Book review symposium: Hugh Campbell: farming inside invisible worlds-modernist agriculture and its consequences

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Review of Agricultural, Food and Environmental Studies (2021) 102:425–433
https://doi.org/10.1007/s41130-021-00157-9

REVIEW ESSAY

Book review symposium: Hugh Campbell: farming inside invisible worlds—modernist agriculture and its consequences

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Accepted: 28 October 2021 / Published online: 17 November 2021

Ronan Le Velly: assembling and comprehending the agency of farms

Farming inside invisible worlds (Campbell, 2021) is an extremely stimulating book that will go down in the history of agri-food studies. Its success lies in Hugh Campbell's analyses of the origins, crises and alternatives to modern agriculture in New Zealand as well as the theoretical references that he uses to address these issues. But, before developing these points, I would just like to say how moved I was by the personal and family history that the author tells throughout his book to illustrate both his analysis and his theoretical stance.

The book opens with Campbell's account of growing up in the 1960s and 1970s on a farm in New Zealand without it occurring to him to question a number of obvious facts about what constitutes a "good farm" or a "good farmer", and even less to challenge an element that was completely obscured in discourse at the time—the colonial history of the country's agriculture. To give an account of this history, Campbell sets out to trace his ancestors or, to be more precise, his ancestors' farms. He retraces the history of four farms set up by immigrants from his family between 1840 and 1860 and 1880 and 1920. In a way that is extremely concrete, with a consistently simple style, he explains how, in less than a century, these farms were agents to appropriate lands that until then had

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belonged to Maori. He also describes another kind of colonisation—the colonisation of nature, radically transforming ecosystems. In order to expand cattle and sheep breeding, it was necessary to expand grazing grounds, generation after generation, by destroying the forests and then draining wetland areas. The chapter devoted to his grandparents' modern farm drives this point home. The ontology of the modern farm, explains Campbell, establishes a boundary between the interior and the exterior of the farm: an interior stripped of the complexity of ecological processes, valuing farmer autonomy and seeking productivity, and an exterior that puts both environmental impacts and consumers out of sight. We thus understand the book's title: The farm's modern ontology makes the colonial history, the ecological process and the food system invisible. It takes the farm inside invisible worlds.

With this family history, Campbell sends a strong and original theoretical message. The issue, he explains, is no longer to consider farms as the consequences of modernisation, colonisation or capitalist movements. On the contrary, it asserts that they have agency and that they are active in these movements. "Farms aren't just the bearers of modernity: they are powerful makers of modernity. They have their own particular kind of political agency that needs to be understood" (p. 12). To support this argument, Campbell makes use of the theoretical frameworks offered by "assemblage thinking" and the "actor-network theory" (ANT). These two references allow him to consider the agency of heterogeneous collectives made up of human, natural, material and narrative entities and to underline the stable yet also unstable nature of the social, depending on the movements to assemble and dismantle these heterogeneous entities. Convincingly, Campbell shows that this kind of approach makes it possible to grasp the extent to which the farms established by the first New Zealand colonisers were the agents for radical re-assemblages of society, the economy and nature. For the different stages in the story he tells, he also shows that each farm is capable of moving towards some futures but not towards others. Depending on the hybrid collectives assembled on the farm, it is no longer possible, for example, to move towards agro-ecological production modes (depleted soils, lost agricultural knowledge).

Campbell also uses this theoretical perspective to understand the crises affecting farming today and the alternative agricultural models that have been developing since the 1980s. Much has already been written on these two issues, including by the author, so it is interesting to see how the theoretical framework he uses allows for a new vision. Campbell explains that his work aims to update an analysis of modern agriculture's crisis caused by the structural changes affecting farmers. At odds with this analysis, he points out that the modern assemblage was in fact more fragile than it seemed: Climate and ecological events have been a cruel reminder to everyone of the agency of natural entities; sustainable farming standards have imposed new ways of appraising farms' performance; Maori populations have evoked their history and reclaimed their rights over agricultural land, and so on. At the same time, New Zealand's farms continue to breed modern ontology, taking productive rationalisation, trade globalisation and pressure on the environment to ever higher levels. The critical and reassembling processes are, therefore, not sufficient to eliminate the agency of modern farms, which remain very powerful in the country's economy.

This presentation of almost two centuries of rural history, measured by the yardstick of farms' agency and the assemblages of which they are made, is entirely convincing. However, there are two avenues that I would like to explore further.

A first line of enquiry for future research concerns the co-existence of farms' different ontologies. The current situation, in New Zealand as in many other countries (Gasselin & Hostiou, 2020), involves the co-presence of huge, ultra-capitalist/technologised/productivist farms and small, diversified farms inspired by the principles of agroecology, organic farms adopting industrial production modes, etc. From the perspective introduced by Campbell, each of these farms should be understood as the result of assemblages that are both local (farm machinery, inputs, crop association, etc.) and global (agricultural research, property rights, commercial trade infrastructure, etc.). But with this in mind, how should we consider the encounter between each of these assemblages? What rivalries or synergies are there between them? The political economy and critical sociology can provide some answers to this point, particularly in terms of grasping power relationships. Assemblage thinking or ANT is far less capable of doing this. Although the theoretical framework put forward in this book enables us to comprehend the diversity of ontologies, it seems less apt for thinking about how they encounter one another.

It would also be interesting to further demonstrate the agency of farms' heterogeneous components. Campbell shows clearly that it is more relevant to speak not of farmers' agency but the agency of farms and their networks. Nevertheless, he shows less clearly how, inside farms, natural entities make farmers act in certain ways. Campbell grasps the importance of uncontrollable natural events (cyclone, landslide, "plague of rabbits") in awareness of ecological disruptions caused by modern agriculture. But, apart from these crises, the rest of the book instead paints a portrait of modern farms that, for better or worse, are able to master ecosystems. Nonetheless, modern agriculture is constantly inhibited by natural processes (Arnold & Loconto, 2020; Dwiartama & Rosin, 2014). Symmetrically, although agro-ecological farms derive their agency from a form of collaboration with natural entities, this does not mean that for farmers, these natural entities are easily mobilised collaborators. Very often, they are uncooperative and unpredictable. Farms that seek to "work with nature" and those that seek to "work against nature" obviously do not share the same ontology. Nonetheless, adopting a "more-than-human" perspective requires an explanation of how, in both cases, farmers are constrained in their actions by ecological processes (Le Velly & Moraine, 2020).

These final remarks in no way challenge the theoretical perspective opened up by Campbell. On the contrary, they are an encouragement to pursue it with enthusiasm!

Annemarie Mol: modes of agri-cultivating

In philosophy, the term "ontology" was coined to indicate the logos, the understanding, of what there *is*—hence the onto. "Ontology" did not indicate what humans may *think* there is, but what there *is*, really, in the real world, out there. The reality out there harboured the objects that the sciences sought to know, but that would always elude even their most astute efforts. *After Kant* the idea was that the categories of

human thought stood between *subject* and *object*. Hence, the sciences could try to approach reality, but never fully represent it.

In Hugh Campbell's beautiful study of agriculture in Aotearoa New Zealand, the term "ontology" does something else. It allows the author to talk about socio-material realities that are being fostered, brought into being in complex practices, that include science and technology. In this context, it is not representation that counts for most, but cultivation. The landscapes of Aotearoa New Zealand have been *agricultivated.* Campbell presents us with detailed histories in which the crucial question about, say, wetlands is not how to best map or measure them. Instead, we learn about the modernist efforts of draining them and the current audacity—of at least some farmers—in taking the drainage pipes out again and allowing plants that thrive on wetness to return. In the self-advertisement of New Zealand as a holiday destination, the country boasts grass covered hills that are grazed by sheep. Campbell details how this particular ontological configuration is a result of, on the one hand, the nostalgic dreams of Scottish migrants and, on the other, easy access to the Commonwealth markets where both wool and lamb chops were in high demand. Before the arrival of the Northern whites, the lower hills were covered with fern trees and other perennials. And the country was not yet named New Zealand (after the *old* Zeeland, a province of the Netherlands). It had a diversity of Maori names that are currently evoked by the single Aotearoa.

Hugh Campbell is trained as a sociologist, but in this book, he reaches beyond that, as he tells stories in which social, physical, technical and vital features of the land go together. This means that as his readers, we learn about soils and crops; tractors and markets; dreams and ideals; and their diverse, intertwined, transformations. In 1973, access to the Commonwealth market was made difficult because Great Britain joined the EU. Rearing sheep was no longer, or barely, profitable. More recently, China has developed a taste for milk, that it is willing to import, which means that farmers have begun, in large numbers, to tend dairy cows. But if this yields money, it also overloads the waterways with cow manure. The excess of nutrients that this brings with it allows algae to thrive while other creatures perish. Such things. The limited rationality of modernist ways of working, that reckon with isolated registers of so-called efficiency, astutely forget about the myriads of overflows and externalities.

Hugh Campbell is a son of the land, a son of the kind that are locally called Pakeha, that is to say a descendant of non-Maori settlers. It is the most moving aspect of the book that he keeps that firmly in view. Instead of posing as one Professor Campbell, an external authority, he tells us (in good Maori fashion) about his ancestors. This means that the diverse farms of Hugh's paternal and maternal (great/great-)grandparents figure in the histories we are provided with. The combination of long-term, widely cast academic experience and situated, personal involvement makes this a truly special book, in which different modes of knowing go together in insightful and compelling ways.

The ancestral farm that Campbell finds most interesting academically and in which he can take most pride as a descendant has two names: Its Pakeha name was *Heather's Homestead* and its Maori name *Marotahei.* Here, one of his male ancestors, a Pakeha, joined forces with a Maori woman. Jointly, they moved between and

combined worlds. Sadly, that experiment was violently disrupted. So too was the ontological variant in which, here and there, for a short while, the earlier inhabitants and the recent colonisers joined forces in ways that were salient to both. This reality erased, another took hold. More and more, Pakeha imposed their idea that land can be owned. In the process, they were the ones who took ownership, and they pushed Maori and their worlds—their ontologies—aside. Subsequently, they then moved from colonial arrangements in which they depended on the Maori they fought, to modernist agricultural arrangements, in which they imposed their techno schemes on the land: fencing, draining, weeding, accounting and marketing. Most of the other farm stories presented in the book offer variants of that modernist transformation: from being grateful to the land for the food that it gives to coercing that land to yield produce.

Hugh Campbell is clearly no admirer of modernist agriculture. However, he does not criticise this in a way that makes it impossible to understand how anyone could have thought it might be a good idea. The ancestors are not castigated. No, this does not mean they are excused. Instead, and this is a truly strong point of this book, they are analysed and delegated to the past. Campbell analyses the modernist dreams that Pakeha imposed on the land as he seeks to escape from them. By getting a good grasp on why things were done in the way they were, it should become easier to move on from there. As a further contribution to cultivating different realities, Campbell also presents us with promising attempts to do agriculture differently. He tells stories of farmers who are currently, in diverse ways, trying to make a living *with* the land, rather than at its expense. Here, Maori ways of living with the land are rekindled and used as a source of inspiration, but they are not purified into a system to hold onto. Campbell does not try to fix the agriculture that may come after modernism into a new set of solid ideals. Instead, he presents situated initiatives: here, a farmer eager to adapt ecological agricultural techniques from elsewhere to Aotearoa New Zealand. There, another who, instead of sending what she grows away via far reaching transport networks, sells it locally, on farmers' markets. And then there is the patch of land that Hugh Campbell is caring for himself and in which, now that his work on this book is finished, he will restore some wetlands.

I could end here, as reviewers often do, by giving a verdict. Yes, this is a good book. Or, no, this book is wanting, in this or that respect. But what a poor way of cultivating academic relations is *that*? As if we were in court; as if a book of more than 200 pages could be caught in less than 2000 words; as if a reviewer should pose as an external authority. Let me instead respond in the style of the book by ending with a personal story. In 2015 I visited Aotearoa New Zealand for a conference on agriculture. Hugh Campbell took a bunch of us on an excursion. We visited a dairy farmer who argued for the use of stables so that less manure would flow out into the overtaxed water. We walked on a beautiful crest, on land that was in the process of being rewilded: The former farmers hoped to make a living from tourism. Campbell clearly had long-term relations with our hosts, and all along—in the bus as well—he provided us with rich explanations. For me, then, reading his book, years later, on the fourth floor of an apartment building in the Netherland, felt like being offered a few added layers of background to that wonderful afternoon. Reading is situated. Hence, I cannot quite guess what *Farming Inside Invisible Worlds* has on offer for

you. This depends on what you are most curious about: coloniality, modernism, agriculture, family history, cows, sheep, fern trees, wetlands, ontologies, ecologies, farmers markets or something else again.

Philip McMichael: reformulating settler/modernist farming's entropy on a globally contentious scale

Hugh Campbell's account of the trajectory of settler farming in Aotearoa New Zealand combines an accessible and personalized narrative with complex analysis of forces at work in the rise and demise of modernist agriculture. Most striking is how the farm, as his unit of analysis, works to enclose land and pastoral family identity, via an ontology at odds with *extant* island socio-ecological relations. This perspective represents "empire" in settlement, foregrounding the override of Māori and landscape ecologies. Campbell's ontological method powerfully reconstructs settler farming as a boundary-making sentiment and enterprise: enabling *New* Zealand to become (for a time) the consummate "British farm" in contrast with prior Aotearoa gardens, until imperial preference disappeared with the UK joining the European Common Market in 1973. Meanwhile, the ontological approach explicates the changing global fortunes of modernist agriculture, with singular farm unit productivism and homogenizing technologies blind to enveloping eco-system dynamics, and rising environmentalist and Indigenous rights politics. These political–ecological dynamics come to erode the sustainability and legitimacy of modernist agriculture. As an exceptional agricultural exporter, New Zealand's predicament symbolizes the imminence of crisis in modernist agricultural political-economic boundary-making.

Not only does Campbell's ontological method provide a meaningful and textured way of capturing the farm unit's cumulative shortcomings, but it is also a platform to nurture scholarly theoretical development. A political ontological theme enables analysis of settler farming's complex human/non-human interactions, as well as world-historical contextualisation. It also complicates political-economic (capital accumulation) theory with analysis of modern science's standardized farm unit as "capital" – generating ecological chaos, and erasing Indigenous life-worlds – contributing to today's agri-food crisis (and indeed new virus exposure).

Campbell's viewpoint is compelling precisely because his unit of observation is the settler frontier, with the farm as his analytical unit: "What is the ontology of the *modernist* farm, and how did farms enact wider elements of *modernity*?" (Campbell, 2021, p. 23). While ostensibly a case study, settler farm boundary-making (fragmenting encompassing eco-systems and related knowledges), foretells a Green Revolution frontier of discrete farming techno-politics, "a segmented world of knowledge, securely lodged inside a powerful ontological boundary" (p. 25). Furthermore, this settler frontier anchored the "imperial" food regime's formation of "food and farming relations that acted to stabilize a global food order around 'settler states'" (p. 39).

In other words, just as offshore slavery plantations acted as early "factories in the field", given European guild restrictions on labour combination (James, 1963), so settler agriculture prefigured the agro-export model that has defined global food

regimes and their complex web of corporate supply chains today (complicated now by pandemic actions). Here, Campbell's choice of unit of analysis, while groundbreaking in its rich accounting for farming developments (including non-human actants), is less well positioned to shift focus from the modernist farm to the imperial relations at large within which capitalist modernity has taken hold of agriculture. Here, the farm unit as "capital" inhabits a "techno-institutional infrastructure"[1] of agro-inputs, food exports, transport lines, traders, processors and retailers, as maturing components of food empires or regimes.

One way to address this is to distinguish settler farms as offshore expansion of the *nation*, including cultural practices and institutions, from Green Revolution agriculture as expansion of *state power*.[2] While the former represented frontiers of Old World settlement, the latter represents the contemporary mode of modern capitalist farming metastasizing globally—originating in the 1940s and spreading via state and philanthropic partnerships from Mexico to India and other post-colonial states and more recently to Africa to induct territorial agricultures into the global capitalist food order (Patel, 2013). Meanwhile, New Zealand has adopted substantial regulatory reforms to reposition its agri-food sector in the WTO free trade regime (Le Heron, 2003). It now competes for overseas markets alongside other corporate and financial interests.

My point is that Campbell offers a historical template for the recent universalisation of corporate agriculture—in its industrial and increasingly digital manifestations. From his farm unit as "capital", we now have a more extensive *and* intensive web of financial relations representing *capital in movement*, across space and time zones. The farm ontology informs his reference to the "silence of markets" (p. 92), where what was produced *on* the farm, *then* disappeared on trucks and railways and ships.[3] As an invisible world to the settler farmer, global food markets nevertheless constituted distinctive ontological arrangements, termed "regimes" with their own hegemonic protocols, international market structuring and techno-politics. The current corporate food regime assembles, coordinates and governs commodity and migrant labour circuits across the world today and is premised on predatory enclosure of land and Indigenous life-worlds; precipitating alternative ontological claims to resilient agro-ecologies via smaller-scale multifunctional territorial farming cultures (McMichael, 2013).

Today's competitive world market compels states to facilitate this process, with its financial attractions and digital fencing, anticipated by World Bank satellite imagery of "unoccupied" lands in the Global South (Narula, 2013, p. 169). Resulting "world farms" are "farmed from a distance, with the aid of satellites and

[1] Ploeg (2020, p. 951).

[2] A useful distinction of modes or moments of imperialism by Arrighi (1978)

[3] The "silence" resembles an inverse commodity fetishism. It evokes Marx's critique of market ontology, where his concept, the "fetishism of commodities", is a methodological directive that complements Campbell's approach, insofar as the farm ontology obscures its socio-ecological entanglements. Initial and some contemporary food regime analysis replicates this (but see McMichael 2013, pp. 132–137). Further, as Campbell notes, environmental politics inspired an audit culture to collapse the distance (fetish) between production and consumption (p. 130).

high-tech instruments, by professionals and entrepreneurs who 'farm' from the comfort of urban settings and IT office" (Leguizamón, 2020, p. 147).[4] The international peasant movement, *La Vía Campesina*, calls this "agriculture without farmers", giving voice to legions of farmers under threat from modernist agriculture, its huge public subsidies and legal machinations.[5] And the recent partnership of the UN with the World Economic Forum to organize a Food Systems Summit escalates this threat—in overriding multilateral food governance, at the expense of the rights, protections and voice of direct food producers world-wide, with "corporate capture" (Canfield et al., 2021). Institutionalisation of corporate control over the discourse and practice of global food governance intensifies the remotely/digitally managed "machine-like ontology" stemming from the settler farming trajectory and manifest in the "agriculture without farmers" slogan. The latter serves both as protest, and as an *analytic* of a world of blockchains, drones, sensors and algorithms set to further render territorial and Indigenous worlds and methods of farming invisible.

Meanwhile, forms of "ontological encounter"[6] unfold in Campbell's vortex of "ecological chaos". They range *from* politicisation of ongoing enclosure[7] of small farming (and Indigenous) systems led by the International Planning Committee for Food Sovereignty, *through* ecological makeovers on farms at various scales for soil/farm resilience (eg, Gliessman, 2016; Ploeg, 2018; Khadse et al., 2018; Philpott, 2020), *to* recent institutional recognition of Agroecology in the HLPE (2019) Report. Such "encounter" can resolve Campbell's problematic conventional/alternative binary, offering a way to answer his critical question: "Alternative to what?" (p. 20). Encounter itself generates "alternatives". This is detailed in his narrative of the ecological and legitimacy crisis of modernist farming's one-dimensional lab science and related dispossessions, energizing postmodern/postcolonial forms of farming and revitalizing territorial/nested food markets. Such issues animate worldwide food sovereignty activism and the so-called *Long Food Movement* (IPES-Food & ETC Group, 2021). As Campbell would have it, such postmodern/postcolonial reworking of farming encourages scholarship both grounded and world historical. In this sense, his monograph offers an indispensable methodological intervention for our times.

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[4] This exemplary account combines political-economic, and actor-network, approaches, in detailing the socio-ecological impact of toxic agro-chemicals on children, whose mobilized mothers epitomize "a way of 'knowing' risk that is different from modern, corporate-sponsored science. It emerges from felt, lived experience of taking care of loved ones, of gathering data constantly on their children" (Leguizamón, 2020, p. 146).

[5] As in India, with PM Modi's recent legal ordinances to power a global agribusiness agenda eroding protections for millions of landless and small farmers, and citizen food-security rights.

[6] Explored in McMichael (2019)

[7] Whether through land grabbing, value-chaining, undermining of seed commons or market predation (cheap food dumping, reduction of public supports, rising agro-input costs), for example.

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