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# Political dimensions – agriculture and class struggle

As a prelude for attempting (in Chapter 8) to sketch out some elements of a practical approach to farming, let us first define a political framework.

### The weight of history: good and bad sides of ‘tradition’

We have just discussed determination-by-negation. How, then, does this apply to the relationship between farming and the ‘wild’, between our modifications of nature and the thing itself?

In fact there is a good way and a bad way of exercising such determination. The good way (which we address in Chapter 8) is just to recognise that, by the fact of our very existence within nature, we are modifying it: it is not pristine but our responsibility is to modify it in the right spirit. The bad way is the modernist or colonialist attempt to break free from alleged ‘*subservience*’ to nature, and hence to escape the ‘tradition’ which maintains us in that subservience. In effect, modernism considers the very notion of awe (wonderment) as somehow dangerous.

In its colonial form, modernisation – in an extension of the sexual images employed in the *Death of Nature*, as analysed by Merchant (1980) – spoke of ‘virgin’ land which indigenous people were not fit to make use of, and which the colonisers had a right/duty to grab (Biel, 2015a). The USA’s founding myths have much about frontiers, pioneers and homesteaders, taming nature (c.f. Coeurdray et al., 2015) while also killing indigenous people who were trying to stop them. We saw that there are two complementary definitions of entropy: timeless stagnancy (too much order and rigidity), and featureless chaos (too little order). In a sense, *both* these determinations were imposed, by the colonial/

modernist/industrial-urban project, upon the indigenous 'other'... an 'other' from which that project sought to escape, but which it was condemned to harbour always, sublated in its bosom, the detested guarantor of its very identity. From this, sustainable farming will eventually break free as a negation of the colonial/modernist negation, ready to take us back/forward to sustainability.

An aspiration to learn from indigenous/traditional approaches is visible in many of the 'movements' (sets of principles) which have been proposed as pathways to sustainable farming. These could include agroecology, natural systems agriculture, permaculture, low impact sustainable agriculture, regenerative organic agriculture, biodynamics, the Fukuoka system and more.

As a guide to approaching these, I would suggest the following three principles:

- [1] In a technical sense, even while each may have its own particular areas of strength (for example, in permaculture we might highlight *rift and margins*; in agroecology *farming in society*, in biodynamics *microbial stimulation*, in Fukuoka *the critique of work*, in natural systems agriculture *working with evolution*, etc...), they nevertheless share a common core. The author's practice has been a pick-and-mix approach without being dogmatically confined to one particular 'ism', and if it's true they are fundamentally compatible, the result should not be eclectic in a bad way.
- [2] They all owe a debt, even if not always fully acknowledged, to the historical legacy of indigenous systems, and in fact, this stuff is just what many indigenous farmers were/are doing anyway without necessarily calling it by the name of some methodology. Alfred Howard was inspired by Chinese tradition in rediscovering organics (Howard, 1943). There was a very important counter-modernist re-appraisal of traditional farming, drawing particularly on Africa, in the exemplary work of Paul Richards (Richards, 1985). Permaculture originated in Australia, taking significant inspiration from aboriginal societies (Holmgren, 1990). Native American legacies constitute an amazing source of inspiration, upon which we draw extensively throughout this book. Much of the sustainable methodology can therefore be derived from a mixture of historical, anthropological and archaeological studies of these experiences but, above all, through a respectful learning from contemporary grassroots farmers and

indigenous movements, insofar as they articulate their own definition, *and, most importantly, ongoing development*, of traditional practices.

- [3] The technical side cannot be divorced from the politics, and this is precisely where some of the ‘isms’ fall short. The author attended the International Permaculture Conference in London in September 2015 without hearing any mention of social movements for food sovereignty or land rights. This is why we are placing the current chapter – whose theme is more political – *before* discussing the technique.

A key aspect of our dialectical perspective is the unity of opposites, and it is essential to apply this to what we call ‘tradition’. Just because we may hate the modernist slander of ‘tradition’, it does not mean we uncritically take on board everything: there is a duality within it. As I will now argue, this is relevant to the way we relate to nature and the wild and, in particular, how we intervene in it.

Some traditional societies were more stratified, centralised and *ruled*, in the sense of an order imposed from the centre-top. In contrast, I’m tentatively employing the term ‘deep tradition’ to represent something closer to the indigenous principle where order is emergent from the panarchy. Even if, as we will argue in a moment, the concrete reality of pre-capitalist (pre-colonial) societies was usually *mixed*, nevertheless the distinction is useful analytically, most importantly because the aspect of society which was more ‘ruled’ is the one geared to organising *work* and this in turn has big implications for how we intervene in nature, as we will now see.

## A critique of work

Let us consider, conceptually, ‘work’ and its relation to energy. Obviously, food systems must supply more energy in calories than they absorb in labour: a hunter could not spend more energy chasing an animal than is obtained from eating it. Traditional farming systems necessarily obeyed similar constraints: their calorific input-output ratio was strongly positive (Glaeser and Phillips-Howard, 1987). At the simplest level, this gives us one rationale for a low-work system. But the argument for reducing energy input also goes deeper.

It is true that much of what is wrong with contemporary food systems is the waste and pollution *ejected from* them (nitrogen runoff;

greenhouse gases). However, what is ejected is actually a degraded form of what flows in. To express this in thermodynamic terms (c.f. Dincer, 2002), the inflow represents an ordered and useful form of energy/matter (sometimes called ‘exergy’ or ‘negative entropy’), which is degraded into entropy when it is used up. This connects with the theme of transformation or metamorphosis, an important representation of ‘flow’. Therefore, the solution to many systemic problems could be cutting input.

In today’s mainstream paradigm the input is fossil fuels and chemicals, but even physical work like digging is actually just another form of energy. The transition to carbon simply occurred when the exploitation of physical labour could no longer meet industrial energy demands (c.f. Mouhot, 2010). So I would argue that performing too much work on the soil, even digging or ploughing without fossil fuels, is reflected in entropy. This happens because the free energy of self-organising complexity is lost when we intervene aggressively, mashing up grazing organisms or mycorrhizae and destroying soil structure, and thereby causing water runoff, leaching of nutrients, and greenhouse gas emissions.

The fundamental argument for no-till farming (c.f. Dowding, 2007) is that you operate alongside the soil’s own properties, not against them. Empirically on my allotment-site, most people waste both time and energy digging and ploughing, causing loss of fertility; they then inject further inputs in the form of fertiliser to compensate. In the worst case they use petrol-driven hand-held ploughs and chemicals but, even where labour is manual and fertiliser organic, the same logic applies: the more work you perform, the worse the result. Many people abandon their plots because they do not have the time/energy to do all work they imagine is needed. If we simply realise that we will get better yield with less time/work, this could open a new horizon of small-scale high-productivity farming, leaving people space to maintain a diverse livelihood strategy.

The above is not an exhaustive demonstration of the benefits of no-till, which are manifested particularly with respect to climate (e.g. Wang, et al., 2011; Davin, et al., 2014), an issue we will develop in Chapter 9. The point here is just to stress the ‘less-is-more’ argument.

Of all the modern sustainability approaches, Masanobu Fukuoka’s ‘do-nothing farming’ (Fukuoka, 1978) most strongly highlights the negativity of work. But it is important to emphasise that ‘do-nothing’ does not mean non-action: the reduction of *work* (physical energy) is coupled to an increase of knowledge. Hunter-gatherers possessed immense funds of knowledge (Goonatilake, 1984, p.4); they ‘did nothing’ to nature but were in effect harvesting knowledge. In

farming, while physical work (e.g. ploughing) is negatively related to the free energy of the complex soil system, knowledge is positively related because it strengthens the soil's self-organising capabilities. It achieves this by, for example, mulching, using such forms of biomimicry as intercropping, or in the case of Fukuoka's system broadcasting seed-balls containing many varieties of seed and allowing nature to decide which would germinate where.

The implications of this argument are by no means confined to a critique of capitalism; they go right back to the dawn of the so-called agricultural revolution. Wherever centralist/top-down agrarian systems conducted large-scale interventions (irrigation in place of water-conservation, monocropping in place of intercropping, deep ploughing in place of conserving soil structure, plantations in place of sensitivity to micro-characteristics of particular fields), they effectively increased entropy expressed as a deficit of self-organisation.

## How farming structure may relate to yield

On this basis, a hypothesis suggests itself: there existed, among pre-capitalist agrarian societies, some correlation between, on the one hand, farming systems closer to self-organising nature (i.e. the indigenous principle or deep tradition) and, on the other, socio-political systems which were relatively less stratified or exploitative and gave more scope to *societal* self-organisation. Conversely, there is an association between invasive, monocropping systems and class stratification. To explore this fully would be a project in its own right, but it does suggest some interesting lines of enquiry. If it were true, the class dimension could then be expressed in a conflict *between two definitions of organisation*:

- (a) On the one hand, approaches that are not scared of self-organisation, are open to exploring the criticality between order and disorder, and are thus resilient in the sense of being able to self-modify in response to shocks.
- (b) On the other, a centralised, top-down approach where society/production was (is) organised by elites. This relates to our earlier point about trying to make systems predictable by simplifying them and instituting linear chains of command. Such systems need to be organised, and this legitimises the elites whose *raison d'être* is to do just that: if they can do it for farming, they can also do it for society. In a certain sense, class society increases work *because it can*.

Marxism is strong on emphasising the continuity of class struggle across the whole history of stratified modes of production (c.f. Engels, 1970 [1877]), which raises an extremely important point: our ‘new paradigm’ must settle accounts not just with capitalism, but with the entire history of exploitation. This truth is nowhere more evident than with food/land issues, where it would be totally artificial to separate today’s social movements from the millennial span of peasant struggles. The organic movement is much less explicitly political. Nevertheless, it can be argued that alternative agriculture approaches – whether we call them agroecology, permaculture, biodynamics or whatever – are making a *tacit or implicit* political statement whenever they identify with those methods (intercropping, perennial crops, water-harvesting, agroforestry) which are sharply differentiated from the ploughing, irrigation and monocropping more typical of centralised class societies. This implies a dialectical and critical view on tradition which may arguably place the organic movement closer to Marxism than it might realise.

An interesting experimental demonstration that less exploitative systems are more productive can be found in a project initiated by P.J. Reynolds in the 1960s–70s at Butser Farm, Hampshire, England, whereby he replicated pre-Roman Celtic farming practices. The link with intercropping and gathering in Reynolds’ work is striking, in that he highlights the lack of uniform height among traditional strains, while at the same time noting that spontaneous plants become effectively incorporated as a key component in diet (Reynolds and Shaw, 1999). The significant finding is that this experiment obtained yields higher than any achieved in Britain prior to the end of the Second World War (Reynolds, 1985, p.406): in other words, the subsequent imposition of Roman slave plantations and feudalism *led to a decline in yield*. It was only the post-war influx of chemicals and fossil-fuelled machinery which retrieved pre-Roman yields . . . of course in a totally unsustainable way.

Having emphasised the ‘deep time’ of the class issue, we must nevertheless understand key ways in which centralised agrarian societies *did not* complete the rift from nature, and therefore things got qualitatively worse with capitalism.

## Where capitalism made things worse

Firstly, however much traditional rulers substituted work for complexity, this took the form of labour not fossil fuels. Consequently, since the energy of farmers came from the food they themselves grew, the system

could not be in calorific deficit. Secondly, even systems like feudalism did not entirely cancel out local self-organisation but rather compromised with it: elite rule was superimposed on a village system of commons regimes, oral knowledge, seed-selection and experimentation.

If the above was true even under European feudalism – which, following Amin, we could regard as a pretty lousy subset of ‘tributary’ modes of production (Amin, 1980) – it would be even more interesting to look at those non-European societies where elites appear to have subsumed elements of ‘deep tradition’ and generalised them. For example, in the Aztec empire, we find a farming model organised around *chinampas* or raised gardens (constituted by alternating layers of mud and decayed vegetable matter). This approach – which could be an exciting thing to experiment with and possibly contains elements in common with the methodology of *Hugelkultur* (a raised mound comprising various forms of vegetable matter with both quick and slow nutrient release, and differential exposure to light) – seems to have been invented by pre-imperial societies but then been taken over and generalised by the centralised state (Calnek, 1972; Redclift, 1987; Smith, 1996). Many forms of ‘traditional’ agriculture may thus represent a *compromise* between the two modes of organisation (centralist and emergent) to which we referred earlier. Although these two forms are in principle contradictory, in practice they found a *modus vivendi* which was *itself emergent and adaptive*. We could most likely make similar arguments about the West African empires, China, India, etc., which in contrast to a truncated and stagnant European feudalism, remained dynamic until undermined by colonial expansion. Such a compromise may indeed be a result of struggle from below; the sustainable paradigm is never merely technical, but has a political dimension as expressed by the agents of change which fight for it and, if this is true today, it may well always have been true. Wherever oppression exists, the movement for sustainability is a liberation struggle.

The most obvious way to present this theme is in terms of class struggle but there is a risk that this could be simplifying and reductionist. Therefore, two essential provisos must be made:

- [1] Given the historical legacy of colonialism and slavery, and their prolongation in today’s aggressive ‘liberalisation’, the oppressed peoples of the global South have a legitimate right to struggle at a *national* level. We therefore should not formulate the class issue in such a way as to deny national liberation. This issue is directly related to food sovereignty *in one of its dimensions*: the global

rulers, as an argument to sweep away impediments to their plunder, present state sovereignty in the South as outmoded, and this must be resisted.

- [2] The movement of indigenous peoples, First Nations and tribal people connects us directly to the relationship between humanity and nature which prevailed before class society, and – just because of the back/forward dialectic described earlier – today constitutes also the most *advanced* force in the battle for a sustainable future, which is at the same time a struggle against genocide (physical and cultural). Any interpretation of class struggle which denies this fact would be Eurocentric and reactionary. Here again, we find a link with another of the dimensions of food sovereignty, which is in fact more important than sovereignty in some nationalistic sense: namely the demand to liberate some sphere (commons, neighbourhood etc.) within which to experiment with a re-alignment between humanity and nature.

## The abiding need to challenge stagnant order

There is something profoundly important in ‘deep tradition’ and the indigenous principle, in bringing us closer not just to holism and equilibrium, but also to the progressive meaning of rift (*disequilibrium*), an issue which will be crucial given the immensity of the task in tearing ourselves away from a dead paradigm.

Let us consider more closely what is meant by ‘order’ in a system. In the largest sense, organisation proceeds from the entire panarchy (Berkes and Folke, 2002). On the other hand, any particular phase of order is necessarily a simplification and, in this sense, ‘a small set of critical processes create and maintain this self-organisation.’ (Holling, 2001, p.391). This implies a ‘site’ or locus, wherein the determining norms of a given phase of order are reproduced, and which has in some sense a controlling role. All this is alright insofar as a system cannot be in total flux, but a problem arises when order rigidifies to the point of killing dynamism. In this case, the locus of determination will need to be challenged from somewhere which is not tied to maintaining it. This is one way we might interpret permaculture’s recognition (c.f. Whitefield, 2004, pp.24–5; Holmgren, 1994) of the crucial role of marginal zones or ‘edges’, where a dominant order is less consolidated. This in turn suggests the issue of ‘criticality’, the frontier where ‘...you can move backwards and forwards between the two [order and chaos]...’

(King, 1996). 'Margins' here signify the *lisière*, the boundary where the region of cultivation *shades off into* the 'wild' forest, and we have full access to the latter's creativity.

If the above applies to physical ecologies, how do we translate it into social terms? The point is that there would likely arise a group with vested interests in reproducing a given order. Therefore, they would have to be challenged from some region of society where the norms are less consolidated. The socio-political implications of margins and zones of ambiguity – c.f. the link with Michel Foucault's ideas – are quite profound.

It is important to emphasise that the issue of avoiding stagnancy is never only an *internal* requirement of systems; on the contrary the issue is intrinsically environmental. This is because the only reason systems can *develop* – that is, become more complex and acquire self-organising faculties – is that they are 'open' (c.f. Prigogine and Stengers, 1984) to an external environment. And of course that environment is not merely passive, but has its own dynamism, which always poses fresh challenges to the systems which inhabit it. The demand for paradigm-shift therefore springs not just from internal causes but from the need to embrace environmental change (which is very much the case today).

Accordingly, for a non-Eurocentric historical materialism, the perspective of indigenous peoples ('tribal', First Nations etc.) must form a key point of reference. On the one hand, being the most marginalised by the current anti-ecological paradigm, they express the creative role of marginality. On the other hand, their tradition had a good understanding of the flexibility a society needs to respond to epochal environmental change. This is only really understandable if one takes a long-term view extending over many generations, which is exactly the indigenous viewpoint.

The ecofeminist perspective is similarly important here (c.f. Mies and Shiva, 1993), since women have been marginalised by all social systems, and more specifically agrarian ones, and can thus play a critical (in every sense) role in kick-starting change. However, to take the argument one step further, ecofeminism could itself be critiqued for taking on board the ascriptive characteristics of gender, and this is where the contribution of queer theory becomes important (Jackson, 1993; Clark, 2013). It challenges those categorisations and rigidities which restrict not only the human rights and personal development of groups within society but also the developmental potential of society as a whole, measured in its flexibility and adaptability. This again takes us back to the indigenous perspective, since we find in many traditional societies a

culture which embraces such a disruption of norms. Thus, in Native American Navajo mythology (Williams, 1992), the people traverse a succession of sharply differentiated developmental phases, *which are in effect adjustments to changing environmental challenges and ecosystem discontinuities*, each of which requires profound changes in human culture and organisation [or paradigm-shift, in the terminology we have been employing]. Humanity is piloted through these transitions by the *nadle* (sometimes referred to in anthropological literature as 'berdaches' or two-spirit), i.e. people whose perspective is not confined to either gender, and therefore have the flexibility to comprehend transition at its profoundest level.

The above issue is central to visioning and transition, since in a situation like today where fundamental paradigm-shift is the only option, we need the ability to think radically and outside the confines of established norms.