enacting change. Others argue for a renewed environmental collectivism that takes its cue from "the civic commons" - "the institutions, collective memories, social



networks, and skills that enable and inspire individuals to engage with each other in stewarding the common good [requiring] some form of collective imagination" (Reid and Taylor 2003, p. 75). This approach recognises the centrality of collective action, institutions, and responsibility, but also emphasises that environmental citizenship assigns every individual a role to play in promoting sustainability, conservation, and relational well-being of the planet, and rather than being passive recipients of environmental harm. It identifies the possibilities of agency and makes individuals responsible for acting. While not exclusive to individual consumption practices, reflexive consumption through dietary choice (Sharp 2019), can be a central practice of activism for individual, collective, public, private and environmental concerns. It is an essential dimension of environmental citizenship and environmental care more broadly in all settings at any scale and in all food system transitions (Wilde and Karyda 2022). The privileged must accept higher levels of responsibility.

In this article we discuss a deeply-ingrained politics of food-identity that is creating inertia in translating individual environmental ethics into environmental citizenship in New Zealand. Dairy/ing is environmentally degrading and this is recognised by many New Zealanders who continue to eat dairy products. Their dietary identities are embedded in complex political agrifood ontologies that accentuate the challenge of inducing change in ethical food consumption.

New Zealand's dairy/ing, national, and environmental identity politics

New Zealand dairy/ing

Increasing global demand for milk has prompted a boost in production from more than 344 million tonnes in 1961 to 918 million tonnes in 2021 (Food and Agriculture Organization of the United Nations 2023a). New Zealand is a major dairy producer and its largest 'company', the farmer owned collective Fonterra, is the world's largest trader of milk powder across national borders. New Zealanders themselves are considerable consumers of dairy products, as the 3rd highest consumers of milk per capita, globally (Fonterra 2018; Food and Agriculture Organization of the United Nations 2023b). Dairy is bound to the history of nation and national imaginaries and national economy. It contributes five per cent of national GDP and 23 per cent of total export values (Hancock 2021) – 95 per cent of total dairy production is exported (New Zealand Treasury 2021).

The economic centrality of dairy has translated into a pivotal national identity project (Bell 1997), one borne of colonial reformations of the landscape to establish

'empires of grass' (Pawson and Brooking 2008) and reconstruct an "English farm in the Pacific" (Singleton and Robertson 1997 p. 328). Around these unmistakable physical changes, post-war national identities have been constructed around a settler rurality (Campbell 2020; Pawson and Brooking 2008). The green of the dairy pasture, mistaken for naturalness, has been further capitalised on by the country's '100% pure' tourism campaign (New Zealand Tourism 2022). Provenancing New Zealand through these imaginaries is undermined by a set of core contradictions, even when updated to insert adventure and postproductivist landscapes. It contradicts environmental realities and is in conflict with an environmental politics that denounces dairying. The damage to waterways and land (Kirk et al. 2020) are of growing local concern, and the significant greenhouse gas contributions of raising ruminant animals is a pivotal global concern (Naqvi and Sejian 2011). 'Green pastures' are also at odds with a transforming economy that is decentring dairying, undermining the place of the agri-industrial complex in state-society relations (Pawson and Brooking 2008). These narratives also hide a colonial history of land grabs and dispossession to support dairying (e.g. Morris 2009) and fail to recognise the rapid emergence of today's post-colonial society, complete with increasing Indigenous governance and associated narratives of place. The above contradictions reveal the inconvenient truth that dairying production practices (and their endorsement through consumption) cause environmental damage. New Zealand dairy/ing faces myriad political challenges, one of which is being enacted through consumer behaviour.

New Zealand's environmental politics

As elsewhere in the world, environmental citizenship is now a prominent part of New Zealand's politics of responsibility. New Zealand's Environment Report (2019), a biennial report of public perceptions, indicated that greenhouse gas (GHG) emissions and climate change are the most commonly identified global concerns, and the second most highly ranked concern for New Zealand after water quality. New Zealand is one of the poorest performers on GHGs in the OECD and gross emissions per person are high (Statistics New Zealand 2019). As these realities gained purchase with a younger generation and an environmentally concerned government, concerns about GHG increased substantially from 2016–2019 (Hughey et al. 2019). This has put significant pressure to act on both the government and individuals.

With water quality also high on the political agenda, dairy/ing has been in the firing line. Government has adopted a raft of measures to force carbon and methane emission reductions on farmers (Roy 2019), but surveys



suggest that individuals are looking for more interventions to manage the dairy industry's GHG emissions and water quality performance from agricultural intensification and increases in dairy effluent run-off (Kirk et al. 2020). Many New Zealanders increasingly recognise that food production has significant deleterious environmental implications locally and globally (Aleksandrowicz et al. 2016).

New Zealand's dietary identities in the global context

Neill and colleagues (Neill et al. 2008) claim the New Zealand meat pie to be a symbol of New Zealand's ethos of self-sufficiency and independence. It is based on a particular imagination of Kiwi life: pioneering, practical, on-the-move, and meat-eating. The iconic figures of the pie and the pie-eater connect cherished but historical national identities to food practices.

As Proust (2006) famously outlines in his account of a Madeleine, food imaginaries are bound up with norms and memories that can both disguise and perpetuate social realities. Artefacts such as New Zealand's household-ubiquitous Edmonds Cookery Book (Kennedy and Lockie 2018), for example, can become powerful constructions of 'national' food identities, which simultaneously celebrate a post-war settler-colonial food culture whilst largely ignoring Māori food identities. The effect has been to anchor one social reality as national and marginalise the other. If a nation is "an imagined political community", where members are assumed to coexist in presence, association, and agreement but are largely unknown to each other (Anderson 2006, p. 6–7), then identity-oriented food narratives play an important role in imagining and articulating a common past, present, and future.

National identities are embedded in New Zealand dairy brands, which claim, for example, that "farming is a way of life" (Anchor 2022a) and dairy is "the best of everything Kiwi" (Mainland 2022a). Dairy sponsorship is prominent in youth sports (e.g., Anchor 2022b), conservation (Mainland 2022b), and New Zealand's 'Milk-for-School' programme, which was introduced as a world first initiative to improve children's health and make use of surplus milk supply. This programme ran nationwide from 1937 to 1967 (NZ History 2022) and was resurrected by Fonterra in 2013 as an attempt to rebuild public relations and farming's place in national identity. In 2017, national industry body DairyNZ erected a sign in the farming district of Waikato which read: 'Dairy. It's a big thing for New Zealand' (Tulloch 2018). Such associations permeate national consciousness and bear upon both rural and urban identities, linking settler-colonial tradition and identity to its economy and cultural practice, and contemporary longings for national identity (Bell 1997 p. 148).

White and Potts (2008) argue that not eating meat can be interpreted as un-Kiwi. Researching New Zealanders who do not consume meat (analogous to dairy in its associations with 'pastoral, colonial nation-building practice'), they found that refusing to eat meat "may be viewed as a defiant unpatriotic act" (*Ibid.* p. 339) – tantamount to a direct challenge to national identity. Their participants claimed that to be vegetarian was to be disconnected from New Zealand culture and a threat to the "collective sense of national self ... and the foundations upon which their nation's prosperity was – and is still – conceived" (*Ibid.* p. 348). In these terms vegetarians undermine what it is to be a Good Kiwi.

Despite this portrayal of vegetarianism as un-Kiwi, it continues to grow in New Zealand. Roper (2021) estimates that 10 per cent of New Zealand's population followed a vegetarian diet in 2019, while other studies put the figure higher still. A study of vegan New Zealanders in 2018 suggested that 27 per cent of the population maintained a vegan and/or vegetarian diet, an increase of between 6–10 per cent since 2014 (Colmar Brunton 2018; Radio New Zealand 2022). This is just under twice the estimated percentage globally (e.g. Juan et al. 2015; Craig 2009). An increase in veganism highlights an anti-dairy identity, which the Vegan Society Aotearoa attributes to environmental factors, specifically climate change (Ibid.). While there are few international or NZ-based studies that focus on climate-related opposition to dairy consumption, those that focus on meat highlight the extent of opposition to 'ruminant' carbon contributions as well as animal welfare (Hedenus et al. 2014; Frenette et al. 2017).

In what follows we explore connections between dairy-centric imaginaries of nation, the experiences of a set of dairy-reducing New Zealand consumers, and the emergence and active construction of a different collective identity centred on 'good environmental citizenship'.

Methodology and methods

We recruited participants through posting fliers on public notice boards and social media, requesting participants with experience of transitioning to diets that reduced or eliminated dairy. Approval for this study was granted from The University of Auckland Human Participants Ethics Committee on the 26th November, 2018, REF 022418. We carried out 15 semi-structured (largely interviewee directed) interviews, consistent with a feminist, post-structural approach to knowledge construction (for example as conducted by Carolan 2016, and described in Campbell 2016). These interviews took place between January and



December 2019. Participants were between 20-50 years of age. All participants self-selected to participate, and were living in New Zealand's biggest city, Tāmaki Makaurau/ Auckland. While self-selection of participants creates a selection bias (Costigan and Cox 2001), our aim was to collect indicative personal narratives rather than sample for statistical analysis. As Robinson (2014) observes, a self-selection approach for qualitative research can help to address the ethics of selecting participants, but tends to attract those with prior interests who are time-rich, and commonly attracts more women than men. Robinson adds that when sampling in this way, researchers can address sample bias by considering the possible impact on findings and generalisability (Ibid., p.36). In selecting respondents, framing our questions, and analysing the responses to them we began from the position that meaning is inescapably situated and subjective and "generated through interpretation of, not excavated from, data" (Braun and Clarke 2022, p. 201). While we never sought a 'representative' sample, rather a diversity of responses, we consider this later in the paper.

Interviews were typically ~ 60 min long and were carried out at various locations convenient to participants. Interviews usually started with asking the participant to discuss their childhood diet and if and how that differed from their current diet. What followed was a detailed conversation about how participants navigated transitions to different diets that led to a change in dairy consumption, which traversed various ethical, social, environmental, economic and personal health reasons for changes to low dairy/dairy-free diets. The interviews were semistructured, enabling participants to lead the conversation based on what was important to them, and the interview schedule included a mix of descriptive questions, structural questions, and opinion questions (Dunn 2016). Questions centred around their personal motivations for their consumption choices and the challenges that they face, to understand what their answers might mean for food consumption, production, and identity politics.

Interviews were confidentially transcribed verbatim by the research team. Interview transcripts were analysed using a reflexive thematic analysis (TA) methodology and method. Reflexive TA puts the researcher's subjectivity at the forefront, as a useful analytical tool in the 'sense-making' of data (Braun and Clarke 2022). For this research, reflexive TA began with immersion in the literature, then the use of a mix of inductive (data-driven) and deductive (theory-driven) orientation to guide the structure of the interview schedule, and – post-interview – data coding of the interview transcripts. The interview schedule was developed deductively, where prior familiarisation with identity and environmental citizenship theory helped to inform each interview question posed.

The questions served to develop initial 'codes' to unite the observations; For instance, an interview question posed to participants was around practices of responsibility/ ethics – this became an initial 'code'. Sets of codes were later re-analysed for sensemaking of themes, through re-familiarisation with the raw data, returning to literature to 'make sense' of participant data with existing theory, and re-familiarising again with the data. Broad key themes were then assembled. These are discussed below in terms of the tensions of what we have themed as conceptions of 'the Good Kiwi' and 'the Good Environmental Citizen'.

Findings and discussion

Below we examine two key themes developed from the data. The first is environmental identities. Participants discussed their environmental identities in relation to, and oftentimes as the catalyst for, their dietary transition. They often referred to key subthemes of their environmental concerns (including animal welfare), and individuals taking environmental responsibility. We interpreted their perspectives, concerns, descriptions of personal values and experiences as expressions of environmental citizenship. Second, participants routinely spoke of how their environmental perspectives, concerns, and values were in conflict with their social/cultural identities. Their comments outlined what we interpret as the figure of a 'Good Kiwi' who consumed dairy products and supported farmers as part of a commitment to the nostalgia/future of a dairy/ing nation. With these two 'food identities' in mind, participants pointed to social aspects of their dietary transitions that provoked dissonance, especially feelings of social marginalisation in adhering to their environmental values and guilt or other sentiments of unpatriotic practice.

'The Good Environmental Citizen'

Conversations with participants discussed their decisions to transition away from dairy in their diets, and highlighted various environmental drivers for this: concern for climate and other environmental degradation, worries for animal welfare in dairy production, and participants' individual efforts to take on environmental responsibility in the face of perceived government and corporate neglect.

Environmental concerns around dairy/ing

Many participants identified concerns around animal/environmental welfare as drivers in their decisions to shift away



from dairy consumption. Some participants reflected on their conscience with regards to connections between dairy consumption and 'non-human' environments/animals.

"There's the environmental degradation, and then there's constantly impregnating cows and separating them from their babies which must be so distressing, and you don't really think about that until you do." (Participant 8)

"[Concerning] aspects [of] the environment are especially the waterways ... effluent going into the streams and rivers. And also, methane – how that's damaging ..." (Participant 13)

Most often these issues raised seemed to be perceived as consistent with productionism and the industrial mode of dairying that New Zealand's dairy industry has adopted as a successful economic strategy, which one participant named as 'mindless profiteering':

"Everywhere one looks one can see the problems with mindless profiteering. And dairy in New Zealand [is] such a huge industry ... it's so obvious here. I guess you could say the same about logging, I suppose you go to Coromandel and see the scarred hills ... it's just the same thing" (Participant 7)

"It's just expanding to such a big level that its harming animals and the environment" (Participant 15)

Participant 15 reflected explicitly that from an environmental perspective it was the *scale* of dairy production, and its business expansion, which they considered to be problematic rather than dairy production and consumption in and of itself. Participants critiqued the idea that the types of environmental degradation or questionable animal welfare in modern industrial farming mentioned above, align with early ways of farming (or being on/working the land), that New Zealand has built its national identity around.

"It doesn't marry with the New Zealand love of its landscape and outdoors ... but then, yeah, that's the thing with profit, ethics aren't profitable" (Participant 7)

Participant 7 noted that New Zealand's national identity associated with dairy does not align with, and ultimately contradicts New Zealand's "love of its landscape and outdoors". In their discussion is a recognition that where there is seen to be a longing for open bucolic spaces, there is simultaneously a lack of recognition for how these 'natural' spaces have been highly engineered and physically constructed, notwithstanding the *cultural* reconstructions of such spaces to establish the "English farm in the Pacific" (Singleton and Robertson 1997, p. 328). Further, many participant comments acknowledged that the environmental (soil and water contaminant) damage

of dairy/ing certainly appears to clash with identities that subscribe to a 'love' for environment, when operations are at large scales.

Individuals taking environmental responsibility

Given the scale of the dairy/ing industry observed, participants noted a lack of attention from government toward climate and environmental concerns, suggesting that, therefore, the responsibility for environment at least becomes an individual's, or 'someone else's' task. This becomes important where either responsibility is pro-actively assumed by the consumer in light of their environmental ethics, or the government's work-around is to place guilt on the shoulders of consumers despite whatever other convictions or identity politics they hold.

"At this point we are in a crisis so most governments are saying that something has to be done but it's never reducing agriculture. It's putting in a carbon tax or putting in a you know whatever else ... Instead of stopping the practice it's 'how can we just put it off a little bit longer' or 'how can we work our way around it'" (Participant 10)

Participant 10 rationalised their dietary transition away from dairy by suggesting that in the absence of government action a good environmental citizen must hold to their personal ethics to do something about the problem. However, they also recognised that doing so can release government and other social groups (including farming organisations) from their responsibility to lead a transition. Their comment echoed Goodman et al.'s (2020) observation that climate concerns are "shaped, governed and contested through wider social, economic and political systems" (p. 3) that may simultaneously promote and/or inhibit development of sustainable practices. We see here an encouragement of individual and collective environmental responsibility and citizenship in consumption behaviours, in part because there is little happening from the top down. The participant did not recognise the contradiction that their action may in fact reinforce the status quo in regulation, legislation and 'big P' political will, which several critics dub the neoliberalisation of ethical consumption to highlight the way that consumer choice is commonly treated as a substitute for a deeper environmental citizenship (Melo-Escrihuela 2008).

Nonetheless, many participants cited concerns around power imbalances between government, prominent dairy corporations, and local farmers who produce dairy products. They expressed concern for farmer economic and social wellbeing. Participant 11, for example, expressed the views that "farmers are feeling extremely concerned – they are feeling very targeted at the moment". Our participants



assigned responsibility for continued environmental failures of farming to a collective, particularly to big business and its links with government – the large national scale actors that set regulation and industry institutions and shape national identities, reiterate myths, and sustain dairying nostalgia.

Not all participants drew a straight line between large interests and continued environmental deterioration. Participant 2, for example, outlined a more nuanced account of responsibility and accountability in which the farmer is the financial and social victim but the big power is responding to environmental ethics and their politics:

"Fonterra's sort of done all sorts of things to improve ... but it feels like it's to the detriment of the shareholders who are the farmers who are doing all the work and producing all the milk and don't really get that return on investment and security and it feels like a lot of farmers are under a lot of stress financially" (Participant 2)

The quote is revealing. It empathises with the figure of the distressed family farmer that is used in some conditions as an element of dairy's legitimatory narrative. The participant is decentring the farmer from the national rhetoric that is causing participants to navigate through their food identity crisis, recognising that the family farmer is situated in a dairy industry complex dominated by big capital (Ouma 2020), participant 2's reflection leads us to posit that it is as much social class and power that lies at the heart of the tension between what are in reality discourses rather than lived identities of the 'Good Kiwi' and the 'Environmental Citizen'. We will return to this point later.

Deviating from the norm in the name of environmental citizenship involved a substantive investment of time and effort to support participant choices and ultimately their food-identity. Several participants gave the impression that the cost (of relationships, time, energy, money) in making 'good' choices in consumption by transitioning away from dairy in their particular social/familial/economic environment was a constant struggle. In some cases it led to consumption transgression, while for others it led to self-doubt in a context where there was little collective commitment or other affirmation of their environmental citizenship and its personal costs. Instead they faced contradictory information, little indication of any impact, and a more general social resistance.

"I think you really need a PhD in all these environmental things to understand. But ... you know, you think you're doing a good thing ... you don't know whether you're doing the best thing for the environment" (Participant 12)

"I feel like ((long pause)) being vegan, it is a lot of work in terms of finding out about the food, going to certain places to buy the stuff that you can have, so much research and time and energy and sometimes money too that it's so much easier not to" (Participant 3)

For Participant 1, abstaining from dairy altogether was the answer to her ethical dilemmas. Instead of having to make multiple, discrete environmental/animal ethics decisions she avoided 'the problem', as she saw it, by not consuming animal products at all.

"In terms of worrying about where it has come from and are those animals treated more ethically ... what's better for the environment, this farm or that farm or whatever. It ... it's just all too hard" (Participant 1).

Despite their personal convictions to adopt a reduced-dairy diet as part of a commitment to environmental citizenship, many participants experienced a clear cognitive dissonance around their choices. It seemed that for most participants, their efforts were pitted against the affective force of a national dairy-centric identity.

'The Good Kiwi'

Conversations with participants provoked implicit and explicit references to an overarching perception of a national identity (the 'Good Kiwi'), which plays out as a challenge to the environmental citizenship of their dietary choices in two ways: First, as a treasured reflection of the myth of a proud national dairy producing and consuming nation; and, second, as an invocation to consume dairy because that is what real New Zealanders do. Significantly, the Good Kiwi does not widely criticise the 'farming complex' for its transformation of the biodiversity of ecosystems, the geomorphology of waterways, the relations of Indigenous societies, or for its legitimatory discourses that dominate national politics and justify multi-generational power relations. Rather, the Good Kiwi is one who recognises a national debt to the farmer, who is also a Good Kiwi. In this section we examine participants' feelings about dairy consumption as a form of national identity and as a patriotic practice, reaffirmed through nostalgia, and ritual consumption.

New Zealand is a 'dairy/ing nation'

Amongst participants there was a sense that New Zealand has a reputation and 'brand' as a dairy nation; that dairy is a prominent part of New Zealand's national identity as seen here and elsewhere. Participants who had travelled or lived overseas also described how foreigners associated New Zealand with dairy production and consumption:



"China is one of the biggest importers of New Zealand dairy products, especially milk powders, so there's certainly a construction around ... you know, the importance of it and the advertising for it is so dominant" (Participant 3)

"I remember when we ... met somebody and they're like 'oh you're from New Zealand – good butter'" (Participant 8)

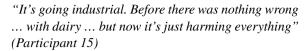
Participants in our study recognised that urban and rural communities experience 'national identity' borne expectations to support dairy and/or consume differently. Participant 5, for example, used the example of her own rural background to emphasise the links between being a Good Kiwi and dairy/ing. She argued with empathy that those in rural areas are more attuned to rural livelihoods and everyday experiences of farms and farming, and to the challenges presented by making livelihoods in dairying. They have *long* worked hard, to produce the nation. For Participant 10, failing to recognise this as an environmental citizen would demonstrate a lack of solidarity—not just with a national identity but also the lives and livelihoods of family and friends who were 'Good Kiwis'.

"I think if I were to go to my grandparents and say oh, I am actually signing a petition to, I don't know, shut down Fonterra' they would be really really upset with that because that's their employer and that's the employer of so many of their friends" (Participant 10)

From the rural to the urban, milk production and consumption establish material and ideological connections to the dairy industry and New Zealand as a nation, past and present. Our participants were positioned differently within the networks of values, relationships, and experiences established by these connections. Some recognised the power relations that forged these connections and distinguished between the toils, risks, and commitments of individual farmers and 'Big Dairy' as a set of corporate, globalised and capitalist relations. One participant formed an explicit connection between the dairy economy and dietary choices and norms:

"I know a lot more vegans in Canada than I know in New Zealand because our [NZ] economy is so highly tied in with the agriculture industry." (Participant 10)

For Participant 10 among others, a 'Good Kiwi' was one who challenged these relations and rejected the apparent conflict with their environmental citizenship. Others focused attention on the lives and livelihoods of individual farmers, developing an empathy that was part of being a Good Kiwi and requiring them to temper their environmental citizenship. All, however, expressed disdain for large-scale industrialised dairying:



While Participant 15 missed or avoided the foundational relationship between industrial agriculture and the national formation that the Good Kiwi is supposed to represent, Participant 6 recognised the time and place specificity of identity formation when it comes to the Good Kiwi. They highlighted the dissonance between the industrial version of dairy and New Zealand's other identity projects and reputations.

"So, it is a national identity, but maybe industrial farming doesn't align with that as much as it would like to" (Participant 6)

Most of the participants suggested in a similar vein that the New Zealand government and the dairy industry itself should have strong motivations to secure their reputations and markets in changing times by enacting their commitments to sustainable environments and healthy societies. Several participants emphasised the failures of big dairy to live up to these commitments. Participant 11 exclaimed that the dairy industry invests in 'huge marketing across New Zealand' and that 'the marketers do their job well'; while Participant 3 insisted that Fonterra use their financial and promotional power to normalise a glass of milk a day but do not consider what this means for the environment.

These and other participants recognise how national economic imperatives based on primary production are woven into everyday mundane practices that pervade the notion of the Good Kiwi. They suggest two lines of possibility emerging from the tensions between the Good Kiwi and the good environmental citizen. First, adopting practices consistent with their environmental pledges and their advertising campaigns and promotional programmes ought to bind big dairy and government to a corporate environmental citizenship. And second, from the opposite direction, environmental citizenship ought not to avoid opting out of generative confrontations with everyday experiences of dairying. Dissent and protest ought also to involve recognition of the complexity of history, the recognition of livelihoods, and empathy for farmers. It ought to involve a reworking of what it is to be a Good Kiwi.

Real Kiwis consume dairy

There was a general sense amongst participants that dairy consumption is deeply ingrained in New Zealand's dietary identity, and rurality more generally. Childhood eating experiences often include dairy, as encouraged through government 'health' signals and school schemes, and regular family dietary practices. Several participants



described New Zealand families that consumed dairy as typical 'New Zealanders', or, typical 'Kiwis'—what we might rephrase as 'real' or authentic kiwis. Others described how dairy is deeply ingrained in New Zealand dietary culture:

"In our New Zealand culture it's very ingrained ... you know cheese toasties, and you have sandwiches with butter on them, and you have milk with your Weet-Bix or your cereal. You drink milk ... and yoghurt, and sour cream" (Participant 6)
"... and so that's what you did, you ate dairy if you were a New Zealander" (Participant 1)
"... it's something, as a Kiwi, we're brought up with" (Participant 2)

These identity dimensions of dairy consumption are also expressed through participants' accounts of their own cultural practices, memories and nostalgia. Several participants recounted experiences of family meals with dairy and the place of dairy in the affective atmospheres of food experiences that speak to tradition and ritual (Sutton 2001):

"The nostalgia of it. It was, I think, because of my grandparents. It [eating particular foods with dairy] was still ... like a Sunday morning tradition." (Participant 10) "Christmas is the big one for me too because ... some of my aunties are incredible bakers [with dairy] and that's a big part of how they show love ... Not being able to partake in that kind of ritual I think is apparent." (Participant 8)

"The way [family] want to show their generosity [is] a lot of times ... through cooking ... and that's difficult. You don't want to offend someone who's gone to all of this effort to try to show you their generosity" (Participant 4)

These experiences position dairy-full food experiences as part of an exchange of 'love' or 'generosity' that are then locked into memory. Respondents suggest that those exchanges and their meanings may be lost or damaged by eliminating or problematising dairy in rituals. Participant 10 went on to say that such is the place of dairy in those exchanges, without it "I think I would have felt like I missed out on something" – perhaps a shared family and cultural experience. The strength of these emotional connections to eating dairy is reflected in Participant 3's interpretation of their decision to go dairy-free as "self-sacrifice" for collective benefit and care. Echoed in different words by other participants, the nature of the sacrifices ranged from abstaining from pleasures such as taste, to connection to family and friends through shared food, and time and monetary costs. As Participant 11 reflects:

"Christmas was one of those times ... I think the first couple of years of me trying to refrain from having so much of that [was hard] because it wasn't that I hated the taste of it or anything like that, it was that I had made these environmental choices" (Participant 11)

In some instances, personal sacrifice of not eating dairy for collective benefit was in tension with other forms of identity politics such as eating with care. Communicating a decision not to eat a shared meal or asking for special consideration is problematic and can erode the meaning of gestures of generosity and/or complicate them by imposing unexpected or unwanted burdens. Misunderstandings can create rifts with family members or friends:

"[My grandparents] would ask me lots of questions and kind of try and fight with me about it." (Participant 10)

To avoid such conflicts, participants talked of difficult conversations, instances of pretence around eating dairy, and even the guilt of consuming dairy to avoid tension, awkward questioning, imposing burdens, or the embarrassment that comes from any of these 'solutions':

"I had a birthday party [thrown for me]... and the whole table was laden with food that I couldn't have ... which was really hard for me because I loved the food. But I tried to – you know, without saying to people 'oh yeah yeah I'm on this diet' because then you get all the questions – just pretend to eat ... the social aspect was really hard" (Participant 12)

"I think it was a combination of guilt, having to think about where my boundaries were, every time I was breaking or stretching the ones that I had at home. And also explaining to other people just became complicated" (Participant 9)

Several participants linked consuming dairy as national identity to dairy/ing as national identity by referring to feeling *un*patriotic by not consuming dairy. Participant 5, for example, described their discomfort at giving up an individual commitment to the collective national identity of dairying. In effect, they internalise the same sense of being unpatriotic that White and Potts (2008) describe in finding that New Zealanders who chose not to consume meat were considered unpatriotic by meat-consuming New Zealanders:

"The dairy industry in New Zealand is really big, and it's one of our main exports ... it's a huge thing here, and it feels a bit strange I guess to be a proud New Zealander and I guess in a way not supporting one of our biggest exports and biggest industries ... Not supporting it whatsoever and taking a step away from that it feels weirdly unpatriotic" (Participant 5)



Conclusion

The paper has examined dairy/ing as a contentious national food object/practice and the relationship between the environmental politics of food consumption and production and food-centric identity construction in New Zealand. Our study explored the experiences of participants in New Zealand who have made dietary transitions that reduce or exclude dairy products. We found that our research participants reduced or eliminated their dairy consumption in response to an environmental responsibility, which we argue can be understood as environmental citizenship. Participants perceived their environmental citizenship to represent a challenge to a national dairying identity and in turn to being a 'Good Kiwi', at least in collective terms and in the eyes of others. However, their experiences suggest that food or dietary identities are more complicated. We draw several insights from this observation.

First, the participants perform their fears of an identitydisrupting environmental politics without routinely testing them through encounters in a rapidly changing world in which environmental citizenship is being written into national identity - albeit tentatively in dairying. While participants asserted that dairy lobby groups and interested corporate and state actors energetically resist environmental citizenship, others do not. Participants identified and welcomed farmer discourses that embrace environmental citizenship, but did not point to other institutional actors within the state and the wider para-state (consultancies and sustainable business networks) who are at work entrenching forms of environmental citizenship in corporate environments. We would question whether respondents reporting moments and forms of self-censorship fully recognise the wider implications and potential of their citizenship beyond consumer choice.

Second, while pushing against a cultural practice that "challenge[s] something fundamental ... the collective sense of national self ... [and the] foundations upon which the nation's prosperity was – and is still – still conceived" (White and Potts 2008, p. 348), the supposedly opposed food identities of 'Environmental Citizen' and 'Good Kiwi' are more complex and entangled in lived reality than imagined in participant responses. Indeed, we found variable commitment and dissonance around consumption practices, where levels of concern and commitment seem tied tightly to the scale and power relations of the way that dairy/ing in New Zealand is perceived.

Third, we must issue a caution around these findings, in that we need to be attentive to who is doing the (re)imagining of national identity and who is absenced from the identities and their imagination, and to what end. Contemporary cultural, political, and economic identities in New Zealand are increasingly shaped by questions of indigeneity,

especially those that are associated with the nation. Consciously conceived contemporary identities must incorporate the concerns, values, rights and interests of Māori. To imagine a Good Kiwi or a good environmental citizen in New Zealand must attend to the ensuing complexities, as must the analysis of lived experiences of all contemporary identities. Being a Good Kiwi or a good environmental citizen must now involve doing and thinking in different ways and must also mean different things to only those considered by our participants. None of our participants self-identified as Māori or overtly considered Māori positions. Their views and identity politics cannot be considered national per se. As we observed with respect to the gender imbalance of our sample, our account is of a particular group responding to dominant representations of dairy/ing and of particular readings of the tensions between being a Good Kiwi and a good environmental citizen. Having said this, our account makes clear that dairy consumption practices and associated identity politics are a product of complex, contingent social relations. We should not expect in-group homogeneity.

Fourth, while a more diverse participant base may have allowed us to draw sharper insights, the views and experiences we document do suggest that ingrained identity politics that speak to memory, nostalgia, ritual and place-based identities can create inertia around performing individual environmental ethics and building collective environmental citizenship. By contrast, they also suggest perceptions of government failures to address environmental degradation can add impetus to the formation of an environmental citizenship. While much of the opposition recorded in our survey is enacted through consumer choice and individual preference, we are able to identify the emergence of an antidairy identity around these individualised practices, perhaps heralding a changing set of consumption norms associated with climate and environmental concerns.

Finally, to return to Anderson's (2006) conception of identity, imagining and (re)imagining, it is important to recognise that culture, despite its importance in shaping national identity, is not an unchanging monolith, but rather a dynamic force that evolves and adapts over time. In our case the bounds of identity (e.g. what to eat), and environmental citizenship (e.g. to take up wellbeing concerns) are dynamic, and our ethics of responsibility need not limit us to think in binaries of 'the Good Kiwi' or 'the Good Environmental Citizen'. These identities appear to have shared dimensions in their bounding of what is 'good'. They are emergent, multiple, simultaneous, and sometimes overlapping in their responses to the ethical, political and relational complexities of dairy production and consumption.

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References

- Aleksandrowicz, Lukasz, Rosemary Green, Edward J. M. Joy, Pete Smith, and Andy Haines. 2016. The impacts of dietary change on greenhouse gas emissions, land use, water use, and health: a systematic review. *PLoS ONE* 11 (11): e0165797. https://doi.org/ 10.1371/journal.pone.0165797.
- Anchor. 2022a. Our quality promise: Fonterra Trusted GoodnessTM. Retrieved from https://www.anchordairy.com/nz/en/about-us/our-quality-promise-trusted-goodness.html. Accessed 1 Aug 2023.
- Anchor. 2022b. Anchor AIMS Games. Retrieved from https://www.anchordairy.com/nz/en/how-we-give-back/anchor-aims-games.html. Accessed 1 Aug 2023.
- Anderson, Benedict. 2006. *Imagined communities: Reflections on the origin and spread of nationalism.* Verso Books.
- Barry, John. 2002. Vulnerability and virtue: Democracy, dependency, and ecological stewardship. In *Democracy and the Claims of Nature*, 133–152. Rowman & Littlefield.
- Baxter, Brian. 2004. A Theory of Ecological Justice. Routledge Research in Environmental politics. London: Routledge.
- Bell, Claudia. 1997. The "real" New Zealand: Rural mythologies perpetuated and commodified. *The Social Science Journal* 34. Routledge: 145–158. https://doi.org/10.1016/S0362-3319(97)90047-1.
- Braun, Virginia, and Victoria Clarke. 2022. Conceptual and design thinking for thematic analysis. *Qualitative Psychology* 9: 3–26. https://doi.org/ 10.1037/qup0000196.
- Colmar Brunton. 2018. Better Futures: Kiwis say not enough being done to keep NZ safe and healthy. Retrieved from https://www.colmarbrunton.co.nz/better-futures-kiwis-say-not-enough-being-done-to-keep-nz-safe-and-healthy/. Accessed 11 Aug 2023.
- Campbell, Hugh. 2016. In the long run, will we be fed? *Agriculture and Human Values* 33: 215–223.
- Campbell, Hugh. 2020. Farming inside invisible worlds: Modernist agriculture and its consequences (p. 224). Bloomsbury Academic. https://library.oapen.org/handle/20.500.12657/58834
- Campbell, Ian J. 2018. Animal Welfare and Environmental Ethics: It's Complicated. *Ethics and the Environment* 23. Indiana University Press: 49–69. https://doi.org/10.2979/ethicsenviro.23.1.04.
- Carfora, V., C. Cavallo, D. Caso, T. Del Giudice, B. De Devitiis, R. Viscecchia, G. Nardone, and G. Cicia. 2019. Explaining consumer purchase behavior for organic milk: Including trust and green

- self-identity within the theory of planned behavior. *Food Quality and Preference* 76: 1–9. https://doi.org/10.1016/j.foodqual.2019.03.006.
- Carolan, Michael. 2016. Adventurous food futures: Knowing about alternatives is not enough, we need to feel them. *Agriculture and Human Values*. 33: 41–152. https://doi.org/10.1007/s10460-015-9629-4.
- Clark, Lisa F., and Ana-Maria Bogdan. 2019. The Role of Plant-Based Foods in Canadian Diets: A Survey Examining Food Choices, Motivations and Dietary Identity. *Journal of Food Products Marketing* 25. Routledge: 355–377. https://doi.org/10.1080/10454446.2019.1566806.
- Cook, Ian, Philip Crang, and Mark Thorpe. 1999. Eating into Britishness: multicultural imaginaries and the identity politics of food. In *Practising identities: Power and resistance*, 223–248. London: Palgrave Macmillan UK.
- Cooks, Leda. 2009. You are What You (Don't) Eat? Food, Identity, and Resistance. *Text and Performance Quarterly* 29. Routledge: 94–110. https://doi.org/10.1080/10462930802514388.
- Costigan, Catherine L., and Martha J. Cox. 2001. Fathers' participation in family research: Is there a self-selection bias? *Journal of Family Psychology* 15: 706–720.
- Craig, Winston J. 2009. Health effects of vegan diets. *The American Journal of Clinical Nutrition* 89: 1627S-1633S. https://doi.org/10.3945/ajcn.2009.26736N.
- Doherty, Brian, and Marius de Geus. 2003. Democracy and Green Political Thought: Sustainability, Rights and Citizenship. Routledge.
- Dunn, Kevin. 2016. Interviewing. In *Qualitative Research Methods in Human Geography*, ed. I. Hay, 4th ed., 149–188. Oxford University Press.
- Fonterra. 2018. It's World Milk Day!. Retrieved from https://www.fonterra.com/nz/en/our-stories/media/its-world-milk-day.html. Accessed 1 Aug 2023.
- Food and Agriculture Organization. 2023a. Milk production across the world. Retrieved from https://ourworldindata.org/meat-production?fbclid=IwAR2I4y82fsZxHORHLWnsxcoeVKc9mSnMSURqynKD9AMtmttZ54a0GjXSYRU. Accessed 1 Aug 2023.
- Food and Agriculture Organization. 2023b. Per capita milk consumption, 1961 to 2020. https://ourworldindata.org/meat-production?fbclid=IwAR2I4y82fsZxHORHLWnsxcoeVKc9mSnMSURqynKD9AMtmttZ54a0GjXSYRU. Accessed 1 Aug 2023.
- Fox, Nick, and Katie Ward. 2008. Health, ethics and environment: A qualitative study of vegetarian motivations. *Appetite* 50: 422–429. https://doi.org/10.1016/j.appet.2007.09.007.
- Frenette, Erik, Olivier Bahn, and Kathleen Vaillancourt. 2017. Meat, Dairy and Climate Change: Assessing the Long-Term Mitigation Potential of Alternative Agri-Food Consumption Patterns in Canada. *Environmental Modeling and Assessment* 22: 1–16. https://doi.org/10.1007/s10666-016-9522-6.
- Goodman, Michael K., Julie Doyle, and Nathan Farrell. 2020. Practising everyday climate cultures: Understanding the cultural politics of climate change. *Climatic Change* 163: 1–7. https://doi.org/10.1007/s10584-020-02863-7.
- Hancock, Farah. 2021. Who's eating New Zealand?. Retrieved from https://www.stuff.co.nz/business/farming/300350351/whos-eating-new-zealand. Accessed 7 March 2022.
- Hedenus, Fredrik, Stefan Wirsenius, and Daniel J. A. Johansson. 2014. The importance of reduced meat and dairy consumption for meeting stringent climate change targets. *Climatic Change* 124: 79–91. https://doi.org/10.1007/s10584-014-1104-5.
- Heuts, F., and A. Mol. 2013. What is a good tomato? A case of valuing in practice. *Valuation Studies* 1 (2): 125–146.
- Hughey, Kenneth, Kerr, Geoffrey and Cullen, Ross. 2019. Public Perceptions of New Zealand's Environment 2019. https://predatorfreenz.org/wp-content/uploads/2021/06/Public-Perceptions-of-New-Zealands-Environment-2019_2021-01-25-032756. pdf. Accessed 7 Mar 2022.



- Hyland, John J., Maeve Henchion, Mary McCarthy, and Sinéad N. McCarthy. 2017. The role of meat in strategies to achieve a sustainable diet lower in greenhouse gas emissions: A review. *Meat Science* 132: 189–195. https://doi.org/10.1016/j.meatsci.2017.04.014
- Juan, Wenyen, Sedigheh Yamini, and Patricia Britten. 2015. Food Intake Patterns of Self-identified Vegetarians Among the U.S. Population, 2007–2010. Procedia Food Science 4: 86–93. https://doi.org/10. 1016/j.profoo.2015.06.013.
- Kennedy, Anne-Marie, and Maree Lockie. 2018. New Zealand nation-building with the "Edmonds cookery book." New Zealand Sociology 33. Sociological Association of Aotearoa New Zealand: 75–95. https://doi.org/10.3316/informit.7774534833 18196.
- Kirk, Nicholas, Melissa Robson-Williams, Andrew Fenemor, and Nathan Heath. 2020. Exploring the barriers to freshwater policy implementation in New Zealand. Australasian Journal of Water Resources 24. Taylor & Francis: 91–104. https://doi.org/10. 1080/13241583.2020.1800332.
- Kouchaki, Maryam. 2011. Vicarious moral licensing: The influence of others' past moral actions on moral behavior. *Journal of Personality and Social Psychology* 101: 702–715. https://doi.org/ 10.1037/a0024552.
- Lockie, S. 2001. Food, place and identity: Consuming Australia's 'Beef Capital.' *Journal of Sociology* 37 (3): 239–255.
- Mainland. 2022a. The Mainland Story. Retrieved from https://www.mainland.co.nz/our-craft/the-mainland-story.html. Accessed 7 Mar 2022.
- Mainland. 2022b. Yellow-Eyed Penguin. Retrieved from https:// www.mainland.co.nz/yellow-eyed-penguin.html. Accessed 7 Mar 2022.
- Melo-Escrihuela, Carme. 2008. Promoting Ecological Citizenship: Rights, Duties and Political Agency. *ACME: An International Journal for Critical Geographies* 7: 113–134.
- Mol, A. 2009. Good taste: The embodied normativity of the consumer-citizen. *Journal of Cultural Economy* 2 (3): 269–283.
- Monterrosa, Eva C., Edward A. Frongillo, Adam Drewnowski, Saskia de Pee, and Stefanie Vandevijvere. 2020. Sociocultural Influences on Food Choices and Implications for Sustainable Healthy Diets. Food and Nutrition Bulletin 41: 59S-73S. https://doi.org/10.1177/ 0379572120975874.
- Morris, Carolyn. 2009. Land tenure and identity in the New Zealand high country. In *Tracking Rural Change: Community, Policy and Technology in Australia, New Zealand and Europe*. ANU Press. https://doi.org/10.22459/trc.04.2009.05.
- Naqvi and Sejian, 2011Naqvi, Sayeed Mohammad Khursheed, and Veerasamy Sejian. 2011. Global climate change: role of livestock. *Asian Journal of Agricultural Sciences* 3(1): 19-25.
- Neill, Lindsay, Claudia Bell, and Ted Bryant. 2008. *The Great New Zealand Pie Cart*. Hodder Moa.
- New Zealand Tourism. 2022. New Zealand People. Retrieved from https://www.newzealand.com/nz/feature/new-zealand-people/. Accessed 7 Mar 2022.
- New Zealand Treasury. 2021. FEU Special Topic: Medium-term outlook for dairy exports. Retrieved from: https://www.treasury.govt.nz/publications/research-and-commentary/rangitaki-blog/feu-special-topic-medium-term-outlook-dairy-exports. Accessed 20 Dec 2022.
- Nezlek, John B., and Catherine A. Forestell. 2020. Vegetarianism as a social identity. *Current Opinion in Food Science* 33. Elsevier: 45–51. https://doi.org/10.1016/j.cofs.2019.12.005.

- NZ History Ministry for Culture and Heritage 2022. Retrieved from https://nzhistory.govt.nz/end-of-free-school-milk. Accessed 7 Mar 2022
- Ouma, Stefan. 2020. Farming as financial asset: Global finance and the making of institutional landscapes. p. 220. Agenda Publishing Limited.
- Pawson, Eric, and Tom Brooking. 2008. Empires of grass: Towards an environmental history of New Zealand agriculture. British Review of New Zealand Studies 17: 95–114.
- Proust, Marcel. 2006. Remembrance of things past (Vol. 2). Wordsworth Editions
- Radio New Zealand. 2022 Google searches point to Kiwis' hunger for vegan knowledge. Retrieved from https://www.rnz.co.nz/news/national/468529/google-searches-point-to-kiwis-hunger-for-vegan-knowledge. Accessed 13 Sept 2022.
- Reid, Herbert, and Betsy Taylor. 2003. John Dewey's Aesthetic Ecology of Public Intelligence and the Grounding of Civic Environmentalism. *Ethics and the Environment* 8. Indiana University Press: 74–92.
- Robinson, Oliver. 2014. Sampling in Interview-Based Qualitative Research: A Theoretical and Practical Guide. *Qualitative Research in Psychology* 11 (1): 25–41. https://doi.org/10.1080/14780887.2013.801543.
- Roper, Jessica E. 2021. Dietary Intakes and Major Food Sources of Vitamin B12 among New Zealand Adolescent Males and Females. Ph.D. Thesis, University of Otago, Dunedin, New Zealand. https://ourarchive.otago.ac.nz/handle/10523/10672. Accessed 7 Mar 2022.
- Rosenfeld, Daniel L., and Anthony L. Burrow. 2018. Development and validation of the Dietarian Identity Questionnaire: Assessing self-perceptions of animal-product consumption. *Appetite* 127: 182–194. https://doi.org/10.1016/j.appet.2018.05.003.
- Roy, Eleanor A. 2019. Ardern tells New Zealand farmers to cut carbon emissions or face penalties. https://www.theguardian.com/world/2019/oct/24/ardern-tells-new-zealand-farmers-to-cut-carbon-emissions-or-face-penalties. Accessed 22 Dec 2022.
- Schild, Rebecca. 2016. Environmental citizenship: What can political theory contribute to environmental education practice? *The Journal of Environmental Education* 47. Routledge: 19–34. https://doi.org/10.1080/00958964.2015.1092417.
- Sexton, Alexandra E. 2018. Eating for the post-Anthropocene: Alternative proteins and the biopolitics of edibility. *Transactions* 43. Wiley: 586–600. https://doi.org/10.1111/tran. 12253.
- Sharp, Emma L. 2019. The role of reflexivity in care-full food systems transformations. *Policy Futures in Education* 17 (7): 761–769. https://journals.sagepub.com/doi/abs/10.1177/14782 10319874256.
- Singleton, John, and Paul L. Robertson. 1997. Britain, butter, and European integration, 1957–1964. *The Economic History Review* 50. Wiley: 327–347. https://doi.org/10.1111/1468-0289.00057.
- Statistics New Zealand. 2019. Retrieved from https://www.stats.govt. nz/indicators/new-zealands-greenhouse-gas-emissions-publi shed-april-2019. Accessed 7 Mar 2022
- Sutton, David E. 2001. Remembrance of repasts: an anthropology of food and memory. Berg. Oxford.
- Tulloch, Lynley. 2018. An Auto-ethnography of Anti-dairy Vegan Activism in New Zealand. *Animal Studies Journal* 7: 180.
- White, Mandala, and Annie Potts. 2008. New Zealand vegetarians: at odds with their nation. *Society & Animals* 16. Brill: 336–353. https://doi.org/10.1163/156853008X357667.



Wilde, Danielle, and Mary Karyda. 2022. Fostering Education of Environmental Citizenship through Food Living Labs. Environmental Sciences Proceedings 14. Multidisciplinary Digital Publishing Institute: 22. https://doi.org/10.3390/environsciproc2 022014022.

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