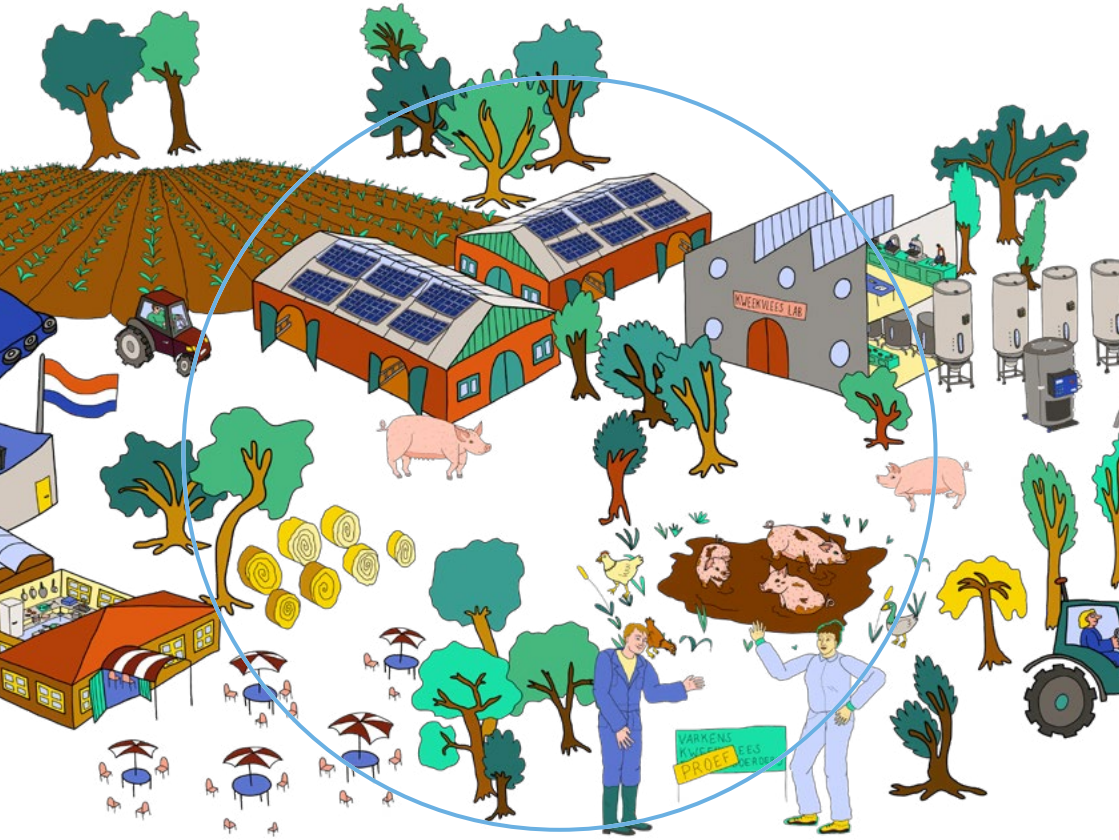

Either/or/and

From dualism to ambivalence

Prof.dr Cor van der Weele

Farewell address upon retiring as Special Professor of Humanistic Philosophy at Wageningen University & Research on 16 September 2021

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Either/or/and

From dualism to ambivalence

Esteemed Rector Magnificus, dear colleagues, family and friends, ladies and gentlemen,

You see a little poem here

hier gaan over het tij
de maan de wind en wij

In my English translation, this becomes:
governing the tide are here
the moon the wind and we

The poem, by Ed Leeflang, is very modestly executed as you can see, and located on Neeltje Jans. This former sandbank became the working island for the construction of the Oosterscheldekering, of which it is now a part.

Photo by Nils van der Burg

'We' are the third element of the poem's governing trio, an afterthought almost - but a bold one; after all, we humans build these strong and effective defences against high tides. Yet in a newer and more ominous interpretation we may also read here the suggestion that in the end we lose out to bigger forces. Our climate changing activities may not directly be governing the tide, but they are certainly governing sea levels.

The poem embeds our efforts in cosmic and atmospheric forces. For me, our embeddedness in countless small and large causal forces is both soothing and frightening as well as a perpetual source of wonder. Let me illustrate my personal sense of embeddedness with two historical events that had big governing roles in my life.

Photo from Watersnoodmuseum via Lenny van Broekhoven

I was born in September 1954. On February 1 of the previous year, 1953, a big flood caused death and destruction in the south-west of the Netherland. My father not only came from Zeeland but was also precisely that year graduating in Delft as a civil engineer. In his thesis, he presented a design for one of the dams of the Delta Works. Political decisions to carry out those works had been postponed for decades, but after the flood those delays were over. My father got a job straight away with Rijkswaterstaat's Deltadienst and our growing family moved from one dam under construction to the next.

The second event, also in February 1953, was Watson and Crick presenting their model of the structure of DNA. This was followed by decades of impressive discoveries about the genetic code and molecular mechanisms in living cells, which inspired me first to study biology, graduating in molecular genetics, and later to write a PhD thesis in the philosophy of biology, after I had also come under the spell of philosophy.

After this introduction, my story will develop in six steps under the following headings:

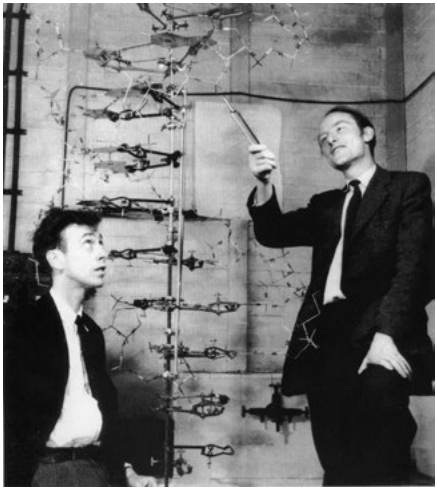
1 Either/or/and
2 Human motivation, selective attention and the importance of criticism
3 Protein transition 1: The pig in the backyard
4 Protein transition 2: Pilot farms
5 Ambivalence and action research
6 Thanks

So let me first explain my title.

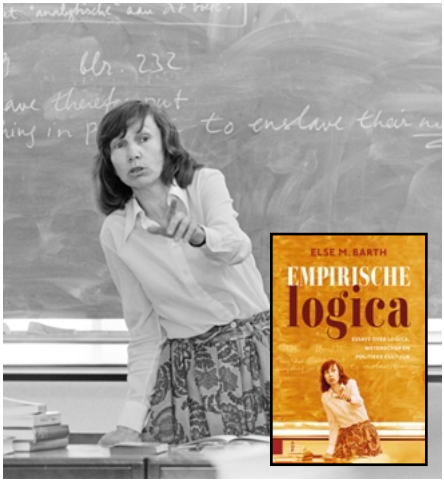
1. Either/or/and

When I was a student of biology, in the 1970's in Utrecht, philosophy was located in an institution called the Central Interfaculty. Its existence and its name were based on the view that all academic disciplines need to be reflective, and that philosophy might offer useful help. A competing view of philosophy holds that it has its own set of questions, but in this interfaculty view, when you had a 'kandidaats' in say biology or sociology, you could go for a 'shortened' kandidaats in philosophy.[1] When I decided to do this, the very first philosophy lecture I attended, on logic, immediately presented me with the most inspiring of teachers, Else Barth.[2]

She talked and wrote about logic and philosophy as if she were a detective,



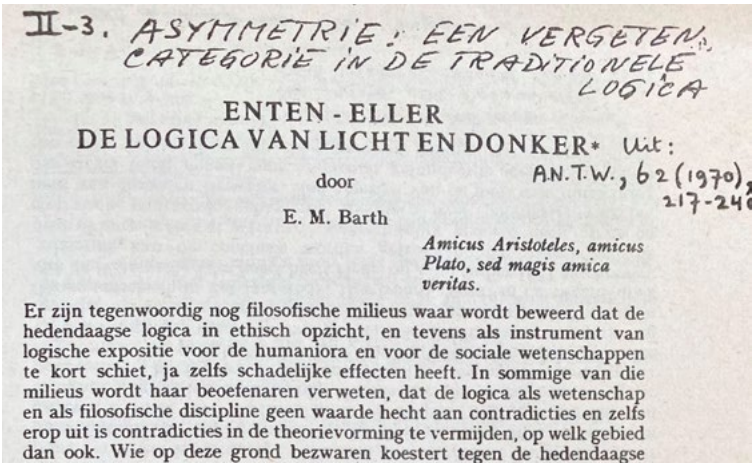
Watson and Crick 1953. Photo by A. Barrington Brown / Science Photo Library



Else Barth. Photo by Karel Zwaneveld
Insert: Empirische logica. Photo via Amsterdam UP

1 For younger people: a kandidaats was something in between the current bachelor and master's degrees.
2 Else Barth taught logic at the university of Utrecht from 1971 till 1977. She then moved to the University of Groningen, where she became professor of analytic philosophy and where I graduated in philosophy in 1984, writing my master thesis under her supervision. The thesis was about 'generic and hierarchical ways of thinking in biology'. Evolutionary biologist Rolf Hoekstra was my second supervisor.

searching to uncover the logical structure of forms of thinking in the history of Western philosophy (see e.g. Barth 1971). She was especially keen on identifying thought structures that worked oppressively - her goal was instead to put thinking in the service of the flourishing of the widest plurality of people and animals. One of the targets of her criticism was the tendency in the philosophical tradition to think about reality in terms of polar oppositions: black versus white, sun versus moon, man versus woman, etcetera. The principle of 'Either-or', Of-Of in Dutch, 'Entweder-oder' for Hegel, 'Enten-Eller' in Norwegian (she came from Norway) is the subject of this paper (Barth 1970).[3]



II-3. ASYMMETRIE: EEN VERGETEN CATEGORIE IN DE TRADITIONELE LOGICA

ENTEN - ELLER
DE LOGICA VAN LICHT EN DONKER* Uit: A.N.T.W., 62 (1970), 217-24

door

E. M. Barth

Amicus Aristoteles, amicus Plato, sed magis amica veritas.

Er zijn tegenwoordig nog filosofische milieus waar wordt beweerd dat de hedendaagse logica in ethisch opzicht, en tevens als instrument van logische expositie voor de humaniora en voor de sociale wetenschappen te kort schiet, ja zelfs schadelijke effecten heeft. In sommige van die milieus wordt haar beoefenaren verweten, dat de logica als wetenschap en als filosofische discipline geen waarde hecht aan contradicties en zelfs erop uit is contradicties in de theorievorming te vermijden, op welk gebied dan ook. Wie op deze grond bezwaren koestert tegen de hedendaagse

The paper was directed against the logic of light and dark, as she called it. Such either-or distinctions or so-called exclusive disjunctions are rarely adequate; in most cases, it is more helpful to think with the help of inclusive disjunctions. This is a logical operation that indicates not that *precisely* one of two options is true, either A or B, but that *at least* one of them is true, so maybe both. Either/or/and.

What will I do with this today? I will elaborate this theme not in logical but societal directions. My general philosophical orientation is pragmatic or contextual. That is to say that because of the context-dependence of problems, we should not look for any absolutely right form of thinking for all situations. In line with this, I will not propose that we should always get rid of all binary distinctions. Yet vigilance is certainly needed.

3 *Enten-eller* is also the Danish title of Kiekegaard's famous book, but since Barth does not refer to him, I will mention him no further, maybe to the disappointment of some of you.

As a starting point, it may be good to note that two-fold distinctions, or dualities, or binaries, are a simple way of creating order, always near at hand, and often very helpful. When it is claimed, for example, that everything is unified or that there is only one option, a duality is a first attempt to allow for difference. But moving from one to two is only a modest form of widening the options. Here are three dangers:

- Distinctions that are first offered as provisional may begin to look like firm polar opposites and be treated as if they are mutually exclusive and as if there are no third and fourth or combined options. Historical examples are mind versus matter, reason versus emotion, man versus woman, nature versus nurture.
- Binaries often come with unequal valuation of the two sides. Think of higher mind versus lower matter, or the struggle which is more important, nature or nurture.
- And they tend to cluster into overarching dualisms, for example strong rational men versus weak emotional women.

In these ways, binaries tend to become obstacles for recognizing a larger plurality of valid options and for considering non-hierarchical relations. My examples will not focus on men versus women or reason versus emotion but on such things as techno-optimism versus techno-pessimism or innovation versus tradition.

In recent decades, drawbacks of dualism have been widely noted, and there have been calls to radically oppose dualistic thinking. Donna Haraway (1985, 2003) and Bruno Latour (1993) have been prominent in the fights against the dualisms of nature versus culture and mind versus matter, speaking instead of cyborgs, hybrids, naturecultures etc. Their anti-dualism has become very influential, to the extent that hybridity became a kind of new orthodoxy in some academic circles. Yet I propose to remain pragmatic. Living without dualities is impossible in practice, and some forms of dualism may also be helpful. Think of the dualism of government versus parliament, which is a dualism of political roles. Else Barth also embraced a dualism of social roles, when she argued for a dialogical set-up of logic (Barth and Krabbe 1982, Barth and Martens 1982, see also Barth 2018). The aim was to give logic a social meaning and embedding by building logical rules in the form of rules for dialogues between Opponents and Proponents.[4]

But wait: may not the scheme of opponent versus proponent become a rigid form of dualism, especially if we assume that only one of them can win? Don't we also need less dualistic forms of critical dialogue? This question will return, but I leave it open for now, turning first to other elements of my story.

4 A main motivation was to go beyond the monological character of traditional logic: "Earlier logic and philosophy distinguished only one logical role, the role of the Thinker." (Barth and Martens 1982, p. 6).

2. Human motivation, selective attention and the need for diversity and criticism

The chair I have been holding is the Socrates chair.[5] In the introduction of my yearly report for the Socrates Foundation I invariably wrote that I connect two themes, firstly moral motivation, with special emphasis on selective attention and ambivalence, and secondly technology and ethics, with a special focus on the role of cultured – or cultivated[6] – meat in the protein transition. In the rest of the lecture, I will talk about each of these themes in turn and then say more about their connection.
First, in discussing moral motivation, I will sketch a picture of humans as social animals. It is a kind of quick tour along various disciplines that will take us to the need for diversity and criticism.

For Plato, what was valuable about human beings was our minds, or more broadly our souls. He regarded the body as a prison for the soul. For a long time, most philosophers in our western tradition have been thinking in similar ways. The body and everything associated with it, such as food and emotions, was considered much less valuable and interesting than our minds. Darwin was the great pioneer of a more embodied view of human beings, which included a deep interest in emotions. The historical process of a revaluation of the body also involves the embodiment of thinking and it is taking place in and between many disciplines. In linguistics, for example, the view emerged that our constant use of metaphors shows the embodiment of language and thought (Lakoff and Johnson 1980, 1999, Van der Weele 2006)[7]. Think of chewing on an idea or digesting an outcome. The revaluation is slow and far from complete; books are still appearing with titles such as 'How to be animal' (Challenger 2021).

We are social animals, highly successful ones in evolutionary terms. Explanations of why the human species is now so dominant on earth include our collaboration in large groups. Large scale collaboration requires trust, which in turn requires morality, which evolved on the basis of social emotions such as sympathy, shame, and fear for exclusion. Belonging is a basic need for animals living in groups and such social emotions are therefore powerful motivators. Adam Smith acknowledged how central social belonging is when he wrote in the *Theory of*

5 The Socrates Foundation, working under the umbrella of the Humanist Alliance (Humanistisch Verbond), maintains 'special' humanistic chairs at most Dutch universities https://www.humanistischverbond.nl/wie-we-zijn/de-organisatie/stichtingsocrates/

6 Many names have been proposed in the course of the years, e.g. in vitro meat, lab-grown meat, clean meat, cell-based meat and more. I mostly use 'cultured meat', more recently also 'cultivated meat'.

7 In this paper, 'Food metaphors and ethics', I take food metaphors as a starting point to argue for richer vocabularies for thinking about food, the body, the mind and relations between them.

Moral sentiments: "Compared with the contempt of mankind, all other external evils are easily supported" (Smith 1976/1659: 61). We have a mutual need of each other's sympathy, and this mutual sympathy is a basic ingredient of morality. More than a century later, in *The descent of Man* (2004/1871), Darwin agreed. He described morality as a highly complex phenomenon: arising from a mixture of giving and seeking sympathy and then further shaped by reason, habit, religion and upbringing. In many papers, starting with Van der Weele 2011, I have been discussing these books and their continuing relevance.[8]

We are not so autonomous as traditional philosophers thought or hoped; to a large extent we think in schools and paradigms, along the lines of the groups that make up our social identities. Our great need for receiving sympathy, or the approbation of our fellowmen, as Darwin also calls it, is not only a strong force in morality, but also in attention, thinking, and argumentation. Let me elaborate a little.

I have been wondering about the selective character of our attention for most of my life. The first time I wrote about it was in my PhD-thesis, and it was a central topic in my inaugural lecture.[9] Selective attention is partly a matter of historical pathways; we think and attend along familiar lines. But more immediate causes also play a role, for example in the form of emotions; some things attract us more than others. A relatively innocent example from science is the recent finding that colourful and conspicuous plants are studied more often than inconspicuous plants (Adamo et al, 2021). You will easily accept,

8 Both saw sympathy as the core moral sentiment. Its mechanisms are crucially mutual: we both give sympathy to others and need their sympathy in turn. In searches for the purely good, the needy side is often seen as suspect. For a plea to improve the moral reputation of seeking sympathy and attention, see also Van der Weele (in press).

9 In my PhD thesis (Van der Weele 1995/1999), I argued that assumptions of genetic determination have made biologists neglect environmental causes in embryological development, with harmful effects. Convincing explanations are interactionist; see also Oyama (1985/2000). Here, too, I opposed dualism, instead distinguishing three explanatory approaches in the biological literature.
In my inaugural lecture, the theme of selective attention offered a context for discussing strategic ignorance concerning meat (Van der Weele 2013). My most recent publication on the subject focuses on strategic ignorance about attention seeking (Van der Weele in press, see also previous note).

I think, that interesting patterns of attending and ignoring can be found in many places within and outside science, some innocent, some very harmful.
In daily life, emotional aspects of such patterns are relatively easy to detect. Some ten years ago, when I studied what people wanted to know about meat, quite some people said things like "If you want to eat meat, you should not know too much about it". Selectively avoiding information in this way, to protect our preferences and our social identities against unwelcome inputs, is called 'strategic ignorance'. Such self-protection is on the one hand useful and even necessary (after all, we cannot be responsible for everything), but it can become very problematic, too. In the case of meat, it is clearly related to changes that are in the air and that many people would like to avoid for the time being (Van der Weele en Ruissen 2013, Van der Weele 2013, Onwezen and Van der Weele 2016).

Strategic ignorance can be about anything, also about ourselves; in that case we avoid unwelcome information and insights about for example our capabilities or motivations. There is much recent research showing that we are tempted to ignore information that threatens a positive view of ourselves (Eil and Rao 2011, see also Dana et al 2007, Golman et al 2017, Grossman and Van der Weele 2017). Here, Adam Smith was a forerunner again. He wrote: "It is so disagreeable to think ill of ourselves, that we often purposely turn away our view from those circumstances which might render that judgment unfavourable." (Smith 1976/1659: 158).

A tendency to avoid the unwelcome also extends to our reasoning. It is a further consequence of our motivations as social animals. Reasoning is a social activity and the idea that persuading others is at least as important as finding truth has been gaining in plausibility, both theoretically and empirically (e.g. Mercier and Sperber 2011, Schwardmann et al, in press). For our argumentative goals, we as reasoners tend to find support for our views and arguments, while we tend to avoid efforts to find weak spots in them. Notice that this is in line with the notorious confirmation bias, the tendency to seek information that confirms our views. And basically, the way to compensate for this and to enhance the quality of reasoning outcomes is also social: it consists of a division of tasks in reasoning. Others are much better than we are in seeing the weak spots in our arguments, while we in turn can find fault in their arguments. To be sure, we can partly internalize this process through internal critical dialogue, imagining objections and new perspectives that might be raised, but such internal rehearsals in large part confirm the social character of our reasoning. John Stuart Mill famously expressed what is at stake here in *On liberty* (1859): that the vitality of our opinions depends on exposing them to objections and difficulties.

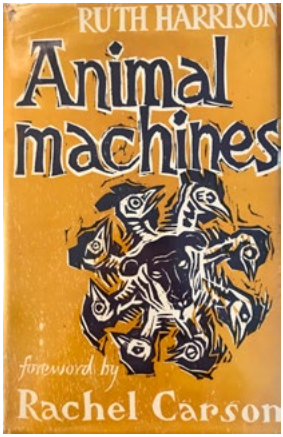
This is also a crucial insight for science. Once upon a time, good science was mainly associated with outstanding individuals. This was later followed by a strong belief in sticking carefully to the right method. But the idea of method as a touchstone also lost much of its power. The decline started with philosopher of science Karl Popper, who proposed that science proceeds in two phases. The first phase, which he called the context of discovery, is creative. In this phase you don't have to be careful at all, you can come up with any wild dream or idea. This is followed by a second phase, the context of justification, which is all about critically scrutinizing these bold ideas, and in this phase you need to be as stern as you possibly can. Popper's initial idea was that good scientists will themselves have this critical attitude towards their own work, but he came to realise that many scientists love their own theories too much to really make this work, and that colleagues will often be more motivated to serve this critical function (Popper 1945).[10] Others have further developed these thoughts. Feminist philosophers (e.g. Harding 1986) added the importance of a diversity of scientists, also for detecting blind spots in the scientific agenda. The general picture that has been emerging is that science is crucially a collective enterprise, in which a wide search for new ideas is combined with institutionalized criticism. Taken together, these ingredients yield knowledge that is not infallible or timeless, but nevertheless the most robust knowledge we can hope to achieve (Oreskes 2019). The endeavour is often characterised by terms such as adversarial collaboration.

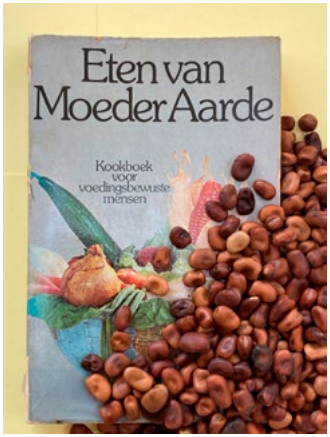
Where does this leave us as social animals, inside and outside science? Our need for a positive self-image and for sympathy from others leads to a tendency to pay attention and think and argue in quite selective ways. To enhance the quality of our deliberations and our knowledge, we need each other for critical and additional perspectives. In other words, we need some forms of social dualism. This resonates with the proponent-opponent model of critical dialogue, of which I also suggested that it tends to become too dualistic. I again promise to come back to this, after I first turn to my other theme, the protein transition.

10 Henk van den Belt alerted me to this 'later' side of Popper, evident e.g. from this passage in *The open society and its enemies* (1945), volume 2, page 217: " […] ironically enough, objectivity is closely bound up with the social aspect of the scientific method, with the fact that science and scientific objectivity do not (and cannot) result from the attempts of an individual scientist to be 'objective', but from the friendly-hostile co-operation of many scientists." However, since Einstein was and remained Popper's ideal of the self-critical scientist, Henk offered the afterthought that it is perhaps better to say that Popper continued to waver between idealism and realism.

3. The protein transition part 1: The pig in the backyard

Protein consumption has been changing through history and across the world. A very conspicuous change in the twentieth century was the great rise in meat consumption after the second world war, starting in the rich countries. Calls of alarm followed fairly quickly. In 1964, Ruth Harrison published *Animal Machines*, against the instrumentalisation of animals in intensive farming, while Frances Moore Lappé's *Diet for a small planet* dates from 1971. It was translated in Dutch as *Eten van moeder aarde*.





Moore Lappé argued that the perfect alternative for meat has been available for thousands of years, in the form of pulses: beans, peas, lentils, chickpeas etcetera. Good for us, good for the soil, good for food security. Let us eat less meat and more pulses (combined with grains), she said, and she offered encouragement through many recipes.[11] When I read the book as a student in the 1970s, it looked totally convincing and congenial to me. I knew peas as a traditional crop at our family farm in Zeeland, I liked them, and since societal change was in the air anyway, I simply expected that this much-needed transition was about to happen. But while the book was successful, its mission was not: decade after decade, global pulse consumption kept going down, global meat consumption kept, and keeps, going up.
This is why, when in 2007 I first heard about the idea of in vitro meat (later called cultured meat or cultivated meat), I thought 'Ah! This might finally help!' Real meat, but without its harmful consequences. From then on, I have been very interested in the idea of cultured meat and its role in the protein transition, studying societal responses and reflecting on them.

11 Her recipes combined pulses with grain. I once gave a recipe myself, 'chili con carne cultivada', hypothetically combining pulses with cultured meat, in Van der Weele (2017).

Clemens Driessen and I held focus groups to hear people respond and discuss, and it struck us how strongly the idea of cultured meat triggers ambivalence, not only about this potential new product but even more prominently about traditional meat. Someone would always raise the question if cultured meat isn't very unnatural, someone else invariably responded by wondering how natural our traditional meat actually is, and then the discussion continued about people's mixed feelings about meat. We came to see ambivalence as a crucial element in moral life, especially in times of change, and as a basis for new stories.

The clearest example of such a new story was a scenario that emerged from one of the groups and that we called 'the pig in the backyard' (Van der Weele and Driessen, 2013). In this view, pigs are kept in backyards or urban farms, some cells are taken from them very now and then, and cultured meat is then grown from those cells in small scale local factories.

Varkenshuis Tilburg, 2013

Whether such local factories were imagined in neighbourhoods, or in villages, as the title of the paper with Hans Tramper suggests (Van der Weele and Tramper 2014), the basic idea built on an ambivalent mixture of feelings - love of meat, concerns about animal welfare and sustainability, worries about alienation from our food, resistance to dependence on big companies, a longing for better relationships with animals, and more. The pig in the backyard created a new story out of this mixture and generated real enthusiasm, first among focus group participants and later among readers: a feeling that it combines the best elements of tradition and innovation.

Our general reflection on what happened in the focus groups was that after one and a half

hours of free discussion, perceptions had begun to shift: normal meat had typically come to look a little stranger and cultured meat a little more normal (Van der Weele and Driessen 2019).[12]

We proposed that ambivalence is a crucial aspect of moral deliberation and that it deserves a better moral reputation. Its role in times of transition, in particular, deserves more interest and attention, for example because it is a potential preamble to an acceleration of change. Avoidance of the emotional discomforts of ambivalence leads straight to strategic ignorance, very present in the protein transition and a sign that many concerns still remain underground. Dealing openly with ambivalence may lead to new creative energy and the discovery of new options, such as the pig-story.

The foregoing has direct connections with the question how to deal with dualities. Cultured meat is often pictured as a technological fix, located on one side of a deeply entrenched dualism between techno-optimism and techno-pessimism. Techno-optimists such as ecomodernists put their cards on human ingenuity, while techno-scepticism comes with pleas for a more sober way of life, regenerative agriculture, agro-ecology etcetera. Discussions about new directions for agriculture are often framed in these terms, with the suggestion that we must choose, even if we find the choice very difficult. For example, Charles Mann, in his book on this dualism, says that he oscillates: on Mondays, Wednesdays and Fridays he opts for one side, on Tuesdays, Thursdays and Saturdays for the other, and that on Sundays he doesn't know (Mann 2018, 13). Choose we must, is the clear suggestion, though here is really someone who looks like the proverbial ambivalent donkey that starves between hay and water, unable to choose whether it is more hungry or more thirsty.
Dualisms are potent attention devices with an almost built-in suggestion that choice is necessary. But when we are actually ambivalent, why would we feel forced to choose? Why not widen our search, for example by simply wondering about ways to use technological ingenuity AND change our lifestyles, why not create new inspiring stories in which the elements in tension are combined in new ways and core values from both sides are respected? For me, this looks not just like a personal preference, but as something that is dearly needed in the protein transition to overcome many forms of stalemate and paralysis. I think we should look for perspectives that manage to combine and integrate the things we value (Van der Weele 2021).

12 Earlier references to (sometimes very quick) processes of re-evaluation after first responses of surprise or even 'yuck' can be found in my first exploration of responses to cultured meat (Van der Weele 2010).

4. Protein transition 2: Pilot farms

For many years, cultured meat seemed too far off to take it really seriously as a threat for animal farmers, but as its realisation was coming closer this started to change. For me, the question if and how the pig in the backyard might be not just inspiring but perhaps also realistic merged with the growing need for new perspectives for farmers. Might they be somehow involved in the production of cultured meat? Might this technology be developed not just for big companies, but also for small scale producers in cities and rural areas? With this question, Else Barth, a few years after she had died, returned in my life in a new way. It turned out that she and her husband had left their money to a fund with the aim of improving the lives of animals in livestock farming. I applied for a grant from the Barth-Misset Fund, and received it, to discuss with farmers and others whether cultured meat might be an opportunity for farmers instead of (merely) a threat. Cox Janssens made an animation about this project that can be seen on the website of the Barth-Misset Fund

Drawing by Cox Janssens

The animation reflects some central outcomes of the study in that it pictures a happy prospect for farms and pigs, in combination with a lot of uncertainties and practical obstacles.[13] After all, the more obvious road towards cultured meat production involves economic viability through the efficiency of larger factories and larger companies. Big tensions exist between considerations of economic viability on the one hand and the societal benefits of smaller scale production on the other hand. The need to explore the feasibility of these hard-to-quantify benefits in more depth made pilot farms emerge as the way forward.

Ira van Eelen's efforts for realising a pilot farm are mentioned in the animation,[14] but she and I are now also members of a larger consortium that prepares a proposal on Cellular Agriculture[15] for the National Growth Fund. The proposal aims at developing meat, but also milk and cheese and potentially many more animal products, in new biotechnological ways, not just on large industrial scales but also on smaller scales, for farmers and urban producers. It is a non-dualistic vision for a societally embedded shift to a future in which various biotechnologies are combined with keeping (much less) animals, with arable farming and with other old and new forms of food production. Within the project, exploring and overcoming the tensions involved, with scale as a prominent one, is a crucial challenge.

Such a non-dualistic vision should also include a return to pulses. After all, they are still the perfect alternative for meat, and they are still waiting for their public image to be lifted from meat for the poor to meat for rich and poor alike (Van der Weele et al 2019). When the FAO called 2016 International year of the pulses, the aim was to reverse the ongoing decline: alongside decreasing consumption and production, breeding programmes had

13 It was generally agreed that it only makes sense to do it on a farm if there is a real reason for doing so, 'a good story'. The good story that emerged in various groups involved keeping animals of special breeds, free-roaming e.g. in nature areas, in order to produce local and artisinal specialties of cultivated meat from the cells of these animals, obtained through occasional biopsies.
Another finding was that farmers hardly discussed animal morality, for which one of them gave the following explanation: "Ever more farmers are morally concerned about what they do, caring for animals that are then killed, and that is new and world wide, and everybody knows it but you cannot say it as a farmer, it is high treason" (Bryant and Van der Weele 2021).

14 We collaborated in the second part of the study, after I found out she was hoping to realise a pilot farm for cultivated meat. She later discoverd that her father, Willem van Eelen, who was the Dutch cultured meat pioneer, already in 2008 proposed it as an option for farmers in an interview (Van der Sterren 2008).

15 This term, coined in 2015 (https://new-harvest.org/community-coined-cellular-agriculture/), includes a range of biotechnologies, such as cell culturing, tissue engineering, (precision-) fermentation and more. For pragmatic reasons, the proposal focuses on cultured meat (through cell culturing) and animal-free dairy (through precision fermentation), but the range of potential products is much larger – think of leather, fur, etc.

been stopped in many places, including Wageningen, since pulses were no longer commercially interesting. At our family farm, and farms all over, the same picture: as the demand dwindled, most farmers had been abandoning peas and beans.
But tentatively, pulses are returning. On our family farm, we experimentally started growing fava beans (field beans) a few years ago. I say 'we' because many years have passed, older generations have died, and our generation now runs the farm. On the photo below you see how our fava beans were harvested in August this year.

Photo by Kees Vos

In a sense, our farm can also be called a pilot farm, as we experiment with new crops, new ways to process them, and also with new collaborations. First of all, we have been collaborating for years with our nephews, who are arable farmers and who are also our neighbours. We also started to collaborate with fermentation experts - a tempeh maker, a miso maker - who are happy to try fava beans instead of the usual soy. And with Wageningen colleagues, including Wageningen artist in residence Arne Hendriks, a storyteller who likes to sketch new futures based on counterfactual pasts, for example about miso. We have thus come to see our farm too as a place of experiments and sorting out tensions.

Here you see a pot of miso, slowly fermenting in the basement of our farm until it is time to see what has become of it, next month.

Photo by Arne Hendriks

How do these two types of pilot farms – the Cellular Agriculture farm yet-to be-realised, the traditional farm looking for new directions - relate to each other? Pulses and cultured meat are both alternatives for meat, but quite different at first sight, and moving between them implies moving between the old and the new, tradition and innovation, between low tech and high tech. These differences create conspicuous tensions in the protein transition, and the dualistic attention trap suggests that we must choose. In the quest for ways to avoid that trap, let us also remember what pragmatist philosopher John Dewey had to say about deep changes: they require that we open up our visions through new imaginative turns, he wrote (Dewey 1980/1934). As I see it, dealing with ambivalence by turning them into new searches instead of binary oppositions can offer such openings.

5. Ambivalence and action research

Let me bring my themes together. I first mentioned the need for a mutually critical attitude to combat our selective attention, and then I pictured how in the protein transition we need to overcome a dualism of options. These suggestions may seem to be in serious tension. More specifically, if we associate criticism with the roles of opponent and proponent, isn't this inherently connected with the dualism of precisely two options – yes or no, black or white, winning or losing? I have been emphasizing that tensions can also be the basis for new options and new stories, so it is about time to briefly come back to this opponent-proponent - dualism.

A coherent view is quickly within reach, I think, by simply dropping the assumption that winning and losing are the only possible outcomes of critical discussion. Critical discussion cán be a winner-takes-all competition, but it can also have dualistic aspects without having dualistic choice as an aim. It can become part of a search for third and fourth options. This means, first, that critical discussion is not the opposite of collaboration but is on the contrary an essential part of it. Creativity (or the context of discovery) and criticism (or the context of justification) are both needed for good outcomes. But second, these contexts may not even be so neatly separated. The protein transition illustrates that an either-or framing can be turned into a search for third and fourth options that is creative and critical at the same time. Such collaborative confrontation of perspectives in tension functions as a remedy against confirmation bias and group think. We know the dangers of homogeneous bubbles that lead to ever more extreme positions as well as polarisation with other groups. This happens in science, too (see e.g. O'Connor and Weatherall, 2017). Turning dualism into collaborative ambivalence is often a constructive move.

This is relevant in somewhat different ways for societal and academic life. In the context of the university, it takes me to a small plea. There are many things to reflect on in present-day science. We all talk, for example, about how a competitive atmosphere is now too dominant. The stress and haste of this atmosphere are partly taking away the time and energy that academics need for active critical engagement with each other's work. Let me just very briefly argue for reinvigorating reflection on science as part of all academic education, not only through moral reflection on integrity, but certainly also through a new emphasis on philosophy of science –including questions around dualism and polarisation. I have no time for further elaboration, let me instead end by suggesting that apart from being concrete places, pilot farms are also metaphors for (action) research. They combine the search for the new with the inherent conservatism of farming, thereby stimulating back-and-forth thinking between tradition and innovation to build new stories based on tensions.

6. Words of thanks

The end of my formal relation with Wageningen University is not the end of my active life, but it surely is a moment for looking back and saying thanks. Such a moment makes it tempting to think that everything in life led up to it. But actually, my appointment at the Socrates chair came after a period of such turns and setbacks that I thought my career had come to a standstill. This seemed not a totally horrible outcome, yet it was something to digest. The whole episode made me extra aware of how forces in life, the moon and the wind etcetera, can make you wash on very different shores.

The appointment was a new turn, and overall a happy one. I enjoyed holding this chair, and I want to thank the organisations that were directly responsible, the humanistic Socrates Foundation and the university. I thank the Socrates Foundation for the welcoming atmosphere. It was a pleasure to have an active role in thinking with my Socrates colleagues and the board about new directions for humanism.[16] I also thank my curatorium, consisting of Annemarie Mol, Gert Spaargaren and Marcel Verweij, for always being warmly supportive.

The university has also been welcoming. The fact that Wageningen knows no split between faculties functions as a constant invitation for the interdisciplinary collaboration and reflection that I value so much, and I have gratefully made use of it. My involvement with Studium Generale also fitted in with this interdisciplinary spirit. Chairing the SG board had great synergy with the Socrates chair, and I am proud of the team that is producing ever more excellent programmes and initiatives.

I started my study of biology exactly fifty years ago. During these fifty years I studied and worked at so many places and with so many people that I can have no hope of doing justice to all. The only option is dropping any aim of completeness.
In my time as a student, Else Barth was a source of inspiration, and later, when I wrote my PhD thesis, so was Susan Oyama. Wim van der Steen as my first PhD supervisor was a rock of support, and I am still happy that Rolf Hoekstra had a role in both my graduate and my PhD thesis.

Through the enjoyable bio-art group in Amsterdam, the Arts and Genomics centre led by Rob Zwijnenberg and Miriam van Rijsingen, I met bio-artist Oron Catts and his work Disembodied Cuisine. Even though Oron himself was very sceptical of cultured meat, I

16 I argued for the importance of ambivalence for humanism, too (see e.g. Van der Weele 2013a) and also wrote about relations between humanism and technology (Van der Weele and Van den Belt 2020).

have remained interested ever since. My first collaboration was with Henk Haagsman, with the active and early support of the ministry of LNV. The most recent support came from the Barth-Misset Fund. Along this road I have been happy to collaborate with many people across disciplines – among them Mark Post, Ira van Eelen, Cox Janssens, and most intensively Clemens Driessen. In the wider field of the protein transition there are also many people, for example Tiny van Boekel, Etske Bijl, Arne Hendriks and many others; sorry to be so extremely incomplete. I am glad that these activities are in many forms also extending into the future.

The philosophy Group has been a basis for collaborations that often took me elsewhere, but I also worked closely with direct colleagues, notably Jozef, Henk and Clemens, and more recently Zoë, while others were dear roommates and friends: Bernice, Leon, Beatrijs... I thank Marcel for his support and for leading the group in a friendly atmosphere. There were thesis students with stimulating themes. There were colleagues, especially from biology and sociology, for collaborations in the form of reading groups and educational experiences. Inspiring teaching experiences often involved interdisciplinarity: setting up an ethics/sociology integration in a food course with Jessica Duncan, the combination of human genetics and ethics in a course that includes the choice whether or not to go for a DNA test. And there was the friendly and helpful supporting staff, with Bea in a special long-term connection with the PHI group, and today a special thank you to Inge for her dedicated support in the organisation of this day.

Henk van den Belt and Clemens Driessen left the philosophy group earlier than I did. Clemens is now with the geographers and Henk has retired and moved to Australia, but I am lucky to still be working with both, planning further writing projects to which I look forward. It is a great joy to have such deep and long-lasting collaborations and I feel grateful to both of you, also for initiating and organising the wonderful symposium we had earlier today.

Friends, individual and in groups, and neighbours as well: it is impossible to imagine a good life without you and from now on I am confident that I will have more time for walks and everything.

Turning to my family: grateful memories, first of all of my parents, remain from older generations. In our own generation, inheriting a farm with many people has been wonderful as well as complicated. It has taken us through some turbulent adventures and tensions. Yet I am confident that with patience this also offers opportunities for a renewal of relations.

Joël: I am happy to see you and Stefi so thriving in your work and together. And with you, too, I am looking forward to joint writing. After all, it was you who introduced me to the concept of strategic ignorance.
Bruno, finally. We combine a loving and harmonious daily life with some background differences that can sometimes get tricky but that also offer openings to new levels of vitality in our relationship. It is a wonderful journey.

Ik heb gezegd.

References

Adamo, M., Chialva, M., Calevo, J. *et al.* (2021). Plant scientists' research attention is skewed towards colourful, conspicuous and broadly distributed flowers. *Nature Plants* 7, 574–578. https://doi.org/10.1038/s41477-021-00912-2

Barth, E.M. (1970). Enten-eller; De logica van licht en donker. *Algemeen Nederlands Tijdschrift voor Wijsbegeerte* 62, 217-240.

Barth, E.M. (1971). *The logic of the articles in traditional philosophy*. Dordrecht: Reidel Publishing Company.

Barth, E.M. (2018). *Empirische logica; essays over logica, wetenschap en politieke cultuur*. Redactie Else de Jonge en Wouter Slob. Amsterdam: Amsterdam University Press.

Barth, E.M. and E.C.W. Krabbe (1982). *From axiom to dialogue*. Berlin: De Gruyter.

Barth, E.M. and J.L. Martens (1982). *Argumentation*. Amsterdam: John Benjamins.

Bryant, C.J. and C.N. van der Weele (2021). The farmer's dilemma: meat, means and morality. *Appetite* 167, 105605. https://doi.org/10.1016/j.appet.2021.105605.

Challenger, M. (2021). *How to be animal; a new history of what it means to be human*. London: Canongate.

Dana, J., R.A. Weber and J. X. Kuang (2007). Exploiting moral wiggle room: experiments demonstrating an illusory preference for fairness. *Economic Theory* 33/1, 67-80.

Darwin, C. (2004/1871). *The descent of man, and selection in relation to sex*. London: Penguin.

Dewey, J. (1980/1934). Art as experience. New York: Pedigree.

Eil, D. and J.M. Rao (2011). The good news - bad news effect; asymmetric processing of objective information about yourself. *American Economic Journal: Microeconomics*, 3 (2), 114-38.

Golman, R., D. Hagmann, and G. Loewenstein (2017). Information avoidance. *Journal of Economic Literature* 55/1, 96-135.

Grossman, Z. and J.J. van der Weele (2017). Self-image and wilful ignorance in social decisions. *Journal of the European Economic Association* 15/1, 173-217.

Haraway, D.J. (1985). A manifesto for cyborgs: science, technology and socialist feminism in the 1980's. *Socialist Review* 80, 65-108. Included as 'A cyborg manifesto' in Haraway (1991): S*imians, cyborgs and women*. New York: Routledge.

Haraway, D.J. (2003). *The companion species manifesto: dogs, people and significant otherness*. Chicago: University of Chicago Press.

Harding, S. (1986). *The science question in feminism*. Ithaca: Cornell University Press.

Harrison, R. (1964). *Animal machines: The new factory farming industry*. London: Vincent Stuart.

Lakoff, G. and M. Johnson (1980). *Metaphors we live by.* Chicago: University of Chicago Press

Lakoff, G. and M. Johnson (1999). *Philosophy in the flesh: the embodiment of thought and its challenge to western thought*. New York: Basic Books.

Latour, B. (1993). *We have never been modern*. Cambridge (MA): Harvard University Press (originally in French, 1991).

Lappé, F.M. (1971). *Diet for a small planet*. New York: Ballantine Books. Translated in Dutch in 1974 as *Eten van moeder aarde* (Amsterdam: Elsevier).

Mann, C. (2018). *The wizard and the prophet; science and the future of our planet*. New York: Penguin.

Mercier, H. and D. Sperber (2011). Why do humans reason? Arguments for an argumentative theory. *Behavioral and Brain Sciences* 34, 57-111.

Mill, J.S. (1859). *On Liberty*. Included in J.S. Mill (1975 and further editions) *Three essays*. Oxford: Oxford University Press.

O'Connor, C. and Weatherall, J. O. (2017). Scientific polarization. *European Journal for Philosophy of Science* 8/3, 855–875.

Onwezen, M.C. and C.N. van der Weele (2016). When indifference is ambivalence; strategic ignorance about meat consumption. *Food Quality and Preference* 52, 96-105.

Oreskes, N. (2019). *Why trust science?* Princeton: Princeton University Pres.

Oyama, S. (1985). *The ontogeny of information; developmental systems and evolution*. Cambridge: Cambridge UP. Second revised edition 2000 by Duke UP.

Popper (1945): *The open society and its enemies*. London: Routledge.

Schwardmann, P., E. Tripodi and J.J. Van der Weele (in press). Self-persuasion: Evidence from field experiments at international debating competitions. *The American Economic Review*

Smith A. (1976/1759). *The theory of moral sentiments*. Oxford: Clarendon Press.

Van der Sterren, M. (2008). Kweekvlees kans voor varkenshouders. *Fokkerij*, 16 juni.

Van der Weele, C.N. (1999; original PhD-thesis 1995). *Images of development; environmental causes in ontogeny*. Albany: SUNY Press.

Van der Weele, C.N. (2006). Food metaphors and ethics: towards more attention for bodily experience. *Journal of Agricultural and Environmental Ethics* 19: 313-324. https://library.wur.nl/WebQuery/wurpubs/345704

Van der Weele, C. (2010). In vitro-vlees yuck!? Een eerste verkenning van een eerste reactie. Den Haag: LEI-nota. https://edepot.wur.nl/169063

Van der Weele, C. (2011). Empathy's purity, sympathy's complexity: De Waal, Darwin and Adam Smith. *Biology and Philosophy* 26, 583-593. https://link.springer.com/article/10.1007/s10539-011-9248-4

Van der Weele, C.N. (2013). *Willen weten: wel/niet, vlees/kweekvlees*. Inaugurele rede Wageningen Universiteit. https://edepot.wur.nl/252598

Van der Weele, C. (2013a). Ambivalentie over mensen, een humanistische opgave. *Waardenwerk* 53, 17-24.

Van der Weele (2017). *Cultured meat, better than beans?* In J. Duncan and M. Bailey (eds): *Sustainable Food Futures; multidisciplinary solutions*. London: Routledge, 163-174.

Van der Weele, C., (2021). How to save cultured meat from ecomodernism? Selective attention and the art of dealing with ambivalence. In B. Bovenkerk and J. Keulartz (eds): *Animals in our midst: The challenges of co-existing with animals in the Anthropocene*. Springer: The International Library of Environmental, Agricultural and Food Ethics 33, 345-357. https://edepot.wur.nl/547606

Van der Weele, C. (in press). How can attention seeking be good? From strategic ignorance to self-experiments. In M. Wehrle, D. D'Angelo and E. Solomonova (eds). *Access and Mediation; Transdicisplinary perspectives on attention*. Berlin: Walter de Gruyter, 259-278.

Van der Weele, C. and C. Driessen (2013). Emerging profiles for cultured meat; ethics through and as design. *Animals* 3/3, 647-662.

Van der Weele, C. and C. Driessen (2019). How normal meat becomes stranger as cultured meat becomes more normal; ambivalence and ambiguity below the surface of behavior. *Frontiers in Sustainable Food Systems* https://www.frontiersin.org/articles/10.3389/fsufs.2019.00069/full

Van der Weele, C. and A. Ruissen (2013). Ambivalentie en strategische onwetendheid rond vlees. Den Haag: LEI-nota, https://edepot.wur.nl/279567

Van der Weele, C. and J. Tramper (2014). Cultured meat: every village its own factory. *Trends in Biotechnology* 32, 294-296.

Van der Weele, C., P. Feindt, A.J. van der Goot, B. van Mierlo and M. van Boekel (2019). Meat alternatives, an integrative comparison. *Trends in Food Science and Technology* 88, 505-512.

Van der Weele, C. and H. van den Belt (2020). Humanism and Technology. In A. Pinn, A. (ed.): *The Oxford Handbook of Humanism*. Oxford: Oxford University Press

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Should we put our agricultural hopes in new technologies or in regenerative approaches? Dualisms, and their suggestion that we must choose, frame many debates. By offering just two options, they tend to discourage more wide-ranging and creative searches. Yet dualism can also be helpful, for example in the form of critical discussion, an antidote against confirmation bias and wishful thinking. But then again, critical dialogue is not necessarily connected with the dualism of winning or losing.
Why choose, if we are actually ambivalent? This lecture looks for pragmatic ways of dealing with dualisms. It proposes pilot farms as places, and as metaphors, for finding new directions on the basis of tensions, through back and forth thinking between tradition and innovation.

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