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# Meat—the enemy within

Jocelyne Porcher<sup>1</sup>

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## Abstract

The radical criticism of animal husbandry currently taking place in the name of protecting animals and the planet is largely focused on meat. What are the reasons for this polarisation? What is meat? It is crucial to respond to these questions at a time when the reduction of the symbolic distance between humankind and ‘other animals’ is challenging representations of flesh, and when ‘cultured meat’ is taking root in people’s minds before it takes its place on supermarket shelves.

**Keywords** Meat · Flesh · Animal husbandry · Cultured meat · Death

Since 2006 and the publication of the FAO report ‘Livestock’s Long Shadow’,<sup>1</sup> animal husbandry has faced numerous accusations, being held responsible for greenhouse gas emissions, deforestation, biodiversity loss, water wastage, zoonoses and animal suffering. Animal husbandry appears to be environmentally damaging and we would be better off without it. In a dozen years, this accusation has extended not only to livestock production in general but also to its products, and one of them in particular—meat. Having been a desirable product, it has now become morally repulsive, a danger for health and the symbol of our civilisation’s archaism. For the common good, we must urgently and drastically reduce our meat consumption or even forgo it altogether and change our diets by opting for vegetarian or vegan models. Or, more likely, by entrusting the fate of our food to cellular agriculture. How can we explain how this radical evolution has occurred in what seems such a short lapse of time? And what is meat? We propose to answer these questions from a zootechnics and socio-anthropological point of view, firstly by examining current criticisms of meat, and secondly by returning to what defines meat and the semantic problems posed by a biotech innovation such as ‘cultured meat’. We conclude with the idea that meat, for its

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<sup>1</sup>H. Steinfeld et al., 2006. *Livestock’s long shadow. Environmental issues and options*, Rome, Food and Agriculture Organization of the United Nations <http://www.fao.org/3/a-a0701e.pdf>

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detractors, is the enemy within, animal flesh in its own right, all the more worrying because since animals have become our ‘neighbours’, all flesh is potentially meat.<sup>2</sup>

## ‘Abolishing meat’

When partisans of ‘the abolition of meat’ explain their arguments, we see that, as has already been seen in the ‘Livestock’s Long Shadow’ report, no distinction is made between what should really be called ‘animal husbandry’ and animal production. Animal husbandry here designates the historical working relationship with farm animals that incorporates various rationalities, the first being relational. The term ‘animal husbandry’ or farming has been appropriated by animal production since the nineteenth century, and is used generically, which allows for the use of terms such as ‘industrial animal farming’, which is an oxymoron, or expressions such as a ‘farm’ of 1000 sows or cows (Porcher 2002). Criticism is directed indifferently on systems in which animals are raised and systems in which they are produced, i.e. industrial and intensive systems, as if their impacts on the environment, health and animals were the same. And above all, as if this equivalence had been proved and there were no need to examine it further. The same is true for meat. Meat is carcinogenic, it causes cardiovascular diseases, it is a cause of obesity, it leads to zoonoses, and so on. Meat is said to be a poison that is more directly harmful than tobacco. Because it is impossible to ban it, we should discourage its consumption or tax it.

The shift from criticising animal husbandry to criticising meat raises several questions. Logically, since prior to meat it is the farming of animals that is being challenged, all animal products should be discredited—meat, but also milk, cheese, eggs, etc. On the contrary, however, in parallel to the instruction to eat less meat, or even not to eat any at all, praise for vegetarianism can be observed along with recommendations for a vegetarian diet (e.g. the adoption of ‘Meatless Monday’ in school canteens). Meat should be banished but we could continue to eat cheese, yoghurt, eggs, etc. However, eating dairy produce or eggs from industrial farms sends just as many animals to the slaughterhouse (calves, hens, cull cattle) as eating meat does. In fact, around half the beef eaten comes from dairy systems.

Historically, this moral aporia of vegetarianism has led to veganism, in other words, in theory, the rejection of any animal-based product.<sup>3</sup> The vegetarian position, then, if not accompanied by an engagement for livestock systems that respect animals, is particularly immoral. Effectively, it involves delegating to others the consumption of meat that one refuses to eat oneself, so as not to have blood on ones hands, but nevertheless to consume the products that it has generated. For there to be vegetarians, there must therefore be meat eaters. Or to kill dairy animals (calves, lambs, kids, foals)

<sup>2</sup> To borrow and inverse the idea of Vialles 1998

<sup>3</sup> In 1944, in Great Britain, the Vegetarian Society splits with some of its members wanting to encourage the rejection of consuming any animal-based product. They created the Vegan Society that promotes veganism. It should be noted that the definitions of ‘veganism’ or ‘vegans’ include ‘as far as possible’ and ‘whenever possible’, which show that the vegan position is, in fact, asymptote. Veganism is above all an intention rather than being the rigorous following of a permanent diet and way of life with no animal sources. This allows people to describe themselves as vegan and to eat crustaceans, for example.

at birth, and to send cull animals to the knackery ... This is what current food policies tend to lead to.

## Why the polarisation about meat?

On an international level, scientists and politicians have (belatedly) become aware of the disastrous impact on the environment of animal production and the excessive consumption of its products. The short-term objective is, therefore, to reduce this impact by influencing an aspect of our consumption (which is relatively easy to influence because it involves sweeping the moral problem of the industrialisation of livestock production under the carpet), namely the consumption of meat. Meat is, of course, unlike any other product. It is the result of slaughtering animals.<sup>4</sup> This is why the environmental argument can easily be bound to another argument, that killing animals is a crime and that eating them is a Neolithic relic that should be consigned to history.

The message from opponents of animal husbandry goes to great lengths to ‘abolish meat’. In France,<sup>5</sup> dozens of studies, articles, videos and documentaries and millions of messages on social media encourage the simple equation: meat = murder + destruction of the planet, and its dietary solution = a plant-based diet. In all this messaging, mention is rarely made of another path, which would be to support peasant or small-scale animal husbandry or at least other forms of livestock raising that have been shown to be advantageous for the environment, human health, domestic biodiversity and animal well-being (Dumont et al. 2019; Confédération Paysanne 2020).

Down with meat, then! Or rather ‘animal flesh’, the term favoured by detractors of meat-eating. This term emphasises a similar body component in human beings and animals. While the term ‘meat’ is applied to human beings metaphorically,<sup>6</sup> the word ‘flesh’ can refer to both human beings and animals, and, when applied to humans, takes on a religious dimension (‘This is my flesh...’). Flesh is the incarnate being. This is why, although the term ‘meat’ is sufficient to refer to the animal body because it represents a food category, the term ‘flesh’ has to be qualified: animal flesh. ‘Killing animals’ and ‘animal flesh’ are thus the keywords in the implicit transfer from animal to human in the criticism of meat. It is far more difficult to obtain this level of semantic effectiveness with the term ‘yoghurt’ or ‘egg’—all the more so because, as mentioned above, slaughtering animals is an inherent part of meat while it is obscured in yoghurt.

## Which meat?

Just as it is necessary to distinguish ‘animal husbandry’ from ‘animal production’, distinctions should also be made between meat that has been raised and meat that has

<sup>4</sup> Contrary to the verbatim statements of opponents of meat-eating, human beings are not carrion eaters; they do not eat corpses. The animal must be killed to be consumed. This is done in a ritualised fashion in many societies (Vialles 1987; Porcher 2011; Bruckert 2018).

<sup>5</sup> Millions on an international level, and billions of posts and tweets on social media.

<sup>6</sup> There are many expressions (usually derogatory) in English where the word ‘meat’ is used: dead meat, meathead, easy meat, meat market, put some meat on your bones, etc.

been industrially produced, because although the notion of meat as a general food category is clear, it is far less clear when it involves distinguishing its origin. There are considerable differences in the quality of meat between pork from industrial systems and, for example, pork from the Noir de Bigorre breed of pigs. In particular, it is the quality of the fat that makes the difference from an organoleptic point of view and that also has consequences with regard to health. What's more, if there are considerable differences with regard to the product, these differences are constructed by the animal husbandry system. The qualities of Noir de Bigorre, Cul Noir du Limousin, Quintoia and Nustrale pork<sup>7</sup> can be explained by the breed, selected over decades using criteria not only with regard to productivity but also the animals' lifestyle (in particular their free-range diet), and age at weaning and slaughtering.<sup>8</sup> For meat to be recognised as high quality, it is primarily a matter of the connections between human beings, animals and the land.

In contrast, what can be said of meat from the animal production industry? Under what conditions can it be said that a 'standard' chicken, slaughtered at 40 days, an animal whose muscle structure is deformed, such as the 'spaghetti chicken' (Berri et al. 2017), through selection that maximises both the quest for weight and speed of growth, is meat? A former 'broiler' producer commented (Porcher 2002) 'but I wouldn't buy industrial chicken (I used to produce it), I know how they're raised, let's say that for us, it's not good, industrial chicken is not good, it's produced in six weeks, you'd think you were eating flour'.

From a semantic point of view, industrial chicken is meat, i.e. food derived from animal muscle (Larousse dictionary). But from the point of view of meaning, it 'is not good' because the timeframe of the animal's life is not connected to what makes the quality of the meat. Industrial chicken tastes of flour (used to feed animals); it does not have its own taste. And effectively, it is hard to distinguish which animal supplied the meat in industrial products (industrially produced). 'Broilers' or 'pork pigs', enlightening concepts from the industry that produces them, merge in a space-time reduced to buildings and an optimum 'lifespan' from the point of view of profitability.

## Meat without the animal

Partisans of the abolition of meat promote, as we have seen, a plant-based diet. Steak should be replaced by soya steak. But the substitution operation does not end there. Far more than plant-based alternatives, biotech innovations are offering to replace meat. They are part of the new concept of 'cellular agriculture' (Cell Ag), which includes but is not limited to animal products destined for food such as meat, milk and eggs, as well as leather and silk. The objective is to produce substitutes using vegetable matter (Beyond Meat, Impossible Food) or to produce not a substitute but 'cultured meat'

<sup>7</sup> Only six local breeds of pig remain in France: Gascon, Kintoa (Basque), Nustrale (Corsica), Cul noir du Limousin, Bayeux, Blanc de l'Ouest, i.e. around 3000 breeders, mainly Gascon, Kintoa and Nustrale.

<sup>8</sup> For comparison, industrial pigs are weaned at 3 weeks, or even earlier, and slaughtered at 5.5 months. A local breed of peasant-reared pig is weaned at 2.5 months (age of spontaneous weaning by the sow) and slaughtered at 18 or 24 months. An industrial breed of sow produced 17 piglets per year 1970, and 31 today. A local breed of sow produces between 12 and 15 piglets per year depending on the breed and system of rearing.

(Aleph Farms, Mosa Meat, Higher Steaks, Meatable, Memphis Meat, New Age Meat, etc.).

What is ‘cultured meat’? Technically, it involves cultures of stem cells in a controlled environment. The process is based on the natural process of muscle tissue regeneration. Stem cells are taken from the animal muscle (cow, hen, pig). Then, explains the Mosa Meat website, ‘The cells are placed in a medium containing nutrients and naturally-occurring growth factors,<sup>9</sup> and allowed to proliferate just as they would inside an animal. They proliferate until we get trillions of cells from a small sample. This growth takes place in a bioreactor, which looks similar to the bioreactors that beer and yoghurt are fermented in. When we want the cells to differentiate into muscle cells, we simply stop feeding them growth factors, and they differentiate on their own. The muscle cells naturally merge to form “myotubes” (a primitive muscle fibre that is no longer than 0.3 mm long). The myotubes are then placed in a gel that is 99% water, which helps the cells form the shape of muscle fibres. The muscle cells’ innate tendency to contract causes them to start putting on bulk, growing into a small strand of muscle tissue’.<sup>10</sup>

This process is the result of research into the substitution of *in vivo* by *in vitro* in medical experiments and space research. For those who devised it, cultured meat is as natural as meat from animals except that it ‘grows outside the cow’, as Mark Post, founder of Mosa Meat, explains. It involves reproducing in an incubator a phenomenon that is spontaneous in the animal. In other words, for its inventors, cultured meat *is* meat.

This ‘cultured meat’ is championed by dozens of start-ups funded by millionaires, investment funds and foundations but also by associations that ‘defend’ animals, such as PETA in the USA and L214 in France (Porcher 2019). It is interesting that the vocabulary used by both groups when it involves ‘cultured meat’ does not refer to ‘animal flesh’ but meat. It thus becomes morally edible because it comes from an incubator and not a slaughtered animal.<sup>11</sup>

Is cultured meat really meat?

Is ‘cultured meat’ really meat? If we stick to a strict definition, yes. If ‘standard’ chicken or ‘pork pig’ meat is meat, effectively, it is difficult to claim that ‘cultured meat’ is not. Current semantic debates about the terms ‘milk’ and ‘meat’, for which the animal production industry has won the right that they should not apply to plant-based products,<sup>12</sup> will be more complicated when this involves contesting the right of ‘cultured meat’ to be called ‘meat’. Will ‘cultured meat’ lose its ‘meat’ status if it is produced in an incubator in three weeks rather than in a pig (depending on the representations of its inventors) in 5.5 months?

<sup>9</sup> Until recently, the nutrient medium was calf serum.

<sup>10</sup> Mosa Meat, *How it’s made*, <https://www.mosameat.com/technology>, accessed September 2020

<sup>11</sup> It should be noted that animal ‘defenders’ who promote ‘cultured meat’ do not plan on consuming it themselves, although it would be welcomed to feed their cats. As PETA explains, it is about changing the behaviours of ordinary omnivores: ‘But because many people refuse to kick their meat addiction, PETA wants to help them switch to flesh that does not cause suffering and death’. <https://www.peta.org/features/vitro-meat-contest/>

<sup>12</sup> In France, the bill ‘relating to the transparency of information about food products’ was definitively adopted on 27th May 2020 at the National Assembly. This text bans the use of animal denominations (steak, filet, sausage) being applied to plant-based products.

As we have seen, the different timescales in the industrial production of pork or chicken have not had an impact on the definition of the product. No one contests the meat status of industrial chicken or pig pork, except to say that it is bad meat with an indistinguishable taste. The production process of ‘cultured meat’—whose conceptual origin is the same as the one that prevailed in the industrialisation of animal husbandry, i.e. nineteenth century zootechnics, the idea that farm animals serve to produce animal matter and profits (Porcher 2011)—leads to an even more reduced timeframe. Obviously, this continual shortening of production cycles is what makes the process profitable.

Many studies express doubts about the success of marketing ‘cultured meat’, emphasising that demand is weak (Hocquette et al. 2015; Slade 2018; Bryant and Barnett 2020). It could even be said that, in reality, it is non-existent. Which consumers, apart from animal defenders who do not envisage consuming it themselves, demand ‘cultured meat’? For this reason, building demand is a major challenge for both start-ups and the investment funds that back the project’s construction. Building demand occurs in two main ways. First and foremost, thanks to the radical and repeated criticism of animal husbandry championed by animal ‘defenders’. The extensive market research conducted by promoters of Cell Ag has shown that consumers were not sufficiently aware of how meat is produced in industrial systems and that it was therefore necessary to inform them so that, by comparison, Cell Ag appears preferable (Porcher 2019). Exposing industrial systems is, then, the role attributed to animal ‘defence’ associations<sup>13</sup> whose ‘revelations’ are relayed by the mainstream media and social media.<sup>14</sup> Building demand then occurs by assessing, with frequent surveys in every country, the acceptability of ‘cultured meat’. And as Bryant and Barnett (2020) point out, acceptability is increasing.

## Meat is not just meat

The essential problem is that the benchmark, both critical and alternative, used by the inventors of ‘cultured meat’ is industrial production. Cell Ag primarily aims to replace products from industrial systems. They seek to perfect a ‘standard’ product that is similar to what is already offered on supermarket shelves. The main difference between an industrial chicken breast in its packaging and one produced by Cell Ag will be on its label with, for example the specification ‘produced without killing animals’.

It is far harder to imagine producing ‘cultured meat’ that resembles the meat of a 3-year-old bullock, or a Noir de Bigorre<sup>15</sup> pig, because what makes the meat of these animals is a subtle interweaving of time and relationships with nature, farmers and the professionals who, prior to its being sold, prepare and transform the meat (maturing it, salting it, etc.).

What could be good about ‘cultured meat’ that will make it good to eat<sup>16</sup>? What is ‘cultured meat’ from a symbolic and anthropological perspective? The living-dead.

<sup>13</sup> Thus, in 2017, the French association L214 received over a million euros from the American foundation Open Philanthropy Project to promote criticism of the poultry sector in France.

<sup>14</sup> We might consider that the recent launch in France by Xavier Niel and two other millionaires of a petition in favour of a Popular Initiative Referendum ‘for animals’ is part of this strategy (Porcher 2020).

<sup>15</sup> Although the company Aleph Farms claim to be doing so.

<sup>16</sup> To take up the examination by Verdier (1969) in response to the writing of Claude Levi-Strauss (1962)

Organic life with cells that multiply, but subjective death. There is no one behind these cells and incubators. No subjectivities, no affects, no shared history. The inventors of ‘cultured meat’ highlight the fact that it avoids the death of animals. But it should be pointed out that, if it avoids death, this is only because it avoids life (Porcher 2010). Life is not only biology. It is meaning, connection, culture, affects and so on. ‘Cultured meat’, just like the industrial animal production systems of which it is a logical continuation, echoes what Michel Henry called ‘barbarism’ (Henry 1987), i.e. the destruction of culture, the regression of ways in which life can be fulfilling (Porcher 2018).

## Conclusion

For promoters of ‘cultured meat’, meat from animals is dirty, in contrast to ‘cultured meat’ that is ‘clean’. ‘Dirty’ meat is proof of the intrinsic violence of our relations with animals and our propensity to eat our neighbours. ‘Animal flesh’, as we know, and which is the very reason for its rejection by abolitionists, is the same as our own flesh. And the darkest fear that emerges in arguments against meat reflects this animal flesh within us. Because we are not purely spirit, we have bodies. And bodies are flesh. For detractors of diets that contain meat, meat is the enemy within, evidence of our too-close proximity with animals. For if ‘meat grows inside the animal’, it also grows inside us. No longer consuming meat means distancing the enemy and ceasing to make meat of ourselves.

As anthropologists have stressed, other living beings’ distance from human beings boosts their edible nature. But for the last 30 years or so, ethical philosophers have reduced the distance between human beings and animals so that animals have become our ‘neighbours’. Human flesh, animal flesh, the same flesh, in fact. Too close, then, to continue to be edible. By turning away from the production of the flesh of an animal’s body, and by ‘fattening’ it in an incubator, the inventors of ‘cultured meat’ reintroduce this distance because the meat does not come out of an animal but an incubator. But the question of proximity remains more than ever since what differences are there between a cluster of pig cells and a cluster of human cells? Who will be able to tell the difference when the ore of ‘cultured meat’ bought in the supermarket will have been made with a 3D printer? The taboo of anthropophagy that hovers over the debates about meat curiously disappears with regard to ‘cultured meat’, despite the fact that the process makes it concretely possible to produce ‘soylent green’<sup>17</sup>, the food product made from the human body.

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<sup>17</sup> Cf. The film ‘Soylent Green’, 1973, directed by Richard Fleischer, 93 mn, Warner Bros.



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