

Chapter 30

How to Save Cultured Meat from Ecomodernism? Selective Attention and the Art of Dealing with Ambivalence



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Abstract As a highly technological innovation, cultured meat is the subject of techno-optimistic as well as techno-sceptical evaluations. The chapter discusses this opposition and connects it with arguments about seeing the world in the right way. Both sides not only call upon us to see the world in a very particular light, but also point to mechanisms of selective attention in order to explain how others can be so biased. I will argue that attention mechanisms are indeed relevant for dealing with the Anthropocene, but that dualism has paralysing effects. In a dualistic framework, cultured meat is associated with ecomodernist optimism, bold technological control over nature and alienation from animals. But interested citizens and farmers in focus groups rather envisioned the future of cultured meat through small scale production on farms combined with intensive relations with animals. Such scenarios, involving elements from both sides of the dualistic gap, depend on constructive ways of dealing with dualisms and ambivalence.

30.1 Intro: Wizards and Prophets

We need to eat less meat. Although the urgency is growing, the call is not new. One starting point is Ruth Harrison, who published *Animal machines* (1964) in protest against the then upcoming factory farming. A few years later, in *Diet for a small planet* (1971), Frances Moore Lappé stressed how inefficient meat is for feeding the world. The book is full of recipes illustrating how the combination of pulses and grains is a wholesome alternative for meat. Yet beans and lentils did not take over the world. On the contrary: global meat consumption kept rising, global pulse consumption kept falling, and plant-based meat-imitations did not take off either; consumers found them too different from meat (Hoek 2010). This is why the idea of cultured meat—an idea that had been lingering in the sidewings ever since tissue culturing technology came

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up in the beginning of the twentieth century—could suddenly look so promising when it was rediscovered around the turn of the century. It was going to be made of animal cells, it would (‘really’) be meat but without its downsides. This might finally help.

As a highly technological option, cultured meat was an immediate subject for discussions on the pros and cons of technofixes.¹ Will this technology open up new directions of socio-technical change (Driessen and Korthals 2012), or is it rather a narrowly framed pseudo-solution that distracts from the need for fundamental shifts in our lifestyles? While quite a few animal protection organizations, after some hesitation, pragmatically embraced it as a more hopeful strategy for improving the fate of animals than raising public awareness,² others, including many who campaigned for more natural food, were skeptical. Simon Fairlie was one of them. He not only criticized the technological character of cultured meat but also how this fitted in with vegan perspectives bound to further alienate us from nature. In his book *Meat, a benign extravagance* (2010), Fairlie starts out by rejecting the view that veganism is the best ethical response to the problems of meat. Environmentally speaking, eating small amounts of meat is actually more sustainable than eating no meat at all, he argued, because some of our resources (some types of grassland, some forms of waste), are best used by raising animals (in animal-friendly ways).³ So the vegan solution is simplistic, but apart from that it will lead us to artificial food and estrangement from nature. While the organic sector is campaigning for “slow food, real meat and fresh local produce”, he wrote, vegans and vegetarians are pointing in “the opposite direction”, namely of *factory food, and cultured meat lies at the end of that road (Fairlie 2010, 228). In his view, this technological enthusiasm additionally includes attempts to genetically engineer factory-farmed livestock without the capacity to suffer. In fact, he suspects, we might be seeing the first signs of “a convergence of interests between factory farming, veganism and genetic engineering” which will lead us to the “brave new world of transhumanists”. Against the dominant trends of urbanization, Fairlie argues for ruralization, for small scale human settlements and

¹Including skepticism about unrealistic expectations raised by technologists. However, cultured meat was atypical in this respect. The enthusiasm was more a matter of ethical pull than of technology push. At a time when no researchers were asking for money (there had been a NASA project focusing on goldfish, but it was terminated), the first lobby organization for cultured meat, New Harvest, was founded by the American student Jason Matheny. He had been so shocked by the industrial chicken breeding he had witnessed that he decided something must be done and that cultured meat—he read about the NASA project—looked like a promising idea. When visiting the Netherlands, he met with protein researchers, with the Minister of agriculture and with businessman and long term cultured meat promotor Willem van Eelen. Cultured meat research in the Netherlands began with the funding of three PhD projects. See <https://www.new-harvest.org/about>.

²The American organization PETA, for example, discussed whether or not an organization that included many vegans should support something that made use of animal cells. The outcome was that PETA embraced cultured meat as the most promising quick road to a better future for animals and announced a \$1 million prize to the first laboratory to create commercially viable test-tube chicken.

³This view has been corroborated by more recent research at Wageningen University. See e.g. Van Kernebeek et al. (2016), Van Zanten et al. (2018).

permaculture, with people living closer to nature and closer to the sources of their food.

Fairlie's way of picturing a diametrical opposition between rural sustainable farming and urban estrangement from nature has been affirmed and strengthened by later discussions, especially since the appearance of the *Ecomodernist Manifesto* (Asafu-Adjaye et al. 2015). This manifesto stated that many human activities need to be intensified with the help of technology, in order to "decouple" human well-being from environmental destruction. Ecomodernism comes with a plea for urbanization, under the assumption that this is more sustainable: "cities both drive and symbolize the decoupling of humanity from nature." When Chris Smaje responded on the website of *Dark Mountain*, a movement with a somewhat older manifesto of its own to which I will return, he concludes that the ecomodernist decoupling of human well-being from natural impacts also implies a physical decoupling of people from nature. In his summary: "to us the city and the minimum amount of farmland necessary to support it, to the rest of creation the wilderness" (Smaje 2015). He could not disagree more.

Does this debate have a deep or essential core? Charles Mann's recent analysis certainly suggests so. Under the title *The Wizard and the Prophet* (2018), he focuses on the opposition between "techno-optimist" Norman Borlaug, a hero of eco-modernists who believed in human ingenuity for solving all problems, and "green luddite" or "catastrophic environmentalist" William Vogt, who believed in living more sustainable lives and eating lower down the food chain. Mann describes how Borlaug's path leads to urbanization and labor-extensive industrialized farming, while the prophets strive for small scale labor-intensive agriculture that takes care of the earth and the soil. In Mann's analysis, they appear as fundamentally and unchangeably different views of how to deal with the future of our planet. So perhaps it need not surprise that they now also serve as opposing perspectives on climate change and the Anthropocene: technology versus lifestyle as the way forward.

This dualism clearly comes with an emphasis on opposed strategies in agricultural thinking and research, while detracting from examples that might undermine the divide, such as the use of GPS and drones in organic arable farming, or the use of milking robots in nature-oriented animal farming. Below, I will explore how cultured meat could strategically be developed in a way that undermines rather than reinforces the seemingly cast-in-stone dichotomy between techno-optimists and green luddites. But let me first focus on one additional aspect of the dualism, namely how both sides call upon us to pay attention to the world in very specific ways. While wizards/ecomodernists encourage us to see hopeful developments all around and a bright future on the horizon, their prophet-opponents, with Dark Mountaineers prominently among them, want us to open our eyes to the things that go wrong and that will lead to inevitable collapse. Both sides regard their own way of seeing the world as an accomplishment that takes effort and courage, and both point to mechanisms of selective attention that explain why others have such a biased perspective.

Arguments about selective attention and perception are prominent in both camps. Directing the spotlight on this difference will first seem to enlarge the gap, but it will

then also afford leads for dealing with it differently, namely by taking a closer look at attention mechanisms and how to deal with them in more constructive ways.

30.2 Selective Attention

Ecomodernists propose that if human wellbeing is decoupled from environmental impacts, technology—with a focus on energy technology—will keep human consumption going: “meaningful climate mitigation is fundamentally a technological challenge” (Asafu-Adjaye et al. 2015). We can live in the cities, decrease the burden on environments and regreen the earth by such processes as urbanization, agricultural intensification, genetic engineering, nuclear power and desalination; as the examples show, they derive hope from the prospect of bold frontier technologies. They explicitly embrace an optimistic view towards the future, which received a boost by what is now called the “new optimist” movement, with authors such as Pinker, Norberg, Ridley and Roser (Nisbet 2018). New optimists, including the ecomodernists, have been inspired by Hans Rosling, whose 2006-TED talk *The best stats you’ve ever seen* has been designated as the birth of the new optimism (Burkeman 2017). Rosling devoted the last part of his life to making facts about global improvement more accessible through a form of visual statistics called *Gapminder*. The book that appeared in 2018, after his death, is titled *Factfulness; ten reasons why you are wrong about the world and why things are better than you think*. It explains that we tend to severely underestimate for example how many children in the world are vaccinated or how many years of school education girls on average receive, globally. The book discusses ten ‘instincts’ that explain why our view of the world tends to be far too pessimistic. Several of them are closely related to the character of the news, with its strong focus on what goes wrong. This selective focus can be explained by seeing how we have evolved as beings who need to be on the lookout for things that threaten us. Things that are going well or that slowly become better are not news-worthy, while in reality many things go well or are slowly but steadily getting better. Slow change is hard to see at any specific moment. Yet time makes it visible: our world is completely different form that of our grandparents.

The world also faces real threats, Rosling acknowledges. Climate change is one and we need to be deeply concerned. But it won’t help to focus on worst case scenarios; we need to quickly move on from fear and endless talking and use that energy to solve the problem. “So, what’s the solution? Well it’s easy. Anyone emitting lots of greenhouse gas must stop doing that as soon as possible.” (Rosling 2018, 231). He adds that although the planet’s common resources can only be governed by a globally respected authority (the United Nations), it can be done: we already did it with ozone depletion and with lead in gasoline (*ibid.*, 239).

His overall advice is not to count on journalists for a good view of the world, since they are caught in the attention-grabbing drama business. Rather than burdening them with unrealistic expectations, let us realize that the news fits in with our evolved habit to automatically look for threats, and that it is simply not very useful for understanding

the world. Instead, we'd better learn to attend to the facts. This is also what optimists inspired by Hans Rosling hope to teach us: evolution has not built us to pay attention to what goes well or is slowly improving, but we can train ourselves to embrace a fact-based worldview. When it comes to climate change, ecomodernists and new optimists add that the development of helpful technology is not inevitable; it will require effort, as the ecomodernist manifesto states, from both states and the private sector.

While ecomodernists tend to see optimism as a moral duty, its opposite is now also propagated as the most responsible way forward; let me turn to this very different view of the world.

Climate change can be described as a super wicked problem (Levin et al. 2012), since time is running out, many parties still have an interest in the status quo and there is no central authority for effective interference. Now that climate change is increasingly experienced as a reality, emotions such as fear, grief and despair are on the rise. Apart from being psychological phenomena, pessimism and depression have also become starting points of new forms of activism, for example by environmental activists and journalists Paul Kingsnorth and Dougald Hine, who lost belief in effective change and together founded the *Dark Mountain* project. The name is derived from a line by Robinson Jeffers (1887–1962), a Californian poet who withdrew from civilization in order to seek harmony with nature.

The *Dark Mountain Manifesto* (Kingsnorth and Hine 2009) starts by explaining that all civilizations must go under, and that this is hard to see or predict from the inside, since “the pattern of ordinary life, in which so much stays the same from one day to the next, disguises the fragility of its fabric”. Civilizations are held together by belief. But once such belief starts to crumble, collapse may become unstoppable.

The dark mountaineers have given up belief in our civilization. They see what they say most of us are “unable to see”—since we have all been trained not to pay attention to basic things about our civilization: “its fundamental destructive features”: its myths of progress, of human centrality and of our separation from nature. The problem is not one of outright and explicit denial. Yes there are some remaining climate skeptics, but focusing on them distracts from a far larger and more important form of denial, which is about the emotional inability to really connect to what we know about ecological unravelling and to take it seriously. “Ecological and economic collapse unfold before us and, if we acknowledge them at all, we act as if this were a temporary problem, a technical glitch.”

Yet these uncanny signs are not technical glitches, but inherent to our civilization. In order to find responses—for when the world as we know it no longer exists—the writers think that science and technology are not going to be helpful and neither are politics, ideology or activism. What we need instead is art. They are especially interested in new storytelling in the genre of *Uncivilized writing*. Such writing attempts to shift our worldview and find a position outside the bubble of civilization, a position at which we can carefully pay attention to the nonhuman world and re-engage with it, grounded in a sense of place and time.

Dark mountaineers try to teach us that because we cling to the false safety of our belief in day-to-day existence in a civilization that is built on destructive attitudes

to nature, we are heading for collapse. The courage we need is to really look the painful facts in the face, accept grief and despair, and from there on search for new beginnings.

In the next section I will go into somewhat more detail into the mechanisms of selective attention sketched by both sides of the dualism. While such mechanisms are real, they are just a small subset of potentially relevant mechanisms. Dualistic framing is itself an attention mechanism, and in the paragraph after the next I will focus on its power and some of its dangers. My overall suggestion is that we need more awareness of attention mechanisms in general and of their pitfalls, in order to find ways of dealing with them more imaginatively.

30.3 How Daily Life Blinds Us in Different Ways

My experience is what I agree to attend to, William James famously said. Though such ‘agreement’ will often not be conscious, the implications that attention is necessarily selective and that it determines how we experience the world seem right. Both ecomodernists and dark mountaineers argue that the seemingly self-evident nature of daily life blinds us to what is really going on. Ecomodernists think that because we have evolved to selectively attend to what goes wrong, we fail to see how good our daily life really is. Dark Mountaineers think that because of our emotional rootedness in our seemingly safe routines we fail to see their fragility as well as their destructive externalities. Daily life is apparently able to blind us in different ways: it makes us neglect slow changes in the good direction, it also makes us resist unwelcome facts.

Both types of bias have also been noted by philosophers and social scientists studying patterns of attention, though typically in less absolutist ways. Analyses of the selective focus of the news and the media tend to note similar things as Rosling: the news, depending as it is on triggering our attention, is a biased way of learning about what happens in the world (e.g. Wijnberg 2018; De Botton 2014). News tends to focus on incidents, while it is generally silent on what goes well or what is slowly changing, because that is not newsworthy. What the optimistic account seems to miss, meanwhile, is that slow change can also be for the worse.

The type of neglect observed by Dark Mountain too is the object of study and reflection, and increasingly so in the context of climate change. In the book *Living in denial; climate change, emotions and everyday life*, Kari Norgaard (2011) called attention to mechanisms of everyday denial. She sets out noting that the idea that we would respond more adequately to climate change ‘if only we knew’ (the idea that knowing the facts will make us act rightly) cannot explain the finding that people’s interest may decline as more information becomes available; people have been found to stop paying attention to climate change when they realized there is no easy solution (Norgaard 2011, 2). Not paying attention is different from climate skepticism in that it is not a denial of climate change as such but a way to protect daily life, in a situation in which we feel powerless or confused, by avoiding the issue. The book documents the social organization of such protection mechanisms in Norway. Information is not

the key variable; emotions of helplessness and guilt are key, and they estrange us from the realities of our lives, argues Norgaard. Getting or remaining in touch with such disturbing realities is a real struggle.

Similar analyses abound. It has amply been documented how cognitive dissonance leads to coping mechanisms in which people adapt their beliefs, for example about the cognitive abilities of the animals they eat (Bastian et al. 2012). I have been writing about a related way of evasive coping in the context of meat consumption, ‘strategic ignorance’: not wanting to know too much about meat and the way it is produced in order to avoid awkward choices. Strategic ignorance has long been confused with indifference, because on the level of behavior it looks the same. However, strategic ignorance is in fact based on ambivalence rather than indifference (Onwezen and Van der Weele 2016); it is a mechanism of coping with the psychological unrest and indecisiveness of great tensions. In a psychoanalytically inspired study of climate apathy, Renée Lertzman (2015) likewise challenges the view that apathy and denial typically result from a lack of concern; instead of a lack, she observes a surplus of concern or affect. In her interviews in the vicinity of an industry that was both good for employment and disastrous for the environment, she encountered much ambivalence (both love and hate) towards this industry. Suppression of the hate-aspect led to unresolved mourning and apathy. These findings evidently have much in common with what Dark Mountaineers describe.

Such studies confirm that phenomena of selective attention that ecomodernist wizards and dark prophets talk about are real and troubling. We tend to ignore slow and unspectacular progress because of our habitual dependence on the news. We tend to ignore things that go wrong when they are too emotionally uncomfortable. And daily life gives rise to more mechanisms of selective attention, partly intertwined with the ones just discussed. Not only the news, but habits and routines too blind us to the conditions of normal life; we tend to only pause and reflect, often reluctantly, when things go wrong, disappear or otherwise change. From Plato onward, waking up in wonder to our self-evidences has been seen as the beginning of philosophy. But what do we see when we wake up and reflect—may we perhaps be unhealthily attracted to dualism?

30.4 Dualisms as Paralyzing Attention Tools

Apart from being a world-making mechanism, attention has also become a scarce and valuable commodity in our age of social acceleration and exploding digital information. Business models in the attention economy, centring on harvesting our attention and then selling it, are not only extremely profitable, they have also increasingly been criticized as turning customers at least partly into products. In his book *The attention merchants*, Tim Wu (2016) traces this business model back to the nineteenth century, when newspapers started to make money by selling their readers’ attention to advertisers. He also notes that since the model completely depends on gaining and

holding attention, it strongly encourages extreme content, as this is likely to engage ‘automatic’ attention.

Even though ‘dichotomous thinking’ is known as a personality disorder, presenting the availabilities as two options that look like polar opposites is in fact an eternally tempting model of thought, which creates order in a simple way. Think of black and white, all or nothing, hate or love, nature versus nurture, male and female, technological solutions versus lifestyle solutions or optimism versus pessimism—dualistic and polarizing ways of thinking are forceful tools of attracting and selectively framing attention and creating meaning and order.

Dualism has also been discovered as an attention mechanism by tech companies. Roger McNamee (2019) has documented how the battle for attention put tech companies in Silicon valley on that track; extreme views have been discovered and strategically used as attention capturing devices, as they stir emotion and keep people engaged. They are part of what Tim Harris (2019) calls the ‘extractive attention economy’. Worrisome levels of polarization result from this race to the bottom.

Because selective attention creates our realities, attention tools deserve philosophical as well as psychological scrutiny. This has become more urgent in the era of the attention economy, with tech companies putting much effort in manipulating our attention. ‘When tech knows you better than you know yourself’ (Thompson 2018), the challenge is to understand and face what makes us so vulnerable. The Anthropocene and its debates likewise illustrate the urgency of becoming acquainted with attention mechanisms, including the role played by emotions and dualistic distinctions. How we are being misled by the news, how people are prone to resist painful subjects by avoiding them if they can, how emerging patterns of attention are socially organized, or how dualisms encourage us to think that we should choose between tech solutions and lifestyle changes or between pessimism and optimism.

This takes us back to the dualism that towers over environmental and Anthropocene debates as described by Charles Mann. How can we choose between the poles of such dualisms? Mann himself illustrates how hard this is, saying that he oscillates between the stances: “On Monday, Wednesday and Friday I think Vogt was correct, On Tuesday, Thursday and Saturday, I go for Borlaug. And on Sunday, I don’t know.” (Mann 2018, 13). Mann’s wavering ambivalence seems to lead to a kind of paralysis, quite comparable to the proverbial indecisiveness of Buridan’s ass—the donkey that dies from hunger and thirst between a pile of hay and a pail of water, because it is equally hungry and thirsty and cannot choose between the two. Ambivalence notoriously undermines our ability to choose and it perhaps need not surprise that it has received a bad press in both philosophy and psychology. Psychologically, ambivalence is often extremely uncomfortable. In philosophy, Harry Frankfurt (1988) has influentially argued that ambivalence stands in the way of being a wholehearted and free person. This perhaps helps to explain why Mann thinks that in the end we will have to answer the question who is right, wizard or prophet; “our children will have to answer it” (Mann 2018, 9).

Yet ambivalence is a normal and ubiquitous aspect of life, especially in times of change. From this perspective, we might need better options to deal with it than

making a forced choice, being stuck in paralysis or trying to avoid the subject altogether (Rorty 2009; Razinsky 2017; Van der Weele and Driessen 2019). One important starting point for more constructive attitudes towards ambivalence is that the need to make an either-or choice between precisely two (opposed) options may actually be a very rare phenomenon. Take optimism and pessimism, for example: we can be partly or moderately optimistic or pessimistic, alternately pessimistic and optimistic, or perhaps live with being ambivalently optimistic and pessimistic at the same time. In the final paragraph, I will now return to meat and cultured meat. Both abundantly give rise to ambivalence, and I will argue that constructive skills for dealing with ambivalence can help to avoid dichotomous stalemates and find more constructive solutions.

30.5 Cultured Meat and the Pig in the Backyard

In dichotomic terms, cultured meat seems to clearly belong to the wizard or ecomodernism pole, as has indeed been argued repeatedly. Fairlie's book, in which cultured meat is portrayed as an urban technological strategy that will estrange us from nature, already did so *avant la lettre*, and similar analyses abound. Wyatt Galusky (2014, 945) writes that cultured meat as a technological solution will lead to the disappearance and invisibility of the animal, and that "rather than confront the ethical questions of engaging animals and humans and ecologies in the context of meat, we turn those questions into engineering ones." Valan Anthos (2018) explicitly associates cultured meat with ecomodernism; it does not focus on lifestyle change but on its alternative: fulfilling the demand for meat, with the aim of technologically decoupling meat from its harmful consequences." They do not like this alternative. Modern industrial farming already exemplifies an approach in which our relations to the nonhuman world are viewed in terms of control, efficiency and usefulness, according to both Galusky and Anthos. Cultured meat obeys to the same logic, exerting even deeper control over nonhuman nature, even fostering the unhealthy illusion of total control over a nonhuman world. Our relations with animals, which should be "on the forefront of our confrontations with meat" (Anthos 2018, 46), meanwhile fade into the background: cultured meat sidesteps crucial underlying questions about our relations to animals, because there no longer is any relation with animals to consider. The assumption, clearly, is that cultured meat will make human relations with animals disappear. And this, Fairlie could have added, is precisely the wrongheaded aim of many vegans.

Most people probably prefer better relations with animals to the absence of animals, and will find this prospect scary. But is it indeed the only or the most plausible prospect? This suggestion depends on picturing cultured meat in the framework of the dualism of technological control-cum-alienation versus lifestyle changes; we have either technology to replace animals or moral reflection on our relations with animals, not both. Already in 2008, Hopkins and Dacey responded to such dichotomous thinking in a paper on the ethics of cultured meat, noticing not only that cultured

meat is informed by moral considerations, but also that technology and morality do not represent separate but interactive roads to change. They speculated that cultured meat may change our relations with animals so that “people in the future find eating meat from living animals unbearably barbaric” (Hopkins and Dacey 2008, 589).

The question also rises whether this dichotomic way of thinking produces the only or most plausible scenario for cultured meat. It is certainly not the only one, as a very different scenario has been emerging within my own research, at least partly in response to fears of alienation. In that scenario, our relations with animals do not disappear, on the contrary: cultured meat finally enables us to develop loving relations with the animals we eat. Through focus groups, Clemens Driessen and I have been exploring responses to cultured meat and its relations with meat (Van der Weele and Driessen 2013, 2019). We always found much ambivalence, both about cultured meat and about meat. The remark that cultured meat is unnatural, for example, always made someone else wonder how natural our ordinary meat actually is—from animals kept in confinement, and/or containing added water, preservatives, antibiotics etc. Both factory farmed meat and cultured meat were in fact associated with unnaturalness, technology, and alienation from our food. But concerning cultured meat, such downsides vanished completely with a scenario that spontaneously emerged from one discussion and that we termed ‘the pig in the backyard’. Participants who had started out being quite hesitant about the idea of cultured meat at some point started to envision its production through a local and small scale industry: cells from free ranging pigs, in backyards or urban farms, would be taken through biopsies every now and then and cultured into meat in neighborhood factories. The idea immediately warmed the participants to cultured meat. The scenario integrated ideas of local and urban food production, good relations with (farm) animals, and a neighborhood scale combination of production and consumption. The idea of cultured meat being unnatural, alienating or too technological had vanished completely; in fact, this scenario seemed almost too good to be true (Van der Weele and Driessen 2013).

In later groups, this scenario was welcomed as very sympathetic (“in this way you can experience the animal as a living being and love it”) but also often as more or less implausible, unrealistic, and going against rules and regulations (Van der Weele and Driessen 2019). Perhaps, some participants wondered, doing it on small farms instead of backyards would already be somewhat more realistic.

In a follow up project, this idea of small scale cultured meat production on farms has taken the form of the question whether cultured meat might perhaps be an opportunity, instead of a mere threat, for farmers. In the first part of this project, we held focus groups with farmers. The project is still ongoing, but some results already emerged beforehand, for example about the interest of farmers for this subject. Many farmers were skeptical, so that it was not easy to find enough participants for the focus groups. But there were also a few farmers who were eager not just to participate but to be involved in cultured meat production as soon as possible. Apart from a chance of contributing to circular agriculture, these farmers saw cultured meat as an opportunity to foster new and better connections with consumers, with animals, and with society in general. The combination that attracts them is keeping free-range animals, producing local kinds of cultured meat and invite consumers to come and visit. A

few of them did not wait for the outcomes of the project to already take further initiatives by seeking connections with start-up companies and find out more about technological possibilities.

It remains to be seen what comes of famer-scale cultured meat production. The important point for this chapter is that the activities in this direction do not conform to the either-or schema that dominates so many discussions. Envision a farm with relatively small (e.g. 2000 L) cultured meat bioreactors. It might be a farm that keeps animals of special breeds in free-range conditions. While the animals live their good lives, biopsies are taken from them now and then, to make cultured meat that is then branded as a specialty from this farm and/or from these special breed animals. Other activities on the farm might include elements from a wide range of other options, varying from very technological (milking robots, scanning drones) to very traditional (a small shop, care activities) or new and experimental (a food forest, recycling dung, pixel farming).⁴

Such activities are neither purely ecomodernist nor the opposite, and possible attempts to ‘disambiguate’ (Chiles 2013) and reinterpret them in terms of pure positions seem to be beside the point. Rather, the pure positions themselves have to give way to activities which—just as in the pig in the backyard scenario—combine very traditional elements with new technological options. Such a ‘tinkering’ approach starts from the tension and ambivalences between different values, wishes, and available options, and looks for ways that sidestep or go beyond paralyzing oppositions, thus undermining the dualistic framing. This more generally illustrates that doing and trying need not conform to the dividing lines set out in societal and academic debates, and that progress can be a matter of making new combinations rather than drastic choices.

One obstacle for such small scale initiatives is that they may go at least partly against dominant economic rationality. Yet the dominance of dichotomous thinking may be an at least as powerful obstacle, as it takes attention away from working with the tensions in more constructive ways. While debates between ecomodernists and Dark Mountaineers rage on, some farmers are constructing quite different options, and their efforts deserve more conceptual as well as practical attention. As I have been suggesting in the last paragraph, one attention skill that we urgently need for avoiding dualistic stalemates, is the art of dealing with dualistic ambivalence through imaginative tinkering instead of choosing.

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