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## Essays



# Measuring the simplicity of panpsychism

Taufiqurrahman

*Abstract:* Panpsychism has recently emerged as a promising approach to addressing the hard problem of consciousness. This view posits that consciousness is both fundamental and ubiquitous. A recurring argument in its favour is the simplicity claim – that panpsychism is the simplest theory compared to its alternatives. However, the specific criteria for judging panpsychism as the simplest among competing theories remain underexplored by both its advocates and critics. This paper seeks to identify these criteria and assess the simplicity of panpsychism in relation to other metaphysical theories of consciousness. Through a comparative analysis, the paper argues that panpsychism is neither inherently simpler nor more complex than rival theories. The monistic version of panpsychism, for instance, entails a simpler ontological commitment than functionalism, the most widely accepted theory of consciousness. However, when ideological commitments are factored into the evaluation, even monistic panpsychism loses its purported simplicity advantage, let alone the dualistic versions of the theory.

*Keywords:* panpsychism, simplicity, consciousness.

## 1. *Introduction*

One of the most pressing problems in the philosophy of mind nowadays is the so-called “hard problem of consciousness.” This problem compels us to address how and why certain physical systems, such as the human brain, give rise to phenomenal consciousness or what it is like to be human (Chalmers, 2010). Philosophers have been attempting to solve this problem for over two decades, and one proposed solution is panpsychism. According to this theory, human beings are conscious because microphysical objects, such as the electrons that make up the human brain, possess a simple form of consciousness. Panpsychism suggests that consciousness is a fundamental and ubiquitous aspect of physical reality (Goff 2019a; Seager 2009; 2016; 2020).

The panpsychist view is favoured over other theories because it aligns with our intuition that conscious experience is real and offers a simple yet non-trivial account of the intrinsic nature of the world. Other views, such as eliminativism and identity theory, conflict with our intuition by denying the reality of con-

consciousness. Although dualism is consistent with our intuitive sense of consciousness, it faces criticism for its ontological complexity, as it posits two different kinds of fundamental entities. Functionalism, while ontologically simpler and accommodating to our intuition regarding the existence of consciousness, fails to provide a non-trivial account of the intrinsic nature of physical entities. Instead, it explains consciousness in terms of functional and relational properties rather than intrinsic ones. As a result, adopting a functionalist stance risks leaving us ignorant of the intrinsic nature of the physical world.

Hence, Goff (2017a: 169) argues that “of all metaphysical theories consistent with the reality of ordinary consciousness, panpsychist forms of Russellian monism are the most simple, elegant, and unified.” He refers to this as the “simplicity argument” for panpsychism. While physics describes the causal, dispositional, and mathematical properties of matter, it does not address its intrinsic nature (Eddington, 1929, p. 259; Russell, 1927, p. 10). Consequently, there is a gap in our knowledge provided by physics. In contrast, panpsychism offers a more promising approach by proposing that the intrinsic nature of all physical entities is a form of consciousness. Given that we, as physical beings, have a consciousness-involving intrinsic nature, it is simpler and more unified to assume that the intrinsic nature of other physical entities is similar to ours, rather than different. This argument is also known as “the intrinsic nature argument” (Seager, 2006).

Additionally, the simplicity argument for panpsychism also manifests in the form of the anti-emergence argument. Proposed by Strawson (2006), the anti-emergence argument states that it is a miracle and, hence, unintelligible that emergent properties *Y* emerge from base properties *X* which are wholly non-*Y*. Since it is unintelligible that phenomenal properties emerge from physical properties that are intrinsically wholly non-phenomenal, the phenomenal properties must already be present at the micro level. Therefore, a real physicalist who tends to reject the magic of emergence should embrace the ‘micropsychist’ view (Strawson, 2006, pp. 24-25). This move is also driven by the simplicity principle: it is simpler and, hence, more reasonable to hold that *Y* emerged from *Y* or proto-*Y* than to hold that *Y* emerged from *X*, which is totally different from *Y*.

So, simplicity claim is pervasive to some arguments for panpsychism. However, the criteria for claiming that the panpsychist view is the simplest among other views remain underexplored. In this paper, therefore, I will identify these criteria and subsequently measure the simplicity of panpsychism relative to other metaphysical perspectives based on these criteria. Hence, I will structure this paper into five sections. Firstly, I will concisely explain the types of simplicity that are considered theoretical virtues (Section 2). Next, before

examining and comparing the simplicity of panpsychism to that of its rivals (Section 4), I will define the selected version of panpsychism and then identify its ontology and ideology (Section 3). In Section 5, I will summarize the comparison results and provide concluding remarks.

## 2. *Types of simplicity*

The principle of simplicity tells us that the simpler theory is preferable to the complex one, other things being equal. But how do we determine which theory is simpler and which one is more complex? The simplicity assumed in this principle is related to Quine's (1951) distinction between the *ontology* and *ideology* of a theory. Ontology concerns the entities a theory implies or postulates to exist. In other words, ontology is the list of what there is. For example, a theory that defines light as an electromagnetic wave propagating through a medium called 'ether' implies or postulates the existence of ether. Ideology concerns primitive concepts, i.e., undefined ones, used to formulate the assertions of a theory. For example, Platonic realism requires the concept of 'instantiation' to assert that 'a red apple *instantiates* redness'.<sup>1</sup>

Building on the previous point, therefore, simplicity can be distinguished into *ontological simplicity* (OS) and *ideological simplicity* (IS). Whereas the former is related to the number of entities a theory postulates, the latter is related to the number of primitive concepts a theory uses – the less, the simpler. If, for example, theory  $T_1$  postulates a single entity while theory  $T_2$  postulates two entities,  $T_1$  is simpler than  $T_2$ ; likewise, in the context of ideological simplicity.

Besides the OS-IS distinction, there is also a distinction between the qualitative and quantitative aspects of each type of simplicity. Every entity postulated by a theory is of a certain kind. An entity and another might belong to the same or different kind. For example, Mars and Jupiter are of the same kind, i.e., Planet, while Mars and Alien are of a different kind. Every kind of entity has one or more examples. Planet, for instance, has several examples like Earth, Mars, Venus, Jupiter, Saturn, etc.

The qualitative aspect of OS concerns the number of *kinds* of entities postulated by a theory. The fewer the kinds, the simpler it is qualitatively. The simplicity of this sort is known as *qualitative ontological simplicity* (QLOS). The quantitative aspect of OS concerns the number of *examples* of all kinds postulated by a theory. The fewer the examples, the simpler it is quantitatively. The simplicity of this sort is known as *quantitative ontological simplicity* (QNOS). This distinction can be traced back to Lewis (1973), who attempted to defend

<sup>1</sup> For more about the distinction between ontology and ideology, see Cowling (2021).

his modal realism from an accusation of not being ontologically simple. He argued that his modal realism is complex only in terms of QNOS, not in terms of QLOS – and the type of simplicity that Lewis (1973, p. 87) recognized as a theoretical virtue is only QLOS, not QNOS. However, some philosophers like Nolan (1997), Baker (2003), and Jansson and Tallant (2017) argue that QNOS is also a theoretical virtue. Therefore, in this paper, I will take both QLOS and QNOS into account when evaluating the simplicity of panpsychism.

The quantitative-qualitative distinction is also true of IS (Cowling, 2013). In other words, but also *quantitative ideological simplicity* (QNIS) and *qualitative ideological simplicity* (QLIS) matters. However, this distinction does not play a significant role in this context because no primitive concepts employed by panpsychism and its rivals belong to the same kind.

### 3. *Constitutive Russellian Panpsychism*

In this section, I will identify the (kinds of) entities postulated and primitive concepts employed by panpsychism. As panpsychism has multiple versions, I will focus on the most complete and comprehensive version, *constitutive Russellian panpsychism* (CRP). Proponents of CRP suggest that it can eliminate various problems faced by other versions, such as the hard problem of consciousness and the possibility of strong emergence (Nagasawa, 2021).

#### 3.1. *Definition*

CRP is a combination of three views: (1) the panpsychist view, (2) the constitutive view, and (3) the Russellian view. The panpsychist view contends that consciousness is fundamental and ubiquitous, assuming that it is present not only in macrophysical objects like humans and animals but also in microphysical objects like subatomic particles. The constitutive view, which is generally assumed in both common sense and science, claims that micro-objects make up or constitute macro-objects. For example, in physics, it is commonly accepted that subatomic particles make up macro-objects like human bodies and planets. The Russellian view combines the following three theses:

*Structuralism about physics*: the basic properties physics describes are structural/relational properties.

*Realism about inscrutables*: there are inscrutables, the natures of which are not wholly structural/relational.

*(Proto)phenomenal foundationalism*: at least some inscrutables are either phenomenal or protophenomenal properties. (Alter *et al.* 2012: 70-71).

Combining (1) and (2) yields what is called ‘constitutive panpsychism’. This view posits that micro-consciousness constitutes macro-consciousness, accounting for not only the ontological status of consciousness but also the relationship between micro and macro-consciousness. By incorporating (3) into constitutive panpsychism, CRP can also account for the relationship between consciousness and physical reality: the former is the intrinsic nature of the latter. Therefore, CRP proposes a picture of reality as depicted in the following illustration:

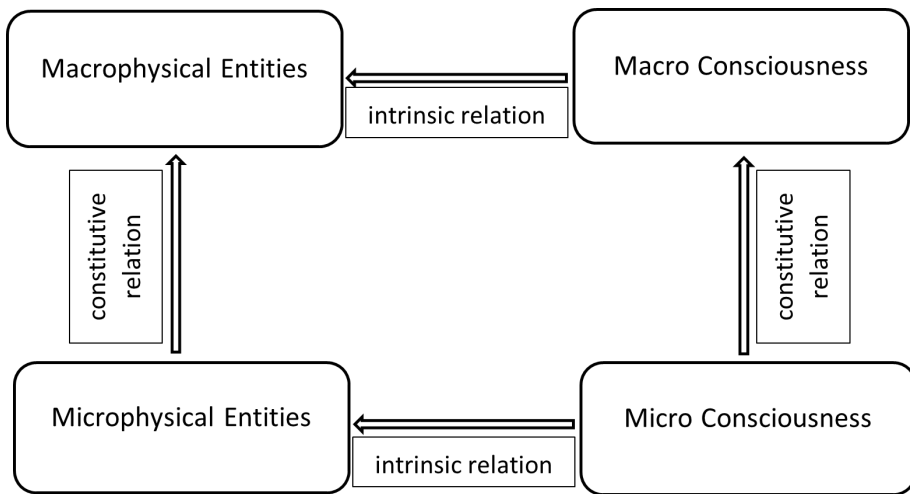


Figure 1: The picture of reality assumed by CRP

Based on the above description, CRP can be defined as a panpsychist view that believes micro-consciousness is an intrinsic nature of physical reality (*Russellian view*) and constitutes macro-consciousness (*constitutive view*). We can understand the ontology and ideology of CRP by relying on that definition.

### 3.2 Ontology

Figure 1 illustrates four entities: (a) macrophysical objects; (b) microphysical objects; (c) macro-consciousness; (d) micro-consciousness. (d) is an intrinsic nature of (b) while (c) is an intrinsic nature of (a), and (d) constitutes (c) while (b) constitutes (a). It is to those four entities CRP (and panpsychism in general) is ontologically committed. Yet, those four entities are just examples of two kinds of entities: (a) and (b) are examples of physical objects while (c) and (d) are examples of consciousness. Therefore, while quantitatively com-

mitted to four entities, panpsychism is qualitatively committed to two kinds of entities (See Table 1). Panpsychism of this sort is often called ‘monistic panpsychism’ because it eliminates physical properties from its ontology.

| <b>Monistic Panpsychism’s Ontology</b> |                       |
|----------------------------------------|-----------------------|
| <i>Qualitative</i>                     | <i>Quantitative</i>   |
| Physical Objects                       | Macrophysical Objects |
|                                        | Microphysical Objects |
| Consciousness                          | Macro-consciousness   |
|                                        | Micro-consciousness   |

Table 1: Monistic panpsychism’s ontology

Does the fact that monistic panpsychism eliminates physical properties from its ontology imply a denial of the existence of physical properties such as mass, spin, and charge? Not at all. Monistic panpsychism does not include physical properties in its ontology because it has no ontological commitment to their existence. This does not imply that it denies their existence. A theory is ontologically committed to an entity only if it requires that entity to exist to be true. Monistic panpsychism does not require physical properties to exist for it to be true. Whether or not physical properties exist, if the four entities in question exist, monistic panpsychism can still be true. Therefore, we can say that monistic panpsychism is agnostic about physical properties. Dispositional properties (more precisely, what we apparently consider as dispositional properties) of a physical object rely on the consciousness that serves as an intrinsic and categorical property of that object. However, this could potentially lead to panpsychism collapsing into a form of idealism.

Therefore, to differentiate themselves from idealists, some panpsychists are ontologically committed to the existence of physical properties. So, panpsychists believe that there are mass, spin, and charge, but all those physical properties are forms of consciousness (Goff 2017b; 2019b). Chalmers (2015: 263) called this panpsychist view as ‘Russellian identity theory’ (RIT) because it assumed physical properties are identical to consciousness (a sort of inversion of physicalist identity theory that believes that mental properties are identical to physical properties). Because of this identification manoeuvre, this version of panpsychist views does not add any additional entities to its ontology: it counts physical properties and consciousness as a single entity. That is why, even though having recognized the existence of physical properties, RIT remains a form of monistic panpsychism.

Some people might say that RIT cannot draw a clear line between panpsychism and idealism. By identifying physical properties with consciousness, RIT can be classified as a form of idealism. Therefore, among panpsychists, some give a dualistic interpretation of panpsychism (Goff, 2019b). They believe that microphysical objects such as fundamental particles have two kinds of properties, i.e., physical properties on the one hand and consciousness on the other.<sup>2</sup> At glance, this view seems to be similar to property dualism, but it is fundamentally different. Property dualism contends that mental properties are only present in the complex system of macrophysical reality (Levin, 2022: 11) while dualistic panpsychism, like any form of panpsychism, maintains that mental properties are present in both macrophysical and microphysical reality. Therefore, dualistic panpsychism has an ontology which is more bloated than the monistic one's (See Table 2).

| <b>Dualistic Panpsychism's Ontology</b> |                          |
|-----------------------------------------|--------------------------|
| <i>Qualitative</i>                      | <i>Quantitative</i>      |
| Physical Objects                        | Macrophysical Objects    |
|                                         | Microphysical Objects    |
| Physical Properties                     | Macrophysical Properties |
|                                         | Microphysical Properties |
| Consciousness                           | Macro-consciousness      |
|                                         | Micro-consciousness      |

Table 2: Dualistic panpsychism's ontology

What panpsychism means by 'consciousness' here is phenomenal property. In Nagel's (1974) term, it is what-it-is-likeness. When I see a red apple, for instance, there is something it is like for me to see a red apple. We can say that the phenomenal property of humans is what it is like to be a human. This type of consciousness is called 'phenomenal consciousness' and is usually distinguished from another type, i.e., 'access consciousness,' which is related to cognitive aspects (Block, 1995).<sup>3</sup>

<sup>2</sup> Dualistic panpsychism implies a rejection of the idea that all properties are dispositional (*dispositionalism*). According to dualistic panpsychists, in addition to dispositional properties, a microphysical entity possesses an intrinsic and categorical property, which is a form of consciousness. Consequently, they would also reject the possibility of bare dispositions, which are dispositions without distinct causal bases.

<sup>3</sup> Every time I use 'consciousness' here, it means 'phenomenal consciousness'.

What justifies panpsychism, whether in its monistic or dualistic form, in including those entities in its ontology? Macrophysical objects like trees, tables, mountains, human bodies, and planets are recognized to exist based on common sense and perceptual experience. Microphysical objects such as electrons and quarks are claimed to exist based on empirical science, particularly particle physics. Similarly, macrophysical and microphysical properties are also claimed to exist based on physics. Panpsychists claim that macro-consciousness like our experience of pain is obviously present in our own introspective investigation, so it resists any doubt. Additionally, they postulate the existence of micro-consciousness belonging to microphysical objects as an explanation for the existence of macro-consciousness.

Among those entities, micro-consciousness is a special case. We recognize the existence of the other three entities based on a certain source of justifications like common sense, perceptual experiences, scientific theories, or introspective investigations. In contrast, micro-consciousness is included in the list of panpsychism's ontology without any justification. We have no perceptual experiences of micro-consciousness belonging to particles in our brain, and the best prevailing scientific theory in particle physics also does not prove that electrons or quarks have any form of consciousness. Neither can introspective investigations help us reach the external world, let alone its micro-level. Since these sources of justification cannot work for justifying the existence of micro-consciousness, the only remaining source of justification is theoretical justification. Micro-consciousness is postulated to exist to do a theoretical job: explaining macro-consciousness. As a theoretical postulate, it needs no justification for its existence. In metametaphysics, such entities are referred to as 'primitive entities' (Benovsky, 2021).

Panpsychism's ontological commitment, therefore, can be divided into two: a commitment to the entities that have been recognized as existing based on a certain source of justification, and a commitment to a kind of entity whose existence requires no justification (i.e., micro-consciousness). It is the second ontological commitment that sets panpsychism apart from other theories, such as property dualism.

### 3.3. *Ideology*

A theory's ontology concerns only which entities are posited to exist, and it cannot account for how those entities exist or relate to each other. To construct a coherent picture of these entities, a theory requires the use of concepts, ideas, or predicates, which we refer to as ideology. Quine (1951, p. 14) distinguishes between two types of ideology: the first concerns the use of

primitive concepts that cannot be defined in terms of other concepts, while the second concerns the use of derivative concepts that can be defined in terms of more fundamental concepts. However, in the context of ideological simplicity, only the former is relevant, as only primitive concepts represent a potential cost to theories (Cowling, 2013: 3892-3893). Therefore, this section will only consider primitive concepts.

Ontologically, CRP does not differ significantly from other forms of panpsychism. All forms of panpsychism share an ontological commitment to four or six entities. It is CRP's ideological commitment that sets it apart from other forms of panpsychism. CRP is ideologically committed to four primitive concepts: *fundamentality*, *ubiquity*, *intrinsicity*, and *constitution*. The concepts of fundamentality and ubiquity represent the ontological status of micro-consciousness. The concept of intrinsicity explains the relationship between micro-/macro-consciousness and micro/macrophysical objects, while the concept of 'constitution' describes the relationship between micro-consciousness and macro-consciousness.

Some might dispute that fundamentality is a primitive concept since it is usually defined in terms of another concept, specifically the concept of *independence*. An entity is deemed fundamental if it is metaphysically *independent* of any other thing (Tahko, 2018; Bliss, 2021: 212-13). Panpsychism posits that consciousness is fundamental, which means that it is metaphysically independent of any other entity. This suggests that panpsychism's commitment to the concept of fundamentality may not be primitive, but rather derivative.

However, a primitivist view of fundamentality challenges this assumption. According to this view, the concept of fundamentality can only be characterized by other concepts but cannot be defined in terms of them (Tahko, 2018). This means that independence is not a definition of fundamentality, but rather one of its characteristic features. In addition to independence, fundamentality can also be characterized by completeness: something is considered fundamental if it can serve as a *complete minimal basis* for describing the entire reality (Tahko, 2018). In other words, by providing a complete list of fundamental entities, we can describe the entirety of reality.

One reason to adopt the primitivist view of fundamentality is the inadequacy of the current definition. Defining fundamentality in terms of independence would result in a vague definition due to the various kinds of metaphysical (in)dependence, such as mereological (in)dependence, grounding, realization, existential (in)dependence, essential (in)dependence, and even causal (in)dependence. Faced with such a variety of (in)dependence relations, the attempt to define fundamentality in terms of independence eventually becomes divided into two different approaches.

The first approach holds that a thing is fundamental if and only if it is metaphysically independent of everything in *any* sense of metaphysical independence. That is one way to define fundamentality in terms of *absolute independence*. Yet, such a definition is regarded as too strict because it is hard to find a thing that is absolutely, metaphysically independent. An entity that is independent in one sense is ordinarily dependent in another sense. Take the quark as an example. Particle physicists believe that it is mereologically independent because nothing smaller is part of it. However, quarks never exist in isolation; they always co-exist in groups of two or three, such as in the case of mesons, protons, and neutrons. Therefore, even though they are mereologically independent, they are existentially dependent. Quarks constituting a proton, for instance, have symmetric, existential dependence on each other.

Trying to avoid the problem of the first definition, the second approach defines fundamentality in terms of *restricted independence*. According to this definition, something is fundamental if and only if it is metaphysically independent in *some* sense of metaphysical independence. However, this approach does not specify which types of metaphysical independence are relevant. Is only one or some types of metaphysical independence relevant? What then justifies one or some types of metaphysical independence having a special status to be definiens of fundamentality? Such questions are left unanswered. In light of these issues, some philosophers take fundamentality as a primitive concept; and so do I here.

The concept of ‘ubiquity’ is undoubtedly primitive. However, some people may believe that ubiquity can be defined as ‘being everywhere’: something is ubiquitous if and only if it is found everywhere. But there is symmetrical relation between them, as they are interdefinable. ‘Being everywhere’ can be defined in terms of ‘ubiquity’ just as ‘ubiquity’ can be defined in terms of ‘being everywhere’. In other words, we cannot define both concepts except in a circular way, making it challenging to determine which one is primitive, and which one is derivative.

In such a difficult situation, we have two choices: either take both ‘ubiquity’ and ‘being everywhere’ as primitive or derivative. If both were derivative, there should be other more primitive concepts that could define them. However, no other concepts can do so. Therefore, it is better to consider ‘ubiquity’ and ‘being everywhere’ as equally primitive, and given their interdefinability, we should also regard both as of the same ideological kind (Cowling, 2013; Finocchiaro, 2019).

The concept of “intrinsicity”, much like “fundamentality”, is still being debated as to whether it is primitive or derivative. Some have attempted to provide a reductive analysis of it. One such attempt was made by Kim (1982: 60), who analyzed intrinsic properties in terms of properties of being not rooted outside times at which it is had (PT) and properties of being not rooted

outside the objects that have it (PO). In other words, a property is intrinsic only if the objects that have it cannot exist before or after possessing it (PT), and the object's possession of it does not require the existence of another contingent object (PO).

Lewis (1983a) provided a counterexample of PO. According to PO, an object's possession of an intrinsic property enables it to exist alone, whereas its possession of an extrinsic property requires it to coexist with other objects. In other words, intrinsic properties are compatible with loneliness while extrinsic ones imply accompaniment. Consider now the properties of *being lonely* and *being accompanied*. Accompaniment is undoubtedly an extrinsic property, as objects that possess it require the existence of other objects accompanying them. Loneliness, on the other hand, should have been an intrinsic property since an object possessing it can exist lonely. However, in reality, loneliness is just as extrinsic as accompaniment (Lewis 1983a: 199). If an object is lonely, it is only so relative to a certain circumstance where no other objects accompany it. If an accompanying thing appears in another circumstance, the property of loneliness that the object previously possessed would disappear, but the object itself would still exist. This means that the object's possession of the loneliness property cannot meet the requirement of PT.

Lewis's counterexample shows that Kim's definition of intrinsicity is not sufficient. Due to this insufficiency, Lewis attempted to define intrinsicity in terms of duplication: a property is intrinsic to *x* if and only if it never differs between the duplicates of *x*. Fortunately, Lewis (1983b: 355) immediately recognized the problem he faced: by defining intrinsicity in terms of duplication, he would face the problem of interdefinability. The concept of intrinsicity can be defined in terms of duplication, as mentioned above. However, the concept of duplication can also be defined in terms of intrinsicity: two objects are duplicates if and only if they share the same intrinsic properties.

As with ubiquity and being everywhere, the interdefinability of intrinsicity and duplication raises the question of which one is primitive, and which one is derivative. However, answering this question would be arbitrary. Therefore, to avoid an arbitrary answer, we should consider both intrinsicity and duplication as equally primitive and as examples of a single ideological kind.

The last concept to which CRP is ideologically committed is 'constitution'. Some definitions of it that have been provided by scholars such as Baker (2000), Sider (2002), Zimmerman (2002), and Jedwab (2013) are still debated. In several works about panpsychism, constitution is mostly understood as a metaphysical grounding, meaning that macro-consciousness is constituted by micro-consciousness, which implies that the former is metaphysically grounded on the latter (Chalmers, 2015: 253; Goff, 2017a: 151). We might, therefore,

treat ‘constitution’ as a derivative concept that is definable in terms of metaphysical grounding. However, the notion of grounding can also be defined in terms of ‘constitution’. Some scholars define grounding as a *constitutive explanation*, as opposed to a *causal explanation* (Dasgupta, 2017; Fine, 2012). Due to their interdefinability, we should regard both as equally primitive concepts.

#### 4. Comparison

Having identified the ontology and ideology of panpsychism, I will now compare it to other metaphysical theories of consciousness to measure its simplicity. I have chosen five theories for this comparison: *substance dualism*, *property dualism*, *eliminativism*, *identity theory*, and *functionalism*. These five, along with panpsychism, have been among the most discussed and embraced theories in recent debates on the problem of consciousness (Bourget and Chalmers, 2023).

##### 4.1. Substance dualism

Substance dualism is the view that there are two ontologically distinct substances: *physical substances* and *mental substances*. But what does ‘substance’ mean? In his *Principles of Philosophy*, Descartes (1982: 23) defined substance as ‘a thing which exists in such a way that it needs no other thing in order to exist.’ Physical substances are entities like stones, trees, and human bodies that exist independently, while mental substances are entities like mind that also exist independently. Both can exist by themselves.

However, while physical and mental substances can exist independently, they can only be known through the attributes that are attached to them. Every substance has an attribute that is essential to it. Physical substances, for example, have the attribute of ‘extension,’ while mental substances have the attribute of ‘thought.’ Since these attributes are essential features of their respective substances, one cannot be understood without the other. We cannot understand a body without understanding its extensionality, just as we cannot understand imagination without understanding that it is a thinking thing. Additionally, each attribute has several modes that specify how the substance that has it exists (Descartes, 1982: 25). For instance, a ball, as a physical substance, has the attribute of extensionality, and it also has a particular shape, size, texture, and weight that vary from one ball to another. Therefore, we can refer to attributes and modes as ‘properties’. Since every substance has properties, and there are two kinds of substances, there are also two kinds of properties: *physical properties* and *mental properties*.

Relying on the above description, we can state that substance dualism is ontologically committed to four different types of entities: (1) physical substanc-

es; (2) mental substances; (3) physical properties; and (4) mental properties. Type (1) and (3) have several examples which respectively can be classified into two in conjunction with the division of level of reality between macro and micro levels. Therefore, quantitatively speaking, substance dualism is ontologically committed to these entities: (1a) *macro-physical substances*; (1b) *micro-physical substances*; (2) *macro-mental substances*; (3a) *macro-physical properties*; (3b) *micro-physical properties*; and (4) *macro-mental properties*. Substance dualism has no ontological commitment to the existence of mental substances and properties at the micro-level of reality.

To explain how these entities exist and are related to each other, substance dualism is ideologically committed to at least four concepts: (1) *fundamentality*; (2) *instantiation*; (3) *emergence*; and (4) a certain concept of relation, such as *interaction*, *parallelity*, or *epiphenomenality*. The concept of fundamentality, which has been stipulated as a primitive concept in section 3.3, is employed as a predicate for physical and mental substances, allowing substance dualism to be linguistically expressed as follows: ‘physical and mental substances are two equally fundamental substances.’

Additionally, substance dualism requires the concept of ‘instantiation’ to explain the relationship between a substance and its properties, which can be understood as either universals or tropes. Some philosophers, such as Baxter (2001) and Armstrong (2004), have attempted to define instantiation in terms of partial identity, but others, such as Mantegani (2013) and Brown (2017), have argued that their definition fails. Therefore, the dominant view in metametaphysical discourse considers instantiation to be a primitive concept (Benovsky, 2021; Cowling, 2021).

Unlike panpsychism, substance dualism (and later, property dualism as well) does not posit the existence of mental substance on the micro-level of reality (micro-consciousness). Where and how did it come from? Dualists have two options to answer such a question. The first option contends that mental substance was created by God from nothing to complement the physical elements of humans. Before humans came to exist, mental substances had not appeared. Such a creationist view was put forward by Descartes, among others. The second option holds that mental substance emerged from the complex system of physical substances – in this context, the brain. According to this emergentist view, although mental substances are new and different from physical substances, they are not something added to physical substances from the outside but the result of the natural mechanism occurring within the physical substances themselves when they reached a complex level. Due to several problems facing the creationist view, substance dualism

has recently mostly embraced the emergentist view (Hasker, 2018: 63-65).<sup>4</sup>

Therefore, the concept of ‘emergence’ must be included in substance dualism’s ideology. But is it a primitive concept? In several works, emergence is rarely defined in terms of other more basic concepts. Some simply stipulate the necessary but insufficient conditions for emergence. Kim (2006), for instance, names two necessary conditions for emergence, that is *supervenience* and *irreducibility*. O’Connor (2021), unlike Kim, names *dependence* and *autonomy*.

Barnes (2012) attempts to go further than Kim and O’Connor by not merely stating the necessary but insufficient conditions for emergence, but by trying to define it in terms of necessary and sufficient conditions. He analyses emergence in terms of *fundamentality* and *dependence*:  $x$  is ontologically emergent if and only if  $x$  is both fundamental and dependent (Barnes, 2012: 884). However, Pearson (2018) has demonstrated that Barnes’s analysis is flawed because some fundamental and dependent entities are not emergent, and some emergent entities are not both fundamental and dependent. Therefore, the prevailing view on emergence regards it as a brute fact that cannot be explained by more fundamental facts (Symons, 2018). As it refers to a brute fact, ‘emergence’ should be regarded as an undefined, primitive concept.

Substance dualism posits the existence of both physical and mental substances. Because these two substances are assumed to be ontologically distinct, substance dualism requires a certain concept of relation to explaining how they can be related to each other. To address this issue, dualism must choose one of three concepts of relation: (1) *interaction*, (2) *epiphenomenon*, or (3) *parallelity*. Among these three concepts, only ‘interaction’ is a primitive concept. Some might define it in terms of reciprocity:  $x$  and  $y$  interact with each other if and only if they are in a reciprocal relation. However, the concept of ‘reciprocity’ can also be defined in terms of interaction:  $x$  and  $y$  are in a reciprocal relation if and only if they interact with each other. Therefore, both concepts are equally primitive because they are interdefinable.

Two other concepts, epiphenomenon and parallelity, can be defined in terms of other more fundamental concepts. Epiphenomenon can be defined in terms of causal power:  $x$  is epiphenomenal if and only if it lacks causal power. Parallelity can be defined in terms of intersection: two entities go parallel if and only if they do not intersect in the course of their existence. Therefore, those

<sup>4</sup> Emergent dualism appears similar to non-reductive emergentist physicalism; however, they differ fundamentally in what emerges. Emergentist physicalists maintain that what emerges from a complex physical entity is a mental property and, possibly, a novel causal power associated with that property. In contrast, emergent dualists assert that what emerges is not merely mental properties and new causal powers, but also a new individual – a new subject that possesses those mental properties and exercises the associated causal powers (Hasker, 2018, p. 67).

two concepts are derivative, and we cannot consider them as part of dualism's ideology in a substantial sense. Consequently, if substance dualism uses the concept of 'interaction' (*interactionism*) to explain the relationship between physical and mental substances, its ideology will consist of four primitive concepts, i.e., *fundamentality*, *instantiation*, *emergence*, and *interaction*. However, if it adopts the concept of 'epiphenomenon' (*epiphenomenalism*) or 'parallelity' (*parallelism*), its ideology will comprise three primitive concepts, i.e., *fundamentality*, *instantiation*, and *emergence*.

#### 4.2. *Property dualism*

Unlike substance dualism, property dualism posits only one kind of substance: physical substance. However, this substance has two different kinds of properties: physical and mental properties. This type of dualism revises substance dualism by removing mental substances from its ontology, resulting in an ontology that includes only three kinds of entities: (1) *physical substances*; (2) *physical properties*; and (3) *mental properties*.

There are two examples of the type (1) and type (2) respectively, while type (3) has only one example. Quantitatively, therefore, its ontology contains five entities: (1a) *macrophysical substances*; (1b) *microphysical substances*; (2a) *macrophysical properties*; (2b) *microphysical properties*; and (3) *macromental properties*. This suggests that only macrophysical substances have mental properties, setting property dualism apart from panpsychism, which posits micromental properties.

Although ontologically different, property dualism has the same ideology as substance dualism. It also needs three/four primitive concepts: *fundamentality*, *instantiation*, *emergence*<sup>5</sup>, and *interaction*. The fourth concept is only needed by interactionist property dualism. To account for the relationship between physical and mental properties, epiphenomenalist and parallelist property dualism employ derivative concepts: *epiphenomenality* and *parallelity*.

<sup>5</sup> Due to the assumption that mental properties emerge from a highly complex system of physical entities, property dualism is considered a type of non-reductive physicalism. Therefore, I do not discuss non-reductive physicalism here, as it has both ontology and ideology in common with property dualism. However, it is not necessary for property dualism to assume emergence and deny the existence of mental properties at the micro level. It is also possible for property dualists to posit mental properties at the micro level of reality without ceasing to be a dualist. This panpsychist-leaning property dualism is indistinguishable from the dualistic version of panpsychism, both ontologically and ideologically. However, it is still distinguishable from the monistic version of panpsychism.

### 4.3. *Eliminativism*

Metaphysical theories of consciousness are mostly designed to explain introspective data that we have consciousness with phenomenal properties. In terms of this introspective data, metaphysical theories of consciousness can be divided into three types. The first one is theories that accept that phenomenal consciousness exists, and its existence is irreducible. Its examples are dualism, panpsychism, and non-reductive physicalism. The second one is theories that contend that phenomenal consciousness exists, but its existence is reducible. This type is exemplified by identity theory. The third one is theories denying the existence of phenomenal consciousness. This type is referred to as ‘eliminativism’ or ‘eliminative physicalism’.

Eliminativism is the most extreme form of physicalism. It only accepts the existence of two kinds of entities: (1) *physical objects* and (2) *physical properties*. These two kinds of entities have two examples respectively: (1a) *macrophysical objects*; (1b) *microphysical objects*; (2a) *macrophysical properties*; and (2b) *microphysical properties*. This suggests that eliminativism designs its ontology to be as parsimonious as possible. The number of entities it postulates, qualitatively and quantitatively, is equal to that postulated by the monistic form of panpsychism.

The same feature is also true of its ideology. The only primitive concept it needs is ‘instantiation’ to account for the relationship between objects and their properties. However, this is only the case if eliminativism is ontologically committed to Platonic realism. If it holds some form of nominalistic view about properties, it will need another primitive concept. Set nominalism, for instance, will have to include ‘membership’ in its ideology (a is *F* if and only if a is a member of *F*-ness); while trope nominalism will have to include ‘possession’ (a is *F* if and only if a has *F*-ness). Therefore, eliminativism will need at least one primitive concept, regardless of the metaphysical view about properties it holds.

### 4.4. *Identity theory*

Identity theory is a kind of metaphysical theory that holds that phenomenal consciousness exists, but its existence is reducible to physical properties. It suggests that mental states are brain states (Smart, 2022). In other words, according to identity theory, mental states exist but are nothing more than neuronal processes taking place in the brain. This claim is the same as the ones made by scientists. For instance, water is H<sub>2</sub>O, lightning is an electrical discharge, and temperature is mean molecular kinetic energy. This means that what the word/phrase refers before and after ‘is’ is the same thing.

By identifying phenomenal consciousness with physical states, identity the-

ory recognizes the existence of the former without adding a new entity to its ontology. It treats phenomenal consciousness and physical states as a single item since they are numerically identical. This physical state must involve some physical objects and their properties. Therefore, the ontology of this theory is the same as that of eliminativism, both qualitatively and quantitatively. What sets this theory apart from eliminativism is its ideology. In addition to a certain concept employed to account for the relationship that holds between physical objects and their properties – be it “instantiation,” “membership,” or “possession” – this theory also employs the concept of “identity” to explain the relationship between phenomenal consciousness and physical states.

However, whether ‘identity’ is a primitive concept is still contentious. Some have attempted to define it. For instance, Brody (1980: 8) defined ‘identity’ using second-order logic as follows:

$$(B) \ x = y =_{\text{def}} [(F) (Fx \equiv (Fy))]$$

in which  $F$  stand for the class of all properties that  $x$  and  $y$  have in common. In simpler terms, (B) states that  $x$  is  $y$  if and only if  $x$  and  $y$  have all their properties in common. Definition (B), therefore, defines ‘identity’ in terms of commonality.

Does this definition successfully define ‘identity’? Many argue that it does not. One of the primary reasons why people deny the definability of ‘identity’ is that it is always involved in any definition of any concept, including ‘identity’ itself (McGinn 2000: 7-9). Take definition (B) as an example.. It would be successful if the definiens on the right side of ‘ $=_{\text{def}}$ ’ were *identical* to the definiendum on the left side of ‘ $=_{\text{def}}$ ’. In other words, its success requires an identity that holds between the definiens and definiendum. Furthermore, identity is also presumed to hold between  $(Fx)$  and  $(Fy)$ . This suggests that (B) involves identity in two different places. Definitions of this sort suffer from circularity because it defines identity by assuming an identity. This is why many consider identity a primitive concept (Bueno, 2014; McGinn, 2000; Savellos, 1990).

Identity theory’s ideology, therefore, contains two primitive concepts. This makes identity theory ideologically less simple than eliminativism – though both are ontologically equal.

#### 4.5. Functionalism

Functionalism is a view about mind, which remains neutral on whether mental properties are physical or non-physical. Functionalism posits that mental properties are functional properties, meaning that something is considered mental not because of its internal makeup, but rather the causal role it plays in

a system (Levin, 2023). Whether physical or not, it can be considered mental as long as it plays a causal role in a causal chain.

Using pain as an example, functionalists view pain not as a physical state (as assumed by identity theory), nor as a mental state (as assumed by dualism and panpsychism), but rather as a functional state. To experience pain is to be in a state that is disposed to be caused by damage to body cells, which in turn causes a belief that there is something wrong with the body that ultimately motivates us to escape the state and, if no other stronger desires, causes us to groan. The functional role of pain in this causal chain can be carried out by any state, whether physical or non-physical. This property is referred to as ‘multiple realizability’ (Bickle, 2020).

Consider a computer to understand what multiple realizability means. When I wrote this article, I used a laptop with Microsoft Word installed for typing. However, this software is not limited to being run exclusively on a laptop. It can also be run on devices with different hardware components such as a tube computer, tablet, or smartphone. Similarly, a mental state can be realized in many different states. For example, being in pain is not only realizable by a neuron-based brain that has C-fibres, but it can also be realized by a neuron-based brain that lacks C-fibres or even a silicon-based brain, as long as it can play the same functional role.

Functionalism, therefore, is ontologically committed to only two kinds of entities, that is (1) mental property and (2) its realizer. It suggests that functionalism is qualitatively ontologically equal to panpsychism: both are committed to two kinds of entity. However, functionalism differs from panpsychism in terms of the number of examples of each kind. Panpsychism postulates two examples of each kind of entity while functionalism has an infinite number of examples for the realizer of mental states. This makes the ontology of functionalism extremely complex quantitatively.

The quantitative complexity of functionalism’s ontology is compensated for by its relatively simple ideology. Functionalism is committed to only two concepts: (1) causal role and (2) multiple realizability. Both concepts should be considered primitive because they cannot be defined without involving themselves. The concept of “causal role” cannot be defined without involving the concept of “causation,” while the concept of “multiple realizability” cannot be defined without involving the concept of “multiplicity” or “realization.” In other words, any attempt to define either concept will always result in a circular definition, which is not desirable. This fact makes functionalism’s ideology as simple as panpsychism’s.

#### 4.6. Result

Having pointed out the ontological and ideological commitments of the metaphysical theories of consciousness, we can assess the simplicity of panpsychism compared to its rivals. Table 3 below demonstrates two aspects of monistic panpsychism's simplicity in comparison of other metaphysical theories of consciousness:

| RIVALS            | MONISTIC PANPSYCHISM |                     |                    |                     |
|-------------------|----------------------|---------------------|--------------------|---------------------|
|                   | Ontology             |                     | Ideology           |                     |
|                   | <i>Qualitative</i>   | <i>Quantitative</i> | <i>Qualitative</i> | <i>Quantitative</i> |
| SUBSTANCE DUALISM | >                    | >                   | =/<                | =/<                 |
| PROPERTY DUALISM  | >                    | >                   | =/<                | =/<                 |
| ELIMINATIVISM     | =                    | =                   | <                  | <                   |
| IDENTITY THEORY   | =                    | =                   | <                  | <                   |
| FUNCTIONALISM     | =                    | >                   | <                  | <                   |

Table 3: The comparison of the simplicity of monistic panpsychism to its rivals'

The table indicates that monistic panpsychism holds an advantage in terms of ontological simplicity. It is simpler than all forms of dualism, equivalent to eliminativism and identity theory, and even surpasses functionalism, which is the most widely accepted theory of consciousness (Bourget and Chalmers, 2023). This comparison suggests that panpsychism can align with our transparent and undeniable intuition of the existence of consciousness without being ontologically superfluous, as is the case with dualism. It maintains the same level of ontological simplicity as eliminativism and identity theory. Furthermore, panpsychism is unexpectedly superior to functionalism in terms of quantitative ontological simplicity, as the latter is committed to the multiple realizability of mental states. This provides a compelling reason to adopt panpsychism.

However, panpsychism has not demonstrated greater ideological simplicity compared to its rivals. At best, its level of simplicity is on par with various forms of interactionist dualism. When assessed against other competing theories, it shows even less ideological simplicity. Therefore, if the simplicity argument must take ideological simplicity into account, panpsychism loses much of its appeal.

This situation worsens if we use the dualistic interpretation of panpsychism as the basis for comparison. The interpretation doesn't change anything in panpsychism's ideology, but it swells up its ontology. As Table 4 shows, dualistic panpsychism is simpler than its rivals only when compared to substance dualism qualitatively and functionalism quantitatively. The number of equal

positions also decreases from five cases in the monistic version to two cases in this dualistic version, namely when compared to substance dualism quantitatively and property dualism qualitatively. In the remaining cases of comparison, dualistic panpsychism is always less simple than its rivals.

| RIVALS            | DUALISTIC PANPSYCHISM |              |
|-------------------|-----------------------|--------------|
|                   | Qualitative           | Quantitative |
| SUBSTANCE DUALISM | >                     | =            |
| PROPERTY DUALISM  | =                     | <            |
| ELIMINATIVISM     | <                     | <            |
| IDENTITY THEORY   | <                     | <            |
| FUNCTIONALISM     | <                     | >            |

Table 4: The comparison of the ontological simplicity of dualistic panpsychism to its rivals

Overall, this comparative analysis demonstrates that the ontological simplicity of panpsychism is neither inherently superior nor inferior to that of other theories. It depends on which version of panpsychism is being compared and which rival theory it is measured against. Moreover, the level of simplicity attributed to panpsychism is influenced by the specific aspect of simplicity being considered. The ontological aspect does tend to favor monistic versions of panpsychism over alternative theories. In contrast, the ideological aspect places panpsychism in a less favorable position.

## 5. Conclusion

Proponents of panpsychism typically present the simplicity argument only after rejecting physicalism and excluding physicalist views from consideration. Consequently, the comparison of simplicity between panpsychism and physicalist theories becomes irrelevant in such discussions. However, given the centrality of simplicity claims in various arguments for panpsychism, it remains essential to assess panpsychism's simplicity in relation to all other theories of consciousness, whether they fall under the monistic or dualistic spectrum. Furthermore, the criteria for evaluating simplicity are still underexplored by both proponents and critics of panpsychism.

In this study, I employed two criteria for measuring simplicity: ontological and ideological commitments. By identifying the ontological and ideological

commitments of each theory, I sought to determine their respective levels of simplicity. This analysis shows that panpsychism is neither inherently simpler nor more complex than other theories. The monistic version of panpsychism has a simpler ontological commitment than the most widely accepted theory of consciousness, namely functionalism. Despite its overlap with idealism, this version offers a compelling case for panpsychism. However, if ideological commitments are considered in the evaluation of simplicity, even the monistic version of panpsychism does not hold a distinct advantage, let alone the dualistic version.

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# Punishment from a Hegelian Perspective

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*Abstract:* This paper proposes that verbal insult as a serious crime should receive severe punishment. This principle is established based on Hegel's perspective, that punishment should aim at restoring the injured universal recognition caused by the crime. Verbal insult is a severe crime because of the damage it inflicts on the universal will, thus the social and political contexts in terms of recognition. This also means that in Hegel's advocacy of punishment to fit the crime, the considerations he gave on the crime's effects on social and political contexts is a result of his primary importance given to mutual recognition. There is a common misconception that Hegel is a retributivist, which is mainly reflected by most discussions on Hegel's theories of punishment focusing narrowly on the part of Abstract Right in his *Philosophy of Right*. Focusing narrowly in this part causes a lack of consideration taken into how crime and punishment should be treated after Abstract Right has been actualised into Objective Right. This paper focuses on this neglected aspect and discusses the importance of recognition restoration and contextual influences in the Objective Reality of *ethical life* (*Sittlichkeit*) in Hegel's theory of punishment.

*Keywords:* Hegel, crime, punishment, recognition, Abstract Right, retributivism

"The man who has a conscience suffers whilst acknowledging his sin. That is his punishment".  
(Fyodor Dostoevsky, *Crime and Punishment*)

## *Introduction*

This paper adopts the perspective that recognition restoration is the basis for Hegel's theories on crime and punishment, and proposes the following practical principle for the implementation of punishment based on Hegel's philosophy of crime and punishment: Among the types of recognition being damaged by the crime, verbal insult is the second most serious type of crime following murder and therefore commensurate punishment is required. The principle is proposed based on the significant roles Hegel attributed to recog-

nition, or the intellectual identification of a thing or person at the same time the assignment to it of a positive value (Inwood 2017: 245).

An additional argument of this paper is that since crimes of different natures cause injuries of different types and varying degrees of severity to the collective human recognition, punishment should fit the crime, and contextual influences should be taken into consideration. The Objective Rights (or the embodiment of freedom in an external object), which are actualisation of Abstract Rights, should be taken into consideration in determining punishment (Brooks 2013). The above arguments indicate that unlike being widely advocated as a retributivist as many contemporary scholars such as the British Idealists Green and Seth (see Brooks 2017),<sup>1</sup> Hegel differs from them as he focuses on recognition restoration. Although this view on recognition restoration is hardly shared by past (notably Kant 1999) and most contemporary retributivists (see Brooks 2014b), many contemporary discussions acknowledge its value in generating insights for law and punishment. Another reason for the common misconception of Hegel as a retributivist is that most discussions on Hegel's theories of punishment focus narrowly on the part of Abstract Right in his *Philosophy of Right* (*PhR*) (Hegel 2008) written in his mature intellectual period (Brooks 2017; Komasiński 2018; see also Brooks 2005; 2013; Wood 1990). The principle proposed in this paper is based on Hegel's discussions in his works of his early period, especially those focus on how Abstract Right are actualised and realised in the *ethical life* (*Sittlichkeit*) and civil society.<sup>2</sup> This approach enables a more systematic reading of Hegel's philosophy.

Komasiński (2018), paraphrasing Hegel, states that the "the move to wrong is a necessary stage to move from the particular towards the universal" (529). This view is consistent with Hegel's account given in his *PhR* that crime is a form of alienation of personality, with the capacity of embodying property, intelligence, conscience, rationality, morality, *ethical life*, and religion (Hegel 1970; 2008). Thus, Hegel holds a developmental perspective on crime, that it is an extreme in the course of development of consciousness from Abstract

<sup>1</sup> Details on the British Idealists will be given in the third section of this paper. Connelly and D'Oro (2019) also suggested that self-actualisation of individual in the society is the major premise of the British Idealist.

<sup>2</sup> As many philosophers, Hegel changed his focuses throughout his intellectual life. He assigned primary importance to recognition in his early writings on practical philosophy (as represented by the Jena writings such as *Phenomenology of Spirit*) and in his mature writings (represented by *PhR*) he put his emphasis on free will. As remarked in the introductory section, the reason for putting together Hegel's texts from different period in this paper is to clarify the misunderstandings (especially Hegel is a retributivist) among Hegelian interpreters. References on the periods the texts belonging to discussed in this paper have been made.

Right to objective reality involving embodiment.<sup>3</sup> As will be elaborated in the next section, this view shares his restorative stance that punishment should serve the function of inverting the injured universal recognition established in the *ethical life* (*Sittlichkeit*) and civil society.

Hegel (2008) provides very few details on the forms of punishment despite describing the types of crimes in his *PhR*. One possible reason is that in this part he focuses on Abstract Right instead of implementation of punishment in real life (Brooks 2017; Komasiński 2018). This paper takes a closer look at Hegel's views on crime and punishment as indicated from the accounts in addition to those in the Abstract Right section of his *PhR*.

An outline of this paper is given below. In the next section, Hegel's main tenets of his philosophy on punishment, which covers punishment as an inversion of the injured universal recognition, evaluations of contemporary discussions on recognition restoration with reference to Hegel's original texts of his various intellectual period. This will be followed by introducing how Abstract Right is actualised in the *ethical life* (*Sittlichkeit*), with special reference to crime and punishment. Reference on works in addition the *PhR* such as *Philosophical Propaedeutic* (Hegel 1986) will be made. This paper ends with the conclusion that contemporary discussions neglect how Abstract Right realises itself in Objective Reality.

### *Hegel's Views on Punishment*

In this section, Hegel's major tenets on crime and punishment will be described.

#### *Punishment as an Inversion of the Injured Universal Recognition*

##### *Early writings*

In his *Realphilosophie* (Rauch 1983), or philosophy which is for the reality, Hegel mentioned injury can only occur after the emergence of recognition. A contract between individuals is a form of mutual recognition, and breaking the contract of one party causes injury to the other. Since entering into a contract is an endorsement of the universal, breaking a contract also injures the universal.

<sup>3</sup> In the Zusatz to §408 of his *Philosophy of Mind* (*PhM*), part one of his compendium *Encyclopaedia of the Philosophical Sciences*, Hegel (1971) states that crime is comparable to madness, in the sense that both are extremes that human individuals in general inevitably have to overcome: "(C)crime and insanity are extremes which the human mind in general has to overcome in the course of its development, but which do not appear as extremes in every individual but only in the form of limitations, errors, follies, and offences not of a criminal nature" (125).

Given the importance of recognition in different types of crimes, punishment should distinguish the types of crimes that are directly and indirectly to recognition. Differential treatment should be provided to criminals committing different types of offences (Rauch 1983).

Recognition being treated as a core component of punishment also means that only individuals who are recognised members of a society are suitable for punishment. In his *Philosophical Propaedeutic*,<sup>4</sup> Hegel (1986) stated that “(T)o hold a man responsible for an Act means to impute or attribute to him guilt or innocence. Children who are still in a state of nature cannot be held responsible for their deeds, nor can crazy people or idiots” (15). Unlike lunatics, children, and the mentally handicapped, recognised individuals are held responsible for their actions. Therefore, in receiving punishment the criminals are being recognised for their rights and their status as free individuals.

Hegel pointed out that the types of punishment should be distinguished for the types of crimes committed because of their differential impacts on the universal will.<sup>5</sup> In his *Jena Lectures*, he expressed that “(I)n regard to penal law as well, there can be differences and modifications in regard to punishment. The stiffly formal equality [of law] does not spare character [differences]. One and the same thing does injury in one class more deeply and irreparably, while doing no disgrace in the other” (Rauch 1983, 168). In this account, Hegel is of the view that verbal injury is the most universal crime among other types of crimes such as violence and theft, given its substantial damage to the universal will.<sup>6</sup>

I thereby commit crime, acts of violence, theft, injury, etc. The verbal injury transcends all this as a universal crime. [In committing it,] I do not say [about someone] that he has done me this or another evil, but that he is this. The verbal insult places him in the universal, as negated. A judgment posits [e.g.] the tree to be green, [that] it is green — i.e., the judgment is not [intended as] subjective but [as] universal. Similarly, the verbal insult transforms the victim’s totality into something that is in itself a nullity. (Rauch 1983: 130)

<sup>4</sup> *Philosophical Propaedeutic* is a collection of his annual addresses on graduation day while he served as a rector of Gymnasium in Nuremberg in his early intellectual period,

<sup>5</sup> “(T)heft, robbery – they are just such confusions. They affect a particular existence: the former injuring the will unbeknownst, the latter injuring both will and knowing. Yet they do not injure the absolute will but only [the will in regard to] something determinate, i.e., the will in a particular existent – not as pure being, not as life. And the reaction therefore cannot be the absolute one, death ... Actual murder – the primary thing that is essential is the evil [intent], the imputation [that it is] not accidental killing, but there too the motive is difficult to ascertain ...” (Rauch 1983: 148–49)

<sup>6</sup> An extreme view given by Hegel is on capital punishment, that since life encompasses existence, no value can be attached to it, and therefore only taking one’s life is qualified for capital punishment.

The above view implies that contextual considerations play a significant role in decisions on punishment, as the extent to which the universal will is damaged should commensurate the type and severity of punishment.

### *Mature writings*

Hegel continued to attribute the aim of punishment as restoration of damaged collective recognition in his mature period. This is despite his shift in focus to free will in this period as represented by his *PhR* (Hegel 2008). Details are given below.

In his mature intellectual period, Hegel also emphasised the differential treatment of crimes not involving death penalty and different social classes for the purpose of re-integration into class after release from confinement. Hegel is of the view that there is no disgrace for the criminal who completed serving his punishment. The criminal is fully recognised by the civil society as a member with full rationality. A famous view of Hegel (2008) on punishment is that being punished the criminal is honored as a rational being, a view which is applicable to phenomena such as suicide and madness. This suggests Hegel advocated restoration of injured universal recognition of Abstract Right actualised in the *ethical life* (*Sittlichkeit*). This account may offer an impression that Hegel is a rehabilitationist (Brooks 2012b). However, his above view is based on the premise of restoration of the injured universal will.

In this same volume of *PhR*, Hegel (2008) re-emphasised that punishment is the restoration of the damaged recognition (despite the inclusion of the word 'retribution' in the paragraph):

The consummated crime is [a function of] the will that knows itself as individual, as being-for-itself, having come into existence despite the power of the other will that knows itself as universal will. But this crime is the animation, the activation, the arousal (to activity) of the universal will. Punishment is this overturn, it is retribution as (that) of the universal will. The essence of punishment does not rest on a contract (that has presumably been broken), nor (on) deterring others, nor (on) rehabilitating the criminal. Rather, the essence of punishment, its concept, is this transition, the inversion of the injured universal recognition (*Anerkanntseyn*). It is revenge, but as justice. That is to say, the recognition which is in itself and was damaged externally is to be restored. (Rauch 2012b: 131)

In another renowned section of his *PhR*, Hegel states that only individuals who are fully recognised in the civil society have rights. If punishment is for deterrence and rehabilitation, criminals are regarded as animals (Hegel 2008,

102-3). In his *PhR*, Hegel offered his view that punishment as rehabilitation and deterrence is fit only for dogs (Hegel 2008, Addition 102). Similarly, Hegel (2008) remarked that punishment is a form of communal self-defense, affirms the order and harmony of the *ethical life* (*Sittlichkeit*), and is a process of raising self-consciousness of the community. Hegel's restorative justice endows individuals the freedom to act freely, self-consciously as a citizen. Forgiveness of the victim to the offender is a form of recognition for the offender. The above descriptions show clearly that for Hegel deterrence and rehabilitation are not the bases for punishment.<sup>7</sup> This paragraph has led many Hegelian scholars to treat Hegel as a retributivist, and details on this issue will be given at the end of the next section.

The above review indicates that in both his early period emphasising recognition and mature writing emphasising free will, punishment is treated as inversion of injured mutual recognition which has been achieved between rational beings." Given the theme of mutual recognition which permeates Hegel's entire theory of punishment, it is not difficult to understand why he viewed verbal injury as a serious crime after murder. The importance of mutual recognition for Hegel also means that the political and social milieu, as well as the punishment's contribution to societal stability, which are objective manifestation of subjective spirit, should be taken into consideration in punishment. Objective spirit refers to a common spirit of a social group embodied in its customs, laws and institutions (Inwood 2017: 275), or spirit above the individual level that is associated with community and culture (Gardner n.d.). Objective spirit should be distinguished from subjective spirit, which covers all individual psychological life (Gardner n.d.; Inwood 2017: 275). However, as mentioned briefly earlier and will be elaborated in later part of this paper, Hegel's emphasis on recognition in punishment makes his theories entirely different from the mainstream retributivists.

### *Contemporary Discussions on Recognition Restoration as the Aim of Punishment*

#### *Atomistic conceptualisation of mutual recognition*

Brooks contended that two rather different accounts given by Hegel on punishment may be the cause of misinterpretations of Hegel's intentions by contemporary scholars (Brooks 2005; 2013). The first view, according to him, is Hegel's discussions on the 'abstract' relations between two atomistic indi-

<sup>7</sup> One view is that retribution is functionally incompatible with rehabilitation (Fattah 1982).

viduals in a contractual relationship in the opening sections of his *PhR*. In this part, Hegel suggested that

punishment is deserved for acts of “wrong” [*Unrecht*] where one fails to recognise another as a holder of rights by violating contractual stipulations between two atomistic individuals. This failure of recognition entails a correction in the form of a punishment set in a value that is equal in severity to the value of wrong inherent in the offence. This value of wrong is determined solely by the criminal himself: society cannot add to or subtract from this value. (Hegel 2008: 91)

This account indicates that the value of wrong and the punishment to be rendered are only valid for the two-person contractual relation. However, Brooks (2005) remarked that in his treatment of the “actual” or “true” relations between persons in a much later part of the *PhR*, Hegel (1970) highlighted that the decision and severity of punishment is liable to the influences of others in the civil society:

(T)he fact that an injury to one member of society is an injury to all the others does not alter the nature of crime in terms of its concept, but in terms of its outward existence [*Existenz*]... Crime in itself is an infinite injury, but as an existence [*Dasein*], it must be measured in terms of qualitative and quantitative differences... its danger to civil society is a determination of its magnitude. (as cited in Brooks 2005: 91)

The importance of others in punishment shows that verbal insult not only injures the achieved mutual recognition between two individuals, but also damages that of the collective human consciousness. The above view also implies that decisions on punishment should take into consideration the political and social milieu as well as its contribution to the stability and betterment of society as this paper proposes. Although Brooks (2005) touches on the civil society, he made few references to Abstract and Objective Rights, the two essential elements in Hegel’s philosophy.

#### *British Idealists’ emphasis on right (vs mutual recognition)*

A comparison of Hegel’s retributivist perspective from contemporary proponents of restoration of recognition is pertinent here to highlight the uniqueness of Hegel’s views. Two representatives of treating punishment as restoration of recognition are the British Idealists Green (1941) and Seth (1907). Brooks (2011) highlighted one characteristic of the British Idealists that distinguishes them from other retributivists is their emphasis of societal maintenance. This

view shares some similarities with Hegel's focus on restoring established recognition in *ethical life* (*Sittlichkeit*) for maintaining the social order. Another unique view of the British Idealists is their focus on the act of crime instead of morality as suggested by Kant. Therefore, the British Idealists treat punishment as a response to criminal acts. Brooks (2010; 2012b) proposed that the British Idealists offer a unified theory of punishment which integrates the retributivist, deterrent, and rehabilitative aims of punishment.

It is clear that Hegel's theories on punishment is based on an entirely different philosophy from the British Idealists. Douzinas (2002) emphasised that from a Hegelian perspective legal right of individuals in modern society is based on recognition. Crime nullifies or negates recognition, and therefore punishment should aim at the restoration of right (386) and therefore recognition.<sup>8</sup> According to Brooks, the two representative British Idealists, Green (1941) and Seth (1907), described above, treated right as the backbone for punishment. While Green highlighted that punishment is a form of disapproval of infringement of right, Seth advocated taking into consideration the importance of right and measurement of punishment be based on social necessity (which is changing over time) (Brooks 2014a).<sup>9</sup> Seth (1907) added that the severity of punishment should be based on the importance of right violated (Brooks 2010). However, it should be noted that no reference on restoration of injured recognition emphasised by Hegel is made by these two representatives.

Based on the adumbration of Hegel's philosophy of crime and punishment, the following are the responses of this paper to the above contemporary arguments on the restoration of recognition as a justification of punishment. Strictly speaking, Hegel is not a retributivist, and retributivism is only an outcome of his philosophy, i.e. his philosophy after being applied. This results in the impression of him being a retributivist. Hegel's philosophy of punishment is based on his unique views on recognition restoration which are not shared by others, especially his argument that verbal insult is the second most serious crime after murder.

### *Need for taking into consideration collective rationality*

Steinberg (1983) explained that means such as declaration and penalty for

<sup>8</sup> Wood (1990) also expressed that Hegel regarded punishment as restoring the right (110).

<sup>9</sup> However, Ryberg (2010a) raised the importance of clarifying the two issues of differential impacts of punishment on individuals and indirect effects of punishment which hinder the proper measurement of severity of crime and the challenge of delimitation.

deterrence purposes are not proper punishment, and punishment is necessary for logical and conceptual reasons. In fact, the deterrent and rehabilitative functions of punishment lack empirical support (Walgrave 2023: 626). Increased understanding on Hegel's philosophy of punishment has led scholars to suggest that calling Hegel a retributivist might be misleading (e.g., Brooks 2012b; 2017; Knowles 2002: 158; Komasinski 2018; Tunic 1992: 137).

As many Hegelian commentators, Dubber (1994) summarises features of Hegel's theory of crime and punishment including property right, contract, and mutual recognition. He highlighted the strength of Hegel's theory that in addition to focusing on the rationality of the offender, Hegel takes into consideration the rationality of the onlookers. This is because focusing on the onlookers avoids merely focusing on the offenders as the retributivist and rehabilitationists do, thus gives dignity to the offender. The presence of onlookers also implies that collective recognition needs to be accounted for in considering punishment. The onlookers also play a significant role in verbal insult, as verbal insults especially public ones injure collective mutual recognition thus universal will seriously. Again, as many contemporary interpreters, no mentions of Abstract Right and Objective Right are made in the above account (Dubber 1994).

### *An interim conclusion*

The above review indicates that contemporary discussions on punishment as recognition restoration only take Hegel on the surface, overlooking the key transition from Abstract Right to Objective Right in Hegel's philosophy. Verbal insult is a severe crime because of the damage it inflicts on the universal will, thus the social and political contexts in terms of recognition. This also means that in Hegel's advocacy of punishment to fit the crime, the considerations he gave on the crime's effects on social and political contexts is a result of his primary importance given to mutual recognition. These views result in a common misconception that Hegel is a retributivist. This is especially true that most discussions on Hegel's theories of punishment focus narrowly on the part of Abstract Right in his *PhR*. Focusing narrowly in this part causes a lack of consideration taken into how crime and punishment should be treated after Abstract Right has been actualised into Objective Right. This paper focus on this neglected aspect and discusses the importance of recognition restoration and contextual influences in the Objective Reality of ethical life (*Sittlichkeit*) in Hegel's theory of punishment. Without taking into consideration the realisation of right to the objective reality of the *ethical life* (*Sittlichkeit*), it is hard to see the reason for Hegel being entirely different from the historical and contem-

porary retributivists and his insistence of punishment to fit the crime. This is also the reason for this paper to propose that due attention needs to be given to political and social milieu, as well as the contribution of the punishment to the stability and betterment of the society, which are intimately related to Hegel's major thesis, recognition in his philosophy of punishment. In fact, punishment is more than restoration of recognition, but covers restoration of right, raising the awareness (of both the offender and the public) on the importance of right and recognition, restoration of the harmony of *ethical life* (*Sittlichkeit*), mediation between the offender and the victim, and finally maintenance of the order of civil society (Brooks 2013). In the next section, the importance of Abstract Right realising itself to Objective Right will be introduced, and this will be followed by explanations on why punishment should fit the crime from a Hegelian perspective.

### *How Abstract Right is Actualised in Ethical Life (Sittlichkeit)*

#### *Embodiment and Abstract Right realised in ethical life (Sittlichkeit)*

*PhR* (Hegel 1970; 2008) is a record of the development of Right in the world from the simplest to the most sublime. This explains why Hegel begins his account with property right which involves the simplest form of embodiment in reality. Steinberger (1983) added that property right allows the Will to externalise and alienate itself, as well as to envision and have knowledge on freedom in the most basic form.<sup>10</sup> Tunic's (1992) contribution to Hegel's theory on crime and punishment is his view that freedom requires commitment in terms of embodiment. He summarises Hegel's view, that a commitment which allows us to be free must be universal, objective, and rational. Therefore, subjective commitment as utilitarianism suggested does not fall into this category despite being rational. Revenge, on the other hand, is particular and therefore unrelated to freedom. However, unlike Hegel, Tunic (1992) regards both objective and subjective commitments are essential for freedom.

Komasinski (2018) delineated the dialectical nature of Abstract Right and how Abstract Right is realised in the *ethical life* (*Sittlichkeit*). His description on how punishment becomes less abstract can be indicated by Hegel's later treatment of how punishment is executed in the Police, the Corporation and the Legislature.<sup>11</sup> A good example on the actualisation of right in the *ethical*

<sup>10</sup> In Steinberger's (1983) words, "(P)roperty is thus the necessary embodiment of the Will's freedom", (860)

<sup>11</sup> Police (Hegel, 2008, 215–24), the Corporation (Hegel 2008: 224–28), and the Legislature (Hegel 2008: 284–304).

*life (Sittlichkeit)* can be found in Hegel's treatment of administration of justice in his *PhR*, in which Hegel (1953) re-stated his requirement of value equivalence in punishment, i.e., punishment which commensurate the severity of the crime (instead of mere punishment for the sake of punishment as described by the retributivists) and offered concrete content for punishment in relation to the society. In this part, Hegel extended the publicity of law to more practical procedures of legal proceedings.

The view of Brooks (2013, 2017) and Komasinski (2018) are that Hegel offers concrete details on the implementation of punishment only in his account which after Abstract Right has been actualised on the state level (or here the administration of justice). This is an advancement on a popular treatment of crime as infringement of Abstract Right, with rights remain on the abstract level (e.g., Stillman 1976). Hegel treats the state as having the power to punish because the state is a realisation of the Spirit (Siep 2017). As given by Hegel (1995) in one of his mature writings, "(W)here there is no state, there is revenge" (101). The state, for Hegel, has the function of mediating contradictions between individual property right<sup>12</sup>, and the state has the duty to ensure individuals can secure their "own long-term interest in self-preservation and the pursuit of happiness" (Siep 2017: 520). State actions are mandatory in case of conflicts between the three self-contained parts of the *ethical life (Sittlichkeit)*, namely, the family, the society, and the state, and the infringements of the right of individuals within and between these realms. In his *Philosophical Propaedeutic* (belonging to his early writings), Hegel (1986) provided extensive accounts of freedom, law, morality, disposition, and obedience which elaborate his view on punishment in his other works on *ethical life (Sittlichkeit)*.

### *Punishment as restoration of freedom*

In his discussions on the realisation of natural law to the objective realm (i.e., Objective Spirit), Hegel (1975) in another account in his early writings explained that punishment is the restoration of freedom, that

with the state of affairs +A there is linked for the criminal the opposite state -A, and both are brought about equally, while the crime had brought about one only. Thus, the punishment is the restoration of freedom, and the criminal has remained, or rather been made, free, just as the punisher has acted rationally and freely. (92)

<sup>12</sup> Property can be extended to a person's mental and spiritual skills, knowledge, and arts (Wood 1990: 95).

Although Hegel (2008) regards the prescriptions of actual punishment for different types of crime as beyond the scope of philosophy (particularly in his *PhR*), he mentioned there should be different degrees of the severity of punishment for crimes of different natures (i.e., equivalence of value). According to Steinberger (1983), Hegel viewed that the severity of punishment depends on the extent that freedom is inhibited, or how closely the right being infringed is related to freedom. This is the other side of the view that punishment should aim at restoring the injured universal recognition, for the reason that universal recognition enables the attainment of exercise of freedom. For Hegel (2008), punishment

is the reconciliation of the law with itself; through the annulment [*Aufheben*] of the crime, the law restores itself and thereby actualizes its authority. Subjectively, it is the reconciliation of the criminal with himself, i.e. with the law known by him as his own and as valid for him and his protection; when this law is executed upon him, he himself finds in this process the satisfaction of justice and nothing save his own act. (209)

### *The importance of taking into consideration contextual influences*

Another reason for Hegel not willing to prescribe specific punishment for different types of crime is that punishment is context-specific, a characteristic which belongs to the objective realm. In his *PhR*, Hegel (2008) states that

(I)n itself, crime is an infinite injury (see §95); but as an existence [*Dasein*] it must be measured in quantity and quality (see §96), and since its existence is determined as affecting the idea and consciousness of the validity of the laws, its danger to civil society is a determinant of the magnitude of a crime, or even one of its qualitative characteristics... Now this quality or magnitude varies with the state of civil society; and this is the justification for sometimes attaching the penalty of death to a theft of a few pence or a turnip, and at other times a light penalty to a theft of a hundred or more times that amount. (207)

An example he gave is that there are different conventions on the punishment symbols used: Beheading is very often used for certain types criminals such as nobleman in the past (Feinberg 1965). This remark indicates the importance of “shapes of consciousness” in Hegel’s philosophy, that culture and history (i.e., context) exert considerable influences on the decisions on punishment such as type and severity.

Brooks (2012b; 2017) offered a similar view that contextual influences are critical consideration on punishment, which is re-iterated by Hegel in his *PhR*

(e.g., Hegel 2008, Addition 209; Addition 216). The severity of crime should be determined based on both the criminal's state of mind or intention and contextual factors such as danger to society. According to Brooks (2017), Hegel takes contextual influences seriously in determining the severity of crime (thus punishment). An example Brooks (2013; 2017) provides is the stability of society. An unstable society is vulnerable to certain types of crimes (e.g. rioting) and therefore this type of crime should be treated as more severe in terms of dangers to the society. Time is another critical contextual influence on determining punishment. Hegel (2008) stated that

harsh punishment, therefore, are not unjust in and for themselves, but are related to contemporary conditions. A criminal code cannot hold good for all time, and crimes are only semblances of reality [*Scheinexistenzen*] which may draw on themselves a greater or lesser degree of repudiation. (Addition 208)

This, again, provides clues to Hegel's reluctance on providing practical guidelines on how to implement "punishment to fit the crime" and is a major reason for the proposal of punishment taking into consideration political and social milieu and its contribution to social stability.

Tunic's (1992) book on Hegel's political philosophy is one of the landmarks in the interpretations of Hegel's theory on crime and punishment. Despite its title suggests that his book focuses on political philosophy, it covers mainly legal punishment. In addition to summarising Hegel's main dictums,<sup>13</sup> he pointed out that rationality is the basis for politics and the legal system. According to Tunic, since the world is liable to irrationality and contingency and is not perfectly rational, crime is a manifestation of irrationality of the world. Increasing rationality of the world would lead to a decreasing need for punishment. As stated in *PhR*, "the fact that society has become strong and sure of itself diminishes the external importance of the injury and so leads to a greater leniency in its punishment." (Hegel 2008: 207) Again, Tunic's account, despite the lack of reference to the actualisation of Abstract Right to the *ethical life* (*Sittlichkeit*), offers insights on how rationality manifests itself to the reality of society.

<sup>13</sup> For example, the criminal has a right to punishment, punishment is a negation of the negation crime causes, crime is a violation of society's general will and the infringement of right of a particular individual, and punishment frees the criminals.

*Hegel as an Advocate of Punishment to Fit the Crime*

The most extensive discussions on crime and punishment by Hegel can be found in his *PhR*, which has attracted considerable attention to commentators. In his discussions on Abstract Right, Hegel distinguishes three types of wrong, namely, non-malicious wrong, fraud, and finally coercion and crime.<sup>14</sup> Non-malicious wrong or civil offence is implicit or immediate show of Abstract Right. It arises from a clash between the right of one person to another, and is a show of rightness. Fraud, on the other hand, is a show of right by the agent to actualise the Abstract Right into particularity or the will to be actualised. In his *Philosophical Propaedeutic* belonging to his early writings, Hegel (1986) suggested that fraud occurs when “the universal is reduced to a mere semblance by the particular will, as happens initially when the universal is reduced, in contract, to a merely external community of wills” (96). Force or coercion is “destructive because it is an expression of a will which annuls the expression or determinate existence of a will. Hence force or coercion, taken abstractly, is wrong” (Hegel 1986: 97). Another feature of crime is that it is a nullity made by the agent. This account indicates that only crime involves nullity, and as will be explained below, punishment should aim at nullifying this nullity.<sup>15</sup>

In addition to the three types of wrong based on Abstract Right, Hegel pointed out that the content of crime contributes to the specific qualities and their treatments in this part of *PhR*. He strongly criticises insufficient Understanding, or the intellectual capacity for isolating and analysing, because it resulted in superficial punishment such as Draco’s prescription of death for all types of crime. Hegel’s accounts of crime both in his mature period (as represented by *PhR*) and early period indicate that he places a heavy emphasis on the types of crime and advocates differential punishments for each of them. For example, in his Jena writings he states that “(t)he distinction between robbery and theft is qualitative” (Hegel 1986, 99) and mature writings “... murder is qualitatively distinct from theft, and theft, according to its scale, quantitatively distinct from greater or lesser theft” (Hegel 1995: 98). These statements reflect that Hegel is dissatisfied with the insufficient prescriptions of different types of crimes. Interestingly, Hegel did not recommend punishment for the crime involving verbal insult this paper proposed throughout his intellectual life. The proposal of the British Idealists of using

<sup>14</sup> Wood (1990) recounted that in his Nüremberg lectures (belonging to his early intellectual period), Hegel (1986) listed three types of crimes, namely, violence and enslavement, injury of body and life, and finally theft of external property.

<sup>15</sup> Wood (1990) offered four meanings of nullity, which includes the nullity of the criminal will because what it attempts to do cannot be done, the criminal act is self-destructive, the criminal act is an act with its outer existence at odds with its inner nature, and finally the will of criminal as null.

stern words can be considered as one of the punishments for this type of crime (Brooks 2010).

In both his *PbR* and *Philosophical Propaedeutic*, Hegel raised the view that punishment should be based on the concept of infringement of right instead of revenge. It is because revenge is a new transgression and “falls into infinite progression and descends from one generation to another ad infinitum” (Hegel 1986, 73). This, again, provides evidence for Hegel being an advocator of punishment to fit the crime. Contemporary discussions converge with this view, that empirical evidence has indicated that variables such as personal and social demographic influence punitiveness and the public’s preference for non-carceral alternatives (see Walgrave 2023: 627).

Punishment is the dialectical overcoming of crime and the dialectical unfolding of the Notion of Right (Brooks 2017; Steinberger 1983).<sup>16</sup> In his renowned account on punishment in his *PbR*, Hegel described that punishment

reasserts itself by negating this negation of itself. In this process the right is mediated by returning into itself out of the negation of itself; thereby it makes itself actual and valid, while at the start it was only in itself [*an sich*] and something immediate (Hegel 2008: 93).

Steinberg (1983) extended this line of argument and recommended the type and severity of punishment be determined by the type and extent of freedom one is infringed, a view which this paper shares. For him, the freedom lost from being stolen a tennis racket would be different from a house being destroyed by fire despite both involve infringements of property right. He recommended further works on the distinction of different types and degree of freedom for punishment. Echoing the focus of this paper, Steinberg (1983) firmly believes punishment must fit the crime.

In fact, many contemporary philosophical discussions on punishment are based on retributive and utilitarian perspectives, which fail to provide satisfactory justifications for punishment.<sup>17</sup> Goldman (1979) illustrated that adopting retributivism failed to justify specific punishment and utilitarianism failed to justify institutional punishment. In addition to retribution, deterrence, and rehabilitation for criminals to re-integrate to the community (e.g., McNeill 2014; see also Bennett 2010), another two purposes of punishment widely advocat-

<sup>16</sup> Wood (1990) also remarked that punishment is the “cancellation” or “annulment” of crime (109).

<sup>17</sup> In his book, Walkers provides detailed and convincing arguments that the modern retributive theory not only has not solved the problems of the classical utilitarian approach, but also created new ones (Walker 1991); see also Wood (1990).

ed are incapacitation of offenders by incarceration and death (Wilson 1975; Walker 1991) and restitution (Hershenov 2010).

Among the discussions to date, it is quite common for contemporary interpreters treating Hegel as a retributivist in the conventional sense, which resulted in his theory being viewed as sharing the limitations of the retributivists (e.g., Hoffheimer 1995).<sup>18</sup> As Brooks (2012b; 2017), McDonough (2004) discussed Hegel's theory of punishment in relation to disjunctive crime and concluded that Hegel's theory of punishment is based on rational retributivism, or a form of reformation. This means that every individual who is rational and is a unified organic whole has the right to be punished. Excusing a criminal because of incapacity either mentally or physically is to treat him as an incomplete entity. The judge is a mediator between the universal law and the particularity of each individual crime. Rational retributivism does not specify the quantity of punishment for each crime, but rather is based on rational deterrence. McDonough's conclusion is that Hegel holds a reformative view on punishment, which is characterised by a combination of retribution and deterrence. This reformative view enables the actuality of punishment to manifest itself in the organic whole.

Stillman (1976) highlighted that Hegel justified the annulment of crime in retributive terms. He proposed his version of Hegelian theories of punishment, that unlike the earlier version of retributivism Hegel's is nuanced with justice, equity, and concern with the individual. However, increased discussions and understanding on Hegel's philosophy as this paper indicated have created doubts on whether Hegel should be regarded as a retributivist.<sup>19</sup>

Echoing the remark made in the introductory section, the above accounts show that it is easy to misunderstand Hegel as a retributivist. Retributivism is a result of Hegel's core basis of recognition restoration and the realisation of Abstract Right to Objective Right described above. Punishment restores norms and order, and heals the injured recognition. The types and severity of punishment should not be based on measurable and quantifiable criteria.<sup>20</sup> Instead, they should be determined by the ways and the severity of the Objective Right of the victim being violated, the nature and extent of recognition being damaged, and the crime's harm to the well-being of society as a whole (Fattah 1982; 2007).

<sup>18</sup> Another example is McTaggart (1896). Wood (1990) is of the view that "Hegel is a genuine retributivist". (109)

<sup>19</sup> For example, Brooks (2013) remarked that Hegel can only be regarded as minimally retributive.

<sup>20</sup> Ryberg (2010b) expressed that the severity of punishment can hardly be measured. Kershnar (2010) also argues that proportionality cannot be justified because there are no mathematical formulas for calculating the seriousness of crime and the commensurate severity of punishments.

## Conclusion

"Criminals do not die by the hands of the law. They die by the hands of other men".  
(George Bernard Shaw, *Man and Superman*)

Shaw succinctly summarises the rationale for punishment in human history, including that of Hegel, that the collective human entity executes punishment through the legal system. Shaw's view is also consistent with the Hegelian philosophy that punishment aims not to retribute, to revenge, to rehabilitate, to deter, and to incapacitate but to restore the wounds caused by wrongs of the collective human consciousness. Punishment serves reconciliative and mediational functions through the negation of the negation, including reconciliation of gaps between one's conscience and sin given by Dostoevsky given at the beginning of this paper. Therefore, adopting a right- and freedom-infringement perspective would result in more rational and practicable implementations. At the same time, the collective human consciousness and universal will could be protected and would function smoothly through this restorative mechanism. A right- and freedom-infringement perspective is also in harmony with the progress of human history, with the example of the abolishment of death penalty and physical torture over time in many countries.

A closer look at Hegel's views on crime, punishment and law as shown from works other than the Abstract Right section of his *PhR*, especially from Hegel's Jena writings, in this paper has confirmed the above view. Based on this conclusion that punishment to fit the crime because of the need for restoration of injured universal recognition, a principle for determining punishment are given at the beginning of this paper. Discussions undertaken in this paper have also indicated that based on the perspective of mutual recognition, verbal insult is the second most serious crime following murder. Given the importance social and political contexts caused by the determining role of mutual recognition, decisions on punishment to fit the crime should take into considerations political and economic stability as well as time and culture. The extent and the probability that the punishment will contribute to social stability and betterment not in utilitarian terms but in terms of recognition, proper operations of *ethical life* (*Sittlichkeit*), and the realisation of Spirit should also be taken into consideration on the decisions on punishment. In addition to illustrating Hegel's theories of punishment are entirely different from conventional retributivism, this paper has clarified that deterrence and rehabilitation, although mentioned by Hegel (1969) in his *ScL*, do not form the core of Hegel's theory of punishment.

Steinberger's (1983) account is highly suitable for concluding this paper. He viewed that Hegel offers very practical and down-to-earth views and recom-

mentations for the implementation by the legal system and penal departments. This is in sharp contrast to the complex metaphysical discussions most other philosophers have been engaging in the historical development in philosophy of crime and punishment. Dubber (1994) remarked that Hegel's theory is highly relevant today in respect to criminal law, because Hegel's view of punishment as relating to recognition indicates the alienation the oppressed groups are facing, and this aspect has been relatively neglected by other theories on punishment. Hegel's view on the common rationality shared by community members provides practical implications that are unique from other theories.

Despite the strengths of Hegel's theories of punishment over other competing theories, his views are not without criticisms. Brown (2001) refuted the utility of adopting rights as the foundation for punishment. According to him, both Kant and Hegel developed their theories of punishment based on rights, with the former based on inborn human rights and the latter freedom of the will (especially in his mature writings). The account provided by Kant is based on inappropriate analogy of repaying debts which fails to take into consideration bodily integrity is not transferable as money. This means that injuries involving one's body or even physical death cannot simply be compensated by punishment. Hegel's theories, which is based on metaphor, also failed because it fails to explain why and how punishment is related to the restoration of victim's rights. Attacking the rights of the criminal does not mean that right is restored, as it makes no difference to the rights of the victim.<sup>21</sup>

Apart from the above criticisms, Fattah (1982) argued that it is impossible to make punishment to fit the crime, because "the determination of the length of imprisonment is left either to the arbitrariness of legislators or the discretion of sentencing judges, with all the disparities and inequities that ensure" (217). Wood (1990) highlighted that sometimes Abstract Right, the pre-requisite for punishment, does not exist for some individuals (e.g., the rabble), the state has no right to inflict punishment on them. This means that Hegel failed to provide the circumstances the universal has a right to cancel the individual. Given these criticisms, more efforts to explore established theories on how punishment is related to notions such as rehabilitation, restitution, dignity (Petersen 2010), torture (Kershnar 2010), and discrimination (Lippert-Rasmussen 2010) are required.

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<sup>21</sup> Brown's (2001) view is also shared by Wood (1990: 111) that punishment does not mean that rights of individuals are protected.

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# Freedom as a detachment of finite beings from the Absolute in Schelling's *Bruno*

Juan Jose Rodriguez

*Abstract:* The dialogue *Bruno* of 1802 is arguably the natural starting point for any investigation on the concepts of finitude, evil and human freedom in Schelling's middle metaphysics. In this dialogue the author elaborates for the first time in his system a concept of freedom and independence of the finite, which extends via his reformulation in *Philosophy and Religion* of 1804 to the *Freedom Essay* of 1809 and beyond to the works of 1810 and 1811 – *Stuttgart Private Lectures* and *The Ages of the World*. The central ontological problem of the dialogue relates to the possibility of a separation between the absolute and the world as space of finite beings, which, according to the system of identity first presented in 1801, cannot exist as such. The question we will then address concerns the status of the finite as such and how would it be possible to admit both its existence for consciousness and the positing of an absolute and infinite principle of philosophy. We will show how Schelling's interest shifts, almost unintentionally, from the infinite principle to the finite as such, as a principle of freedom and self-initiation independent of the real.

*Keywords:* Finite, freedom, absolute, world, consciousness, idealism

## 1. *Introduction\**

The dialogue *Bruno* of 1802 is arguably the natural starting point for any investigation on the concepts of finitude, evil and human freedom in Schelling's middle metaphysics. This period signals his first systematic effort to present a so-called "System of Freedom" that would continue the tradition of Kant's practical philosophy integrated into an objective conception of nature. Schelling had referred to a "System of Freedom" from 1795 (*SW* I, 159) up to 1836 (*SW* X, 36) thus providing a queue of interpretation that runs through his whole career. The difference between early and middle-late Schelling con-

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cerning the constitution of a “system of freedom” consists in that, prior to 1802 (except for the work of 1800 *General Deduction of the Dynamic Process*) Schelling had not yet spoken of freedom as a property of the finite in the way we present it in this paper. It is the case though that the period of freedom properly speaking runs from 1809 to 1815 or 1821. However, and according to our main historical thesis in this article, the elements pointing towards the constitution of a philosophy of freedom need to be traced back precisely to the problematic of the finite arising between 1802-1806 because only in the works of those years Schelling discussed the main presupposition for finite freedom, namely the ontological independence and self-subsistence of finite beings in general.

We say that *Bruno* is the best starting point to elucidate Schelling’s middle metaphysics of freedom because in this dialogue the author elaborates for the first time in his system a concept of freedom and independence of the finite, which extends via his reformulation in *Philosophy and Religion* of 1804 to the *Freedom Essay* of 1809 and beyond to the works of 1810 and 1811 – *Stuttgart Private Lectures* and *The Ages of the World*.

The problem of the dialogue lies halfway between the aesthetic and the ontological, a characteristic intersection of Schelling’s aesthetic period between 1800 and 1803, which we have dealt with elsewhere in connection with the posthumous work *Philosophy of Art*. At the centre of the aesthetic *motif* is the theme of the equivalence of truth and beauty, which, strictly speaking, is an expression of the higher equivalence, towards which the dialogue is gradually moving, between the ideal and the real, of identity – unity and difference, a theme that has preoccupied Schelling at least since the system of transcendental idealism in 1800.

In contrast to his transcendental and aesthetic period, however, in *Bruno* Schelling treats in passing, but with increasing vigour, ontological issues raised by his 1801 exposition and controversially discussed in his correspondence with Eschenmayer. We shall refer first to the question of the existence of the finite as such, i.e. the world as we perceive it, and its relationship to the Absolute or God, which Schelling has been posing as a principle of his system since 1795. This point opens Schelling’s reflections to an even more general concern, namely, the connection and separation between the Absolute and the world, which, as we know, under the guises of the infinite and the finite, has preoccupied modern philosophy since Descartes and Spinoza.

Although the problem of the separation between the absolute and the world is present in Schelling’s philosophy as early as in the *Philosophical Letters* of 1795/1796, it acquires a radically new tinge around the years 1801-1802 that we will now briefly elucidate. The difference lies in the new concept of the finite as such (see *SW* IV, 249, 259, 263, 285) worked by Schelling in this period,

which differs from the concept of the infinitely finite in time that he took from Spinoza earlier in his career and up to the dialog *Bruno*.<sup>1</sup> If we now conceive the world as made of beings that are not only infinitely finite, that is, only ideally finite (see *SW* IV, 248, 257, 281–285), but also real finite beings, then we can begin to understand the notion of the world of finite beings as a proper detachment from the absolute, and, as such, as an ontologically independent formation that comes to rival with the now merely ‘ideal absolute’ and sets itself up as a second absolute in *Philosophy of Religion* of 1804 and in the years to come (see *SW* VI, 39–42; VII, 467). With the – partially unintended – discovery of the extra-systematic place of the finite as such in *Bruno* and in the following works of the period between 1802 and 1809 Schelling opens for the first time in the tradition of modern and contemporary philosophy the topic of existence as an extra or pre-rational fact as later developed by philosophers of existence of the late 19<sup>th</sup> and early 20<sup>th</sup> century.

To briefly summarize our previous points, we ought to say that the central ontological problem of the dialog relates to the problem of the separation between the Absolute and the world, which is raised by considering the world of phenomena as that which appears to consciousness but cannot exist as such or in-itself according to the system of identity first presented in 1801.

The question we will then address concerns the status of the finite as such and how would it be possible to admit both its existence for consciousness and the positing of an absolute and infinite principle of philosophy. We will show how Schelling’s interest shifts, almost unintentionally, from the infinite principle to the finite as such, as a principle of freedom and self-initiation independent of the real. The split opened by the duality of the two principles will continue in *Philosophy and Religion* of 1804 and become more apparent in the other works of the 1800s that are the subject of our broader philosophical interest.

## 2. *Freedom as Separation and Fall*

The first fundamental theme of Bruno’s metaphysics, which is related to our object of investigation, namely the idea of a separation between the Absolute and the world as an objection to the idealistic system conceived as identity, relates, as we have said, to the emergence of the Ideas as forms of mediation between the Absolute and the world.<sup>2</sup> The Ideas, in turn, introduce the

<sup>1</sup> Regarding the relation between the infinite and the finite, as well as the role of intuition in early to middle Schelling see Tilliette 1985, 207–208, 210.

<sup>2</sup> More about the problem of the separation between the absolute and the world in the years 1800–

subject of freedom as emanation and consequently as detachment from the Absolute.<sup>3</sup> Freedom will thus be only conceivable from itself and not from the Absolute, to which it mediates a radical separation, a division.<sup>4</sup> Finally, we will see how the concepts of derived absoluteness and independent dependence, with which Schelling characterises both nature and man, are connected to the freedom of ideas.<sup>5</sup>

The fundamental question at issue here for Schelling is that of the separation between the world and the Absolute. We have already said that this separation manifests itself primarily in the freedom of ideas, according to which they separate themselves from the Absolute. For Schelling, freedom means first and foremost the separation of things from the Absolute, a separation that takes place through the action of things themselves. This movement thus implies a fall of the absolute into the world:

The individual things would now have separated themselves from that which is equal in and for itself by that which would be distinguishable and particular in them, although in that by which they are equal and individual to themselves they have taken with them into temporality an imprint and, as it were, the imprint of that which is par excellence indivisible. (*SW IV*, 233).

In all individual things there are two main properties. Those by whose presence they resemble each other, or otherwise stated, the predicates that signal the identity all of things between themselves and regarding the Absolute (= A). That which is equal in and for itself is the Absolute itself and the Absolute as essence is partially carried over each individual thing insofar, they are not completely dissimilar. All things are equal in that they are, and they are, that is, they positively exist, only in and through the Absolute. But things are not only their common properties between each other and the Absolute, namely, "being". Insofar they exist they are also particular and individual, but the "*what*" by virtue of which they are "so and so" cannot be singled out as a general property, precisely because what is particular of each thing is not an eternal essence and form – in this we note in passing some similarities of Schelling's theory of ideas and the Absolute in *Bruno* to the theory of ideas of Plato: only what is axiologi-

1809 in White (1983: 94-97).

<sup>3</sup> Beierwaltes (2000: 420-423, 434-436); Idem (1972: 100-144).

<sup>4</sup> Anselmo: But is not that which produces also in this respect like that of which it is the effluence? For has he, God, also revealed somewhere in the tangible world the beauty that is in himself, and does he not rather give the ideas of things that are in him an independent life of their own by making them exist as the souls of individual bodies? *SW IV*: 233. See also Vater (1984: 31).

<sup>5</sup> *SW VII*: 349; *VII*: 458; Theunissen (1965: 181-182).

cally and ontologically positive in things is an essence that corresponds to an idea. We must also underline that, the ideality of the Absolute that is built-in the essence of things insofar as they bear the imprint of the Absolute into the temporal world. Coming back to Plato, Schelling is alluding to some sort of participation (*μέθεξις*) theory by virtue of which the particular does not cease to be so by partaking in the Absolute. However, and unlike Plato, Schelling does not intend to separate the ideal and the real side of things by way of an ontological but rather through a *methodological* dualism.

The freedom of ideas and the process of differentiation of all beings, as mediated by the Absolute, relates to the concept of freedom of the finite in general.

Freedom depends on the possibility of differentiating the finite from the absolute. In this way, finite freedom appears as a kind of rebellion of things against their ground and as an attempt to constitute itself as its own ground and point of reference.

In this sense, we would like to suggest that freedom, and human freedom in particular, is configured in Schelling's system of freedom – around the years 1802-1809 – as the other of itself *vis-à-vis* the absolute. In contrast to the whole in the act, freedom lies in pure possibility, in pure potentiality. Freedom is therefore to be understood as separation, detachment, independence or fall. To what extent does it mean for Schelling to conceive freedom as a detachment from the Absolute? To begin with we must note that the existence of a realm of finite beings is the fundamental condition of possibility of freedom, in that if finite beings would not exist as such nor would it be possible to attribute freedom to them. This is why we speak in this paper of “finite freedom”<sup>6</sup> as a detachment of beings from the Absolute, namely, because freedom is to a large extent the self-generated capacity of finitude to posit itself as an independent existence. Freedom is then understood here not only as the fact that this detachment takes place, but also as the grounding operation according to which the finite posits itself as existent.

This goes so far that the gradual change in the concept of freedom that will take place around 1807 also had an impact on Schelling's concept of the absolute. The concept of the absolute began then to take on traits of human freedom and later, in 1811, culminated in eternal freedom, which is understood, subsequently, as the pure possibility of being, as the first potency or “Being able” (*Seynkönnendes*). It is a transition, we could say, from Spinoza's metaphysics of the perfect, the whole *in actu*, the past, the a priori and immovable,

<sup>6</sup> This can be also contested insofar as we could also make the case, as Schelling will later make from 1807 onwards, that there is only freedom where there is finitude, and that God's freedom regarding the world is a completely different concept than the freedom that we attribute to human beings and nature. This is nevertheless a topic lying beyond our scope in this article.

to a metaphysics of the possible, of what has not yet happened, but of beings (*Seyende*), and thus of the future, of progressive historical development.

In fact, Schelling reproaches both Spinoza and Hegel that they do not have a correct understanding of what we can call, following Gabriel, an “historic concept of Being”, but that they rather mobilize only a mere “logical concept of Being”. By this they mean that insofar as the result of the system of philosophy is already contained (although implicitly or ideally) in the principle of the system (being that the substance or absolute subject or spirit) then they are both unable to explain the process of a real becoming or real movement (in spatial terms) as well as the *difference* between the three moments of time: past, present and future. If the results of the system are already *virtualiter* in its original inception, then there could be no real difference, and all that has been and will be is the self-recurring movement of the same. This thesis of Schelling regarding Spinoza’s and Hegel’s system can surely be contested, but it would be difficult to deny that their systems are both complete systems and that at the same time they allow for the emergence of something radically new, either in space or in time.<sup>7</sup>

In what follows, we must deal successively with the Absolute presented by the character Bruno, starting from the concept of absolute unity, as the First that precedes everything, and the relation of the First to consciousness, understood as the principle of cognition. The connection between the First and consciousness takes place through the Absolute itself, which Schelling will refer to as the Third = x and that authors such as M. Gabriel have regarded as the principle for the establishment of the logical-predicative space itself.

### 3. *Unity and Beginning*

The universe and man, according to Bruno, are both at a middle point or moment of becoming, between the absolute and nothingness: “[...] to be mixed of the immortal and the mortal, and neither merely of the finite nor of the infinite.” (SW IV, 234). This in-between is the real. The world, nature and freedom, as real determinations, are neither finite nor infinite, but a mixture of the mortal and the immortal.

The starting point of the metaphysical part of *Bruno* (SW IV, 235-260) is “[...] the idea of that in which all opposites are not both united but rather one, and not both sublated (*Aufgehoben*) but not separated at all [...]” (235) that is, the idea of that in which the opposites are not united, as in the later indif-

<sup>7</sup> See for instance SW VII, 349-350, 358-359; X, 36-48, 126-161, in particular 124-125, *passim*; Gabriel 2011: 70.

ference, but are one, and their elements are not sublated because they have not even separated.

Here there is neither unity nor duality, but the absolute identity, which does not exist in either unity or duality. There is no unity, but only the one.<sup>8</sup> There is also no opposition, but rather a non-separation (*nicht-Trennung*) or non-decision (*nicht-Entscheidung*). This is what we call mere ideality or interiority.

The beginning of philosophy is a theme that is central to the thought of classical German philosophy, both for Hegel's absolute idealism and for Schelling's "real idealism". The following reflections on Schelling's *Bruno* should be seen in this context. According to our author, there are three possible beginnings of philosophy.

The first of them refers to the beginning by "the First (*das Erste*) that precedes everything". This variant resembles the idea of absence of opposites and separation presented earlier by Bruno and the concept of absolute opposite analysed later.

The other two variants then correspond to what Bruno will call the relative opposition of thinking and being, of the ideal and the real. The unity that opposes the opposition is the second variant. The third, on the other hand, is an opposition without unity, which, as we will see, is impossible since every opposition between two elements is united in a superior element. The latter is known to us from the doctrine of the third, according to which  $A=B$  is only possible through a superior third ( $=$ ). The position of relative unity also implies a reversal of relative opposition, as we know from Fichte's idealism. In this sense, Lucian mentions that unity cannot be established without simultaneously establishing the minimal opposition, namely that which posits the same thing as a subject on the one hand and as an object or predicate on the other.<sup>9</sup>

In summary, we have two global ways of thinking about the beginning of philosophy. Either a negative form, based on the concept of what precedes everything, which is identified neither with unity nor with opposition, but rather overlays them, as it were, or a form of relative unity, which is at the same time a relative opposition, since the predicative categories of unity and of the opposition presuppose each other. The first form, which refers to the first that

<sup>8</sup> The One is to be understood as in Neoplatonic philosophy. On this point see Beierwaltes 1985. Tilliette has shown (following Beierwaltes) the strong influence that Plotinus' conception of the One and of intuition played in Schelling's *Bruno* precisely through the mediation of Neoplatonic topics in the work of G. Bruno (as we will show, known to Schelling through Jacobi's *Letters on the Doctrine of Spinoza*). All in all, the Neoplatonic influence on Schelling is a complex combination of direct and indirect reading of Plotinus and other Greek and Christian sources as well. See Tilliette 1979, 706-708, 722; Idem 1985, 210.

<sup>9</sup> However, the semantic interpretation of the subject-object distinction must not be confused with its ontological conception. See Schelling's later critique of Hegel in Dews 2023 and Vater 1984, 25, 34.

precedes everything, is therefore identified with absolute unity and opposition, since there is no differentiated element in it that can be brought into a higher unity.

In the following, we will analyse in detail the concept of the First, which precedes everything, as well as the dialectic between relative unity and the opposition, which can be found in the philosophical positions of Schelling and Fichte. This analysis will enable us to highlight the problems underlying the concepts of unity and identity, which in turn will prove to have a negative impact on Schelling's conception of the system.

The difference between Fichte and Schelling regarding unity becomes clear right at the beginning of the dialog, as Lucian, in a reversal of Bruno's thesis of unity as the first, denies that it is possible to posit unity without simultaneously positing an opposition. This is where the concept of "relative unity" comes into play, i.e. a concept of unity in which the opposites are never completely united and never become one:

For unity is necessarily opposed to the opposite, and since it is therefore as inconceivable without the opposite as the latter is without it, it must also be impossible to posit unity without positing it with an opposite. (*SW IV*, 236).

According to Bruno, unity is the first, since it contains relative unity on the one hand and opposites on the other, so that the first unity is simultaneously a supreme antithesis: "[...] since we make the unity of all opposites the first, but unity itself, together with what you call the antithesis, itself forms the highest antithesis, we, in order to make that unity the highest [...]". (*SW IV*, 236).

Our aim is to show the incompatibility between a strong view of unity, as advocated by Bruno, and a concept of the freedom of the finite from the absolute, which gradually emerges from the phenomenological treatment of the sensuous world from 1802 onwards. By phenomenological treatment we understand the fact that the world that appears is considered as such insofar as it appears, and consequently as autonomous and independent from any ideal-identical principle beyond the 'I'.

What we notice here is the Schellingian view of absolute unity or unity unclouded by difference as distinct from the derivative concept of "relative unity". We also notice an influence of the Hegelian concept of the unity of identity that is to be attributed to the absolute

[...] also think this opposition, together with the unity that is opposite to it, conceived in it, and determine that unity as that in which the unity and the opposition, what is at once equal and unequal, is one [...] (*SW IV*, 236).

The reason why we bring forth the Hegelian concept of unity of identity of identity and non-identity has to do with problem of the internalization of difference introduced above. During the transition from the system of identity to the system of freedom, Schelling struggles to give a full account not only of finitude, but also of difference, to end up internalizing the concept of difference to the Absolute itself much like Hegel will do later in the *Phenomenology of Spirit* with the notion of negation and negation of negation to explain the dialectic movement of reality. Whereas Schelling characterised the Absolute around 1800 as the unity of unity and opposition, he now adopts a Hegel-like formula: Identity of identity and non-identity.<sup>10</sup> Schelling alternates between the two formulations, for he uses both the concept of the non-identical and that of unity clouded by difference. The concept of difference is of key importance to understand the solution to the internalization of difference in the absolute, on one side, and, on the other, the divergence of Schelling with the Hegelian philosophy, for it signals the existence of something that is incommensurable with identity and is not dissolved in it. The concept of non-identity, however, presupposes the concept of identity and dissolves into it, so that what is opposed to identity is also a reductive expression of it and there is no real difference on the whole. Only a doubling or negation takes place. This negation depends on the affirmation of identity, and consequently identity is paramount and conceals true difference, which cannot be reduced to identity-unity. The concept of difference that Schelling is now trying to articulate aims to overcome the rule of pure identity, so that difference could explain the emergence of something new from the Absolute, namely, finitude and freedom. The problem that this radicalization of difference entails is that because it undermines identity and dialectic of opposition and resolution into a higher reality it ends up externalizing in a second formation or real absolute detached from the ideal absolute and therefore a full separation emerges between the absolute and the world that cancels all systematic pretensions of German idealist's claims to identity and unity. In this largely unintended movement Schelling resembles later existentialist opposition between a pure science of reason exemplified by Hegelianism<sup>11</sup> and existence conceived as an extra- or rather as a pre-rational fact.

<sup>10</sup> SW IV: 239-240, 266, VII: 445; Hegel (1986, II: 96). (= TWA 2: 96). See also Vater (1984: 25-26, 45).

<sup>11</sup> It could be objected that we present here Schelling's logic as less accomplished (in pure logical terms) than Hegelian dialectic. Nevertheless, in doing so we follow Schelling himself, who in his late Munich time declared Hegel's *Logic* as the best consummation of the dialectical method he had first conceived for the *Philosophy of Nature*. The only problem is that Hegel had exceeded the purely logical framework when he declared that existence and being do not surpass this science of reason. In this way, he illegitimately hypostasized a way of thinking adapted to the real domain and to actual movement (Nature) into all of philosophy and detached it then from experience, precluding the access to

Let us now return to our train of thought before we commenced our digression on the concept of difference, that is, the beginning of philosophy in the First, which precedes everything, or in the relative unity of unity and opposition. What Lucian objects to in the concept of absolute unity, or that which is placed above unity and opposition, is that this unity is precisely thereby placed again in a relation of opposition to the totality of relative unity and opposition. This regressive argument directed against positing an absolute unity that is later seen as opposed to the whole of the relative sphere of identity and opposition resembles the logical objection to the theory of ideas of Plato.<sup>12</sup>

What the regressive argument of the third man ought to teach us is that an absolute unity needs to be posited as completely detached from the sphere of relative unity and opposition, that is, of the excision between the ideal and the real in order to, paradoxically, be able to explain the emergence of the relative domain. The unity that is placed above the unity and the opposition is in turn directed against them. This prevents Bruno's formulation from arriving at a pure unity unclouded by difference: "In no way, too, do you seem to arrive at a pure unity and one that is not clouded by difference". (*SW* IV: 235).

Bruno maintains that there is no opposition in the highest unity, that is, that it is not in a relation of opposition with respect to relative unity and relative opposition, nor, one might add, in any relation at all. This now introduces the further problem of the separation between the Absolute and the world, just as the absence of a relation between the two in Schelling's system produces a stronger dualism than that which should be avoided. What we must note is that there is no relation between the First, which precedes everything, and the relative unity and opposition. Between the two it exists a kind of "excision".<sup>13</sup>

In what follows we will see, however, how Schelling retraces his steps relatively and attempts to connect the first, which precedes everything, with relative unity and opposition by introducing the concepts of absolute and relative opposition. The first unity, as we shall see, is the absolute opposite, which for this very reason can be absolutely one and indistinguishable. The contrast or difference as such refers to the relative opposite. Let us see how Schelling ex-

the "Positive Philosophy" that the lack of Being of his *Logic* was signaling. Cf. *SW* X, 126-128.

<sup>12</sup> The argument, known through Aristotle as the "third man argument" was first detected by Plato himself in his later dialogue *Parmenides* (132a-e). It states that to explain the essence of something as 'x' (for instance, largeness or man-ness) we need to posit an idea of 'x' that is also characterized as having x, thus requiring the positing of a third entity (like a third man) that would explain both the real entity and the idea, and so on *ad infinitum* therefore undermining our confidence in the explanatory power of ideas *vis-à-vis* the real domain (see for instance Aristotle in *Metaphysics* 84, 23-85 3; 93. 1-7; cf. also *Metaphysics* 990b17, 1079a13, *Sophistical Refutations* 178b36 ff., and *Metaphysics* 1039a2).

<sup>13</sup> *SW* IV: 236.

plains these key distinctions that are highly instrumental in differentiating his unity position against Fichte.

The relative opposite in turn entails a relative unity, for the opposites can only be one in a higher one, without one dissolving or reducing into the other, but they can be united in a higher third, just like two elements that unite in a higher order being. (*SW IV*, 237). The absolutely opposite, such as the image and its object, cannot be united in something superior, but for this very reason they are absolutely one, for if the one did not exist, the other would also cease to exist. According to Bruno:

Only think what you have already thought and tell me whether you can think a more perfect unity than between the object and its image, although it is utterly impossible that the two should ever come together in a third. [...] therefore and for this very reason both will necessarily and everywhere be together, because they are nowhere together. (*SW IV*, 238-239).

Schelling's character Bruno is following a medieval tradition of thought regarding unity that traces its steps back to the *Book of the 24 Philosophers* (*Liber XXIV philosophorum*) and to the metaphysics of Nicholas of Cusa, himself an heir of the conception of unity and God of the *Book*. According to this tradition, unity is like an infinite circle whose circumference is infinite and therefore has a centre that is located "everywhere". By the coincidence of everywhere and nowhere Schelling and the authors of the *Book of the 24 Philosophers* imply that in the infinite there cannot be any local nor temporal fixed point of reference but rather an absolute unity and indistinction. There is reference to Giordano Bruno himself taken by Schelling from Jacobi's appendix to the second edition of the *Letters on the Doctrine of Spinoza* (1789). Schelling will draw inspiration, in particular, from the book *De la causa, principio et uno* (1584) to conceive later on in his *Freedom Essay* (1809) the key distinction in essence between ground and existence thereby distinguishing between the concepts of ground, principle and causa.<sup>14</sup>

Let us come back to our main argument: it is possible to posit the relative unity of being and thinking, the real and the ideal, as first principle of philosophy? But we have seen that the opposition between unity and difference is a relative opposition, i.e. it can be united in a superior third, in relation to which the first, which precedes everything, stands apart. Another way of expressing this original unity is to assert that, since everything in it is absolutely one and

<sup>14</sup> See Jacobi (2000: 157-159). We would like to thank one anonymous reviewer of *Philosophical Enquiries* for this last reference.

absolutely opposed, there is neither unity nor opposition in it.

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It is clear from the above passage that absolute opposition, according to Bruno, can be absolutely one at the same time, if we distinguish between opposition, which can be internal, on the one hand, and separation, which, as Bruno and Lucian argue, places both in a relation of exteriority, i.e. of cause and effect (SW IV, 238).

It is therefore appropriate at this point to return to the beginning of this metaphysical section, in which we presented three beginnings of philosophy (SW IV, 235-236): the first, which precedes everything, unity, which is opposed to difference, as in the relative unity of unity and opposition, and absolute opposition, as in absolute dualism. We thus see that the real beginning must be a relative opposition, for from the first that precedes everything, as Bruno maintains, only an original unity can follow:

Nor is there anything here but transparency (*Durchsichtigkeit*); for that regarding absolute unity, which, by comprehending the finite as well as the infinite, not united but undivided, is neither darkness nor mixture, you yourself see, and have already admitted it [...] (SW IV, 236).

The finite and the infinite are not united in the higher unity, but undivided. What is the difference? That the unity is clouded by the – finite-infinite – difference, but that the non-separation implies a prior moment, which is the ontological rather than the temporal origin of difference.

#### 4. *Unity in Being and Unity in Knowledge*

The most important conversation within the *Bruno* dialogue that we will analyse takes place in SW IV, pp. 252-262 between Bruno and Lucian. Bruno, as we know, represents the position of Schelling's system of identity and, as Beiser suggests, is a combination of Platonic, vitalist (Leibniz) and monist-immanent or pantheist (Spinoza, Bruno) positions.<sup>15</sup> Lucian represents Fichte's philosophy, especially in his *Foundation of the whole Science of Knowledge* formulated in 1794-95.

<sup>15</sup> Vater (1984: 12, 65); Beiser (2002: 350-354, 550).

The subject of discussion is the principle of philosophy and, in particular, the question of whether this principle lies, as Lucian proposes, in knowledge or absolute consciousness, or, as Bruno claims, in that which precedes everything and later gives rise to Fichte's absolute consciousness. The unity proposed by Bruno, which we say transcends knowledge and is located in the vicinity of Hölderlin's concept of being, ceases to be the principle of philosophy, understood as the science of knowledge,<sup>16</sup> to be located in the vicinity of the realm of religion on the one hand and non-philosophy on the other. It is for this reason that Lucian makes Bruno the following objections:

Lucian. Something else now indeed not, but this in such a way that that unity ceases to be the principle of knowledge, and just thereby also, as it seems to me, the principle of philosophy, which is the science of knowledge. (SW IV, 252).

Lucian's definition of philosophy as the science of knowledge is indicative of the problem we are addressing in this portion of the dialogue namely that of the principle of knowledge and the concept of unity. Let us see this more in details to understand the difference between the systems of Fichte and Schelling and to shed light on Schelling's posterior development. The concept of philosophy as a science of knowledge allows us to see how this science would have a mere negative relation to existence, insofar as by knowing the a priori elements of things it does not reach their effective presence. Later on in his career Schelling will direct a similar objection against Hegel logic which he regards exclusively as a "pure science of reason: insofar philosophy is a pure science of reason it is by virtue of this a mere negative philosophy, that is, it can tell us how the world is *if* the world exists at all, but as a science, it is dependent on the fact *that* a world exists, and such a fact cannot be established purely by rational – a priori – means.<sup>17</sup>

The problem that we must now analyse relates to the previous digression on philosophy as a pure science of knowledge. As a matter of fact, the beginning of Lucian's speech concerns the key issue of the extent to which absolute consciousness can function as ground or absolute principle and at the same time as principle of knowledge, which first establishes the relative unity of the real in the ideal:

<sup>16</sup> On Fichte's description of philosophy as the "science of knowledge", see Lauth (1975: 214-225).

<sup>17</sup> For the definition of (negative) philosophy as a "pure science of reason" see SW XIII, 60, 62-65, 76. See also SW XIII, 71, 75, 78, *passim*.

Knowledge as the unity of thinking and intuiting is consciousness. But the principle of consciousness is the same unity, only purely or absolutely conceived; it is absolute consciousness, while the latter is derived or grounded consciousness. Is this your opinion, then, that in philosophy we have no reason for going beyond the pure consciousness given in grounded consciousness, or for considering it at all other than in relation to the consciousness of which it is the principle? Lucian. But this is very much my opinion. (*SW IV*, 254).

The disagreement here lies in the concept of unity, which Lucian distinguishes between absolute and grounded consciousness, but which, as Bruno explains, must be the same unity that characterizes both the absolute and absolute consciousness. This problem is explained as follows. The unity in the absolute and in absolute consciousness, as distinguishable from the grounded consciousness, we must conceive of as identical, and yet the unity in knowledge is relative, for in it the ideal and the real are distinguished, and consequently we cannot place the principle of philosophy in knowledge if by it we mean absolute unity or the absence of opposites. The difference between the two, then, lies in the question of whether an absolute original unity that is free from contradictions is to be striven for, or whether the highest thing that knowledge can strive for consists in establishing, as in Fichte's idealism, the relative unity of thinking and intuition, of the ideal and the real:

For if the same absolute unity is expressed to you in the principle of knowledge that is expressed to us in the absolute, then you will fly over knowledge and consciousness with knowledge itself. Lucian. You overlook that we know unity as absolute, insofar as it is the principle of knowledge, but as absolute only in its relation to knowledge itself, and recognise it as the principle of knowledge. (*SW IV*: 254).

The question with which we shall be concerned is the following: can the relative unity expressed in knowledge between the real and the ideal be transcended, and if so in what way?

It is important to dwell on the point of absolute and relative unity, for here the difference between Fichte's transcendental idealism and absolute idealism advocated by Schelling up to 1804 becomes clear.<sup>18</sup>

Lucian, as we have seen, assumes the different unity of absolute and grounded consciousness and argues that the two are different forms of unity, one absolute, the other relative. Bruno, however, forces Lucian to recognise that in reality both are relative forms of unity, beginning in one case with the ideal or

<sup>18</sup> Vater (1984: 35-37).

knowledge and in the other with the real or being. On the contrary, the unity of a true absolute consciousness, like the unity in the Absolute, should be such that it abolishes the duality of knowing and being, of ideal and real: “Bruno. But the unity in absolute consciousness is the same as that in the Absolute considered *par excellence*.” This shows that there can be no difference between absolute consciousness and the Absolute itself, but that both are identical in the Eternal.<sup>19</sup>

We are thus examining the unity of knowledge that Lucian posits as a principle of philosophy and which makes the ideal and the real appear to be distinct. Unity in knowing is more precisely the relative unity of knowing and being, that is, what begins with the ideal, while unity in being is the relative unity of being and knowing that begins with the real. This is the thesis of the reversibility of Transcendental Philosophy and Philosophy of Nature, which Schelling establishes in the *System of Transcendental Idealism*, and which is presented here as a continuation of Fichte’s philosophy.<sup>20</sup>

If we consider knowledge, i.e., the relative unity of knowledge and being, of the ideal and real factors, as our principle, then we cannot arrive at true unity, i.e., that which is not only relative to knowledge and being: “Bruno. But unity is absolute consciousness only in so far as you regard it as the principle of the certain relative unity which is knowledge.” (SW IV: 256). But to place the unity of knowledge above the unity of being, both of which are relative unities, is for Bruno a step that Lucian has no right to take. In other words, to make idealism the ground of the real or of nature, both of which involve relative forms of unity, cannot follow from a metaphysical foundation of the concept of unity:

Bruno. But there is no ground for considering absolute unity preferably as the principle of one of the two relative unities, e.g. of knowledge, and to abolish the relative opposites in the unity thus considered, for it is the same principle of both, and either you consider it, even in relation to knowledge, in itself, [then] there is no ground for restricting it at all to this relation, or you do not consider it in itself, [then] there is equal ground for considering it in relation to the opposing relative unity, which is equally real and of the same originality with this. (SW IV: 256).<sup>21</sup>

The knowledge of consciousness is a distorted or inverted image of true knowledge, in which thinking and being are not reciprocally determined. The

<sup>19</sup> SW IV: 254

<sup>20</sup> More about the difference between Fichte’s idealism and Schelling’s philosophy between 1794 and 1800 in Schnell 2009; Snow 2018; Vater and Wood 2012.

<sup>21</sup> See SW VI: 42-43.

reason why we can claim to be aware of the inversion of Being in knowing can be summarised as follows. Consciousness or reflection has a dual or double structure in which what appears in consciousness as the first is, in fact, the third, while what appears in it as the third, being, is, in fact, the first. What appears as the content of consciousness is actually a reflection or duplication of the real content, like the image in a mirror, which consciousness nevertheless makes us regard as if its basis lays in consciousness itself.<sup>22</sup> At the heart of the objection of an inversion of Being in knowledge lays Aristotle's theory of a reversal of the *ratio essendi* in the *ratio cognoscenti*: even though we initiate knowledge by what is best known to us and progress towards what is best known in-itself, we then learn that what is best known in-itself has turned out to be, in the course of the investigation, best known also for ourselves.<sup>23</sup> This transformation of our view on knowledge has as a consequence an elevation of what is best known in-itself, namely Being, over what is best known for us, that is, consciousness, constituting then a case of philosophical realism.

Why did we express this inversion of Being in knowledge through the terms "the first" that becomes the third in Being, and vice versa, "the third" that appears subsequently as the first? The third as we shall see below simply denotes the absolute that comes only last to consciousness because we begin knowledge by our sensible certainty. This putative certainty is called the first for that very reason, but the case that Schelling is making involves seeing finite knowledge as an inverted image of the Absolute which is the first not in cognition but in essence.

The error of idealism, according to Schelling, from Descartes to Fichte, resides in that it takes the inverted image of being in knowledge to represent itself Being. By so doing idealism falsely hypostasises the subjective beginning of philosophy by the real beginning of the universe, and thus produces a great gigantomachy or picture of the world which takes subsequently the place of the world itself. More generally, according to Schelling, idealism sets the abstract as the basis of real experience, whereas in reality, the abstract, thinking, can only be an abstraction of true reality, of what actually exists. (See *SW* IV, 256-257; *SW* VI, 197).<sup>24</sup>

<sup>22</sup> Henrich (1982: 159-160); Bowie (1993: 84); Frank (2018: 139-140). See also Bhatti 2014. Bhatti illuminates the difference between the gnoseological or epistemological ground of things and their ontological ground, which lies in the real, that is, outside of consciousness.

<sup>23</sup> See *Posterior Analytics* 71b32; *Prior Analytics* 68b35-7; *Physics* 184a16-20; *Metaphysics* 1029b3-12; *Topics* 141b2-142a12.

<sup>24</sup> *SW* X: 20-40; Falgueras Salinas (1993: 19-100); Tritten (2012: 41, n. 26; Vater (1984: 57-59, 61, 82). A diagnosis similar to Schelling's on the relationship between modern philosophy, idealism and the construction of the world as image, as re-presentation, can be found in Heidegger famous work of

We have already seen that Bruno – and with him possibly Schelling – take from Aristotle the doctrine of the inversion of the *ratio essendi* and the *ratio cognoscenti* to characterise the relation that mediates between absolute and finite knowledge. As we have just mentioned, what appears in consciousness is a reflection or a duplication of the real content, an inverted image of that original unity which precedes everything. In connection with the theme of the inversion of knowing and being in reflection, Bruno introduces the concept of “the third” (*das Dritte*). What appears as the third term to reflection is the first thing in being and through which the synthetic identity ( $A=B$ ) expressed in all real equality is made effective. This equality is actually a threefold equivalence of  $(A=x) = (B=x)$ ,  $x$  being the third concept necessary to establish the equivalence, but which can never appear as such in it. The  $x$  is the absolute itself, or in M. Gabriel’s words, the establishment of the logical-metaphysical space as such, which cannot be of itself, but without which no further equivalence is possible.<sup>25</sup> Idealism is in this sense an inversion of the truly real, i.e., of the absolute in-itself:

Bruno. Is it not for this very reason that the expression of the infinite, from which, and of the finite, in which they are reflected, and of the third, in which these are one, may be recognised in all finitely cognised things? For of that which is the first in the absolute, we have said before that it necessarily becomes the third in the reflected image (*Abgebildeten*). (SW IV: 290).<sup>26</sup>

In principle, then, there are two attitudes. If the relative unity can be reconstructed indifferently from the ideal or real side, why not assume a superior unity that overcomes the opposition from which both emerge? On this point we can ask ourselves: is it completely impossible to assume a unity that is superior to knowledge and being, even if we cannot properly recognise it? This is where the theme of the trans-reflexive character of Being, which Schelling takes over from Hölderlin, appears. Knowledge, which stands in opposition to being, is in fact a form of reflection, a reversed form of a simple principle. Through this inversion of the principle, what is second in being appears to consciousness as the first, but appears inverted through its doubling, like the image in the mirror, which does not exclude the existence of the reflected, but of which we cannot know directly.

1938, “The Age of the World Picture”.

<sup>25</sup> Gabriel (2011); Tritten (2012: 42-44).

<sup>26</sup> See also SW IV: 292. On the concept of mirror image (*Abbildung*), see Schelling’s *Lectures on the Philosophy of Art*.

I cannot see myself directly in the mirror, but I could not see myself at all if the mirror image of which I see myself were not itself a mirror image *of something else* – the mirror image cannot simply be a mirror image of the mirror image, namely reflection cannot close in on itself:

In things you see nothing but the displaced images of that absolute unity, and even in knowledge, insofar as it is a relative unity, you see nothing but an image of that absolute cognition, which is only distorted in a different direction, in which being is determined as little by thinking as thinking is by being. (SW IV, 256-257; see also SW VI, 197).<sup>27</sup>

Lucian counters this doctrine with idealism, i.e. the doctrine of ideality, i.e. of existence only for consciousness, of opposites, according to which being is a proper being *for consciousness* or *for knowledge*, and not something independent in itself:

Since now on the displacement or relative separation and restoration of that unity, as you yourself say, rests all that which is generally held to be real, but that separation itself is made only ideal and in consciousness, you see why this doctrine is idealism, not because it determines the real from the ideal, but because it makes the opposition of the two itself to be merely ideal. (SW IV, 257).

Therefore, idealism is not the doctrine of the relative unity of ideal and real on the side of the ideal or of cognition, but of ideality, i.e. of the existence *for* consciousness only, of the opposition of the two in general. A detailed explanation of the thesis of ideality is needed here. Idealism is not what we can characterize as transcendental idealism or idealism in lax terms, that is the doctrine of relative unity of the ideal and the real that departs from consciousness.<sup>28</sup> This is rather called subjective idealism. Idealism is, on the contrary, a totalizing doctrine begun with Francisco Suarez (1548-1617) and continued via Descartes (1596-1650), Leibniz (1646-1716) and Fichte up to Hegel, according to which the distinction between ideal and real, between essence and the positing of essence (existence), is already merely ideal, that is, is only a *mental* distinction or a way of cognizing that does not (and cannot) posit a real independent of the mind. Precisely the existence of a real independent of the mind is seen as a production of the mind proper.

The above distinction between a limited idealism and a thesis of ideality

<sup>27</sup> More about the metaphor of the mirror in relation to knowledge in Frank 2018, 139.

<sup>28</sup> For this see Wirtz 2015; Ferreiro 2023.

or idealism in stronger terms is key for differentiating (this noted in passing) between the transcendental idealism of Kant and the integral or absolute idealism advocated by Fichte and Hegel – as we do not count Schelling into the idealist authors precisely by refusing to see the real only as a real brought forth by the mind. Kant himself had fully discredited Fichte's *Science of Knowledge* as an attempt to build up an idealistic account of the material side of knowledge alongside with the formal one, an attempt that, as we could claim of later Hegel's panlogism, he regarded as impossible and void.<sup>29</sup>

The problem of idealism is that only this consciousness is assumed to exist, so that one can only speak or think from the standpoint of consciousness. (SW IV, 257). If idealism is the thesis of ideality, then it is only the thesis of the mere existence of the ideal relative unity and thus of the impossibility of any absolute form of unity. How can Lucian prove this?

Idealism is consequently the doctrine of the negative, in so far as it asserts the non-existence of the sensuous world in relation to consciousness or reflection. It is therefore, according to Schelling, a philosophy which explains the finite by means of form and which is categorical only in the face of nothingness:

They would explain the finite completely through form, were it not that the eternal stubbornly refuses the material. Their philosophy consists in the proof that what is indeed nothing, the world of the senses, is really nothing, and this philosophy, which is only categorical of nothing, they call idealism. (SW IV: 309).<sup>30</sup>

In another sense, however, all philosophy is idealism, because it affirms the ideality of the phenomena of the sensuous world in relation to the Absolute, or in relation to action, which unites possibility and reality in itself – albeit as an infinite task.<sup>31</sup>

Now, for the absolute, neither thinking and being are opposed to each other, as for Fichte, nor are thinking and extension attributes of the absolute, as in Kant's empirical realism or in Spinoza's transcendental realism. This applies only to the idealism of the finite, and consequently philosophy is neither idealism nor realism in a one-sided or relative sense, but both at the same time, insofar as it gives an account of absolute unity.<sup>32</sup>

<sup>29</sup> Cf. Kant, "Open Letter on Fichte's Wissenschaftslehre, August 7, 1799," (1967: 254).

<sup>30</sup> SW VI: 43-44.

<sup>31</sup> SW IV: 326.

<sup>32</sup> Schelling has given a similar account on philosophy as neither idealism nor realism already in his works of the period between 1795 and 1796, namely *On the I as Principle of Philosophy* and *Philosophical Letters on Dogmatism and Criticism*, although later starting with *Bruno*, Schelling gradually move in the direction of real-idealism, that is, a position that concedes primacy to the real over the

What Bruno ought to explain is how unity in ideality, i.e., of consciousness, necessarily follows the eternal idea; for that it is possible is shown by the very existence of such ideal consciousness and unity:

You rightly demand that I speak of this. For you, indeed, by wanting to know the absolute unity originally already in relation to the relative unity of knowledge, evade that question which is only a special case of the general investigation of the descent of the finite from the eternal. (*SW IV*, 257).<sup>33</sup>

This means that Lucian wants to enforce Schelling's positing of unity in the question of the origin of the finite from the eternal precisely because Fichte's idealism of the finite does not answer this question, indeed he does not even present it as possible. For Fichte, the finite is thus an ultimate fact of reason, and he excludes, at least in his writings of the 1790s, any investigation that goes beyond the relationship between absolute consciousness and grounded consciousness.

It is therefore up to Schelling to elucidate to what extent the finite can be derived from the eternal, or, if this is not possible, to draw the metaphysical and theological conclusions that result from the break between the two.

## 5. *Conclusions*

This article main problematic has been to clarify and analyse of the theme of the duality between the Absolute and the world as it appears in the work *Bruno* of 1802. Let us take a closer look at the conclusions we reached on both points.

In his system of 1801-1804, Schelling opposes idealism from the point of view of a speculative position of unity, which starts from the Absolute and derives absolute consciousness and grounded consciousness from it. For Schelling, as for Hegel's *Phenomenology*, speculative means that the active and passive factors, the subject and the substance, are not constitutively opposed but that they are absolutely one and at the same time absolutely opposed.<sup>34</sup> For the speculative thesis of the unity of thinking and being, only the absolutely separate can become absolutely one, such as the object and its mirror image.

We have shown, following here Schnell, the incompatibility of the phenomenological attitude of finite reflection in Fichte with the speculation on the infinite of Schelling's absolute idealism around 1801-1804. Either the differ-

ideal. See for instance the beginning of *Stuttgart Private Lectures* (*SW VII*, 428-446).

<sup>33</sup> See Vater 1984, 37-38.

<sup>34</sup> Cf. *TWA* 3: 23.

ence between absolute and grounded consciousness cannot be overcome, and so the distance between the subjective and the objective remains constitutive, as in Fichte, or, as we have seen in Schelling, the entire sphere of knowledge is subordinated to the Absolute or God, the supreme principle of all things.

Finally, we explained the point of contact between phenomenology and Schelling's philosophy using the example set by in *Bruno*. We scrutinized the problem of the difference between the Absolute and the world, which can be seen as a dualism between Being on the one hand and appearance or the phenomenon on the other.

Firstly, we analysed the question of the freedom of ideas to detach themselves from the Absolute and to constitute a world separate from it. Secondly, we have established the extent to which Schelling's philosophy can assert its claim to unity against Fichte's idealistic split between ideal and real ground. Although Schelling seems to continue along the path of his speculative position, he is in fact moving towards a dualistic stand between the principle and what is revealed (*Offenbarten*), which reaches its climax in his *opera magna* of 1809, we refer to the *Philosophical Investigations on the Essence of Human Freedom*.

In the section on the difference between the ideal and the real in relation to the finite and the infinite, we have seen an essential problem of Schelling's approach to unity, namely the question of the status of the finite in a system dominated by an infinite principle. Despite the claim that philosophy's only concern has to do with the finite, Schelling moved gradually towards a position that recognises a kind of ontological status not only for the finite "in" the infinite, but also for the finite as such, i.e. insofar as it exists outside and beyond the infinite. This difference overlaps with the difference between Absolute and world, as well as between absolute and derived consciousness, which we have discussed at last. Around 1802/1804 Schelling is highly divided between the absolute idealist claim of the ideality of the finite, on one side (see *SW* IV, 248, 257, 281–285) and, on the other, is progressively leaning towards a position of strict finitude (see *SW* IV, 249, 259, 263, 285) later pursued in *Philosophy and Religion* of 1804 (see *SW* VI, 39–42) and in the *Freedom Essay*. The thesis about the real existence of the finite will be further enhanced in his *Private Lectures of Stuttgart* when Schelling defends the right to exist of the will proper to every finite being (see *SW* VII, 467).

Schelling failed, however, to fully establish the status of the finite as such in 1802, but unlike 1801, has now been forced by his own reasoning to recognize the need to explain *that* we must and *how* we can think the finite as such. We see therefore a duplication in the treatment of the finite on one side as infinitely finite and, on the other, as finitely finite. Schelling had also difficulties in proving how both approaches are *compatible*, so that now either the finite

tends to again vanish away in view of the infinite, or, as he would rather do in later works, the finite in the infinite and with it the whole sphere of the infinite is called into question – as we lean to think. This is surely a highly polemical finding in that by presenting it, we claimed that Schelling has discovered the impossibility of a complete system of reason already early in his career and that in order to be consistent with his claims on finitude he must have abrogated from his absolute idealist position altogether. Precisely because it is contested in some of the literature is that we consider this finding highly original and worth of attention.

Schelling's thesis, halfway between speculative idealism and a proto-existentialist position, was to connect the absolute character of consciousness with the real absolute itself and to make it a level derived from the absolute itself, rather than, like Fichte, locating the absolute "in" knowledge and thus in consciousness itself – what would result in an absolute "for" consciousness or in an idealism "of" the absolute.<sup>35</sup>

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<sup>35</sup> Cf. L.D. Scarfia, *El idealismo 'de lo' absoluto en Fichte y Novalis*, Doctoral Dissertation presented in October 2019, in Buenos Aires (inedited).

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Focus



# Philosophy and Novel Foods. An Introduction

Elena Bossini, Fabio Bacchini

Imagine a future scenario where, at dinnertime, you navigate the supermarket's meat aisle and encounter not only conventional meat but also an extensive assortment of alternatives: cultivated meat grown from animal cells, plant-based meats, insect-based products, and meats derived from microorganisms. These 'novel meats', which represent the potential future of our dinner plates, are gaining momentum in response to the urgent necessity to address the catastrophic state of the meat industry. Indeed, driven by a mission-oriented approach, food technology advancements are positioned as the key to establishing a sustainable, efficient, and ethically responsible model of meat production and consumption that meets both present needs and future demands.

The advent of novel meats has sparked pressing problems that populate a diverse range of research, spanning from investigations into how the sector's narrative landscape is shaping future visions of meat production (Sexton, Garnett, and Lorimer 2019; Broad 2020; Jönsson 2020), to legal issues surrounding product labelling (Failla *et al.* 2023; Malerich and Bryant 2022) and studies on consumer psychology and perceptions (Pakseresht *et al.* 2022; Lewisch and Riefler 2023).

Most importantly, the topic of novel meats has quickly entered the territory of philosophy due to the multifaceted ethical and metaphysical issues it poses. Ethical questions have been a focal point from the outset (Hopkins and Dacey 2008; Schaefer and Savulescu 2014), as novel meats – particularly cultured meat – are presented as a potential solution to the long-standing moral dilemma of eating animals. Indeed, these foods have been analyzed through traditional ethical frameworks, examining the consequences they might bring about, the virtues and values they challenge or promote, and the implicit assumptions that underlie their endorsement. In the realm of animal ethics, a key point of contention remains whether they represent a pathway toward animal liberation (e.g., Welin and van der Weele 2012; Sebo 2018; Milburn 2023) or, conversely, serve merely as a smokescreen that perpetuates or even reinforces speciesist and anthropocentric attitudes (e.g., Miller 2012; Cole and Morgan 2013; Alvaro 2019).

Beyond ethics, novel meats also disrupt the very concept of meat itself (Stephens 2013; Metcalf 2013), raising the question of whether an edible product made from animal stem cells cultured in a laboratory, or an assembly of plant-based proteins, can truly be considered meat. Additionally, on a broader scale, the topic of novel meats intersects with discussions in the philosophy of food, particularly regarding the limitations and challenges inherent in the approach they promote – namely, one that relies on the salvific potential of technology to fix the food system (Borghini, Piras, Serini 2020; Belasco 2006).

Embarking on the exploration of the various philosophical dilemmas surrounding novel meats, this focus aims to provide the latest insights into the ethical, metaphysical, political, and conceptual issues that drive the debate on the matter. In doing so, such a collection of essays seeks, on one hand, to illuminate how philosophy contributes to pressing food-related issues, and on the other, to position novel foods as a relevant subject for philosophical inquiry. For this reason, the focus intends to engage those working in philosophy, revealing how novel foods compel the refinement of theoretical tools and ethical frameworks, while simultaneously bringing traditional philosophical questions to the surface. Furthermore, this investigation also strives to serve as a resource for those working in food studies, food technologies, legislation and policy, and anyone with a general interest in novel meats, by offering an in-depth analysis of their ethical and theoretical dimensions.

The collection opens with the paper “New Challenges to Cultivated Meat” by Josh Milburn and Rachel Robison-Greene, which addresses three recent ethical objections to cultivated meat and argues that these objections fail to establish a definitive case against the adoption of this novel food. Firstly, the authors analyse the objection raised by Ben Bramble, which is based on the intuition that valuing another being’s body is incompatible with its consumption – an act that, according to Bramble, should be repellent to any well-informed person. Since cultivated meat is composed of the same material as animal bodies, Bramble contends, it should likewise elicit disgust. Milburn and Robison-Greene counter this reasoning by questioning the anti-cannibalist intuition underlying the argument as well as the metaphysical understanding of cultivated meat. The authors then challenge Alvaro’s claim that a virtuous individual would abstain from consuming cultivated meat and proceed to engage with the technological skepticism expressed by Abrell. Through a close examination and subsequent rejections of these arguments, the paper concludes with a cautious yet positive case for cultivated meat, one that frames this novel food as a potentially beneficial strategy for reducing animal agriculture.

The ethical discussion of cultivated meat continues with the second paper in this collection, “Cultivated Meat: A New Lifeworld for Human Beings” by

Luca Lo Sapio, which explores ethical positions both for and against cultivated meat. Lo Sapio examines perspectives such as Singer's consequentialism, Francione's abolitionism, and the positions of Bramble and Alvaro. In contrast to the latter three, who reject cultivated meat, Lo Sapio presents it as an opportunity to reshape the human lifeworld. This opportunity is articulated through five key aspects related to the production and consumption of cultivated meat. First, the capability of cellular agriculture to favour transparent production processes that – unlike conventional meat production – could reduce consumer alienation. Second, the ability of novel foods to encourage a balanced and pragmatic perspective on technology, steering clear of polarized views that depict technology as either entirely salvific or wholly destructive. Third, the relationship between consuming cultivated meat and cultivating virtuous character traits, as well as fostering pathways for personal self-improvement. Fourth, the potential of cultivated meat to deepen connections with the external environment and, lastly, to transcend the rigid dichotomy between the natural and the artificial.

A different approach to the promises and pitfalls of cultivated meat is presented in the third paper, "Cultured Meat in Between Anthropocene Crises: A Perspective from Ecological Feminism", where Alice Dal Gobbo examines the issue through the lens of political ecology. This perspective, combined with feminist thinking on science, technology, and ecology, allows the author to reveal the role of power in shaping both the material and symbolic dynamics surrounding novel food technologies. By uncovering the inherently political, rather than technically neutral, pathways of food innovation, Dal Gobbo emphasizes the importance of addressing how the future enabled by these technologies risks replicating existing power dynamics and leaving marginalized voices unheard. As such, the paper advocates for a methodological approach that involves mapping controversies and attending to overlooked perspectives, with the goal of rethinking food innovations – not as simplistic salvific solutions, but as complex hybrid socio-technical objects that must be understood within the context of planetary boundaries and social equity.

The fourth paper, "An ontological guide to make novel foods familiar" by Nicola Piras, endorses ontological modelling as a methodology capable of facilitating the familiarization of novel foods. Starting with a thorough examination of the European Union's definition of "novel foods", Piras critiques the EU's simplistic, one-size-fits-all categorization, arguing that a more nuanced approach is needed to capture the varying degrees of novelty that foods can present. The paper then proposes an ontological model that focuses on the relationships a food has with its cultural context, consumption practices, and the identity of the eaters, offering a more detailed understanding of the different

kinds and degrees of food novelty. This allows for a more precise demarcation between what is considered local and what is novel and, more importantly, it underscores that a robust categorization of novel foods requires specific normative decisions – decisions that should be developed collaboratively with the involvement of local stakeholders. Using edible insects as a case study, the paper concludes that – while acknowledging the vital role of food experts in these decisions – the input of local communities is crucial for categorizing novel foods.

The final paper, “Is This Meat After All? Novel Food Technologies and Conceptual Change” by Fabio Bacchini and Elena Bossini, examines whether novel meats, such as cultivated and plant-based varieties, can be recognised as instances of the category of meat. After analyzing the divergent definitions of meat found in the literature, the authors argue that novel food technologies reveal the longstanding, yet often overlooked, artefactual nature of meat, making this food category apt to be represented by a functional concept, which defines objects based on the roles or functions they serve within a given system. Under this framework, slaughter-based, cultivated, and plant-based meats are recognized as distinct subtypes within the broader category of meat. Indeed, a functional understanding of meat breaks the traditional association between meat and animal flesh at the overarching category level, while preserving this connection within the specific subtype of “slaughter-based meat.” The paper concludes that this functional perspective represents a conceptual amelioration of “meat”, as it allows each subtype of meat to maintain its unique identity while accommodating innovations in food production.

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# New challenges to cultivated meat

Josh Milburn, Rachel Robison-Greene

*Abstract:* Meat production raises a host of ethical problems that a move away from animal agriculture and towards cellular agriculture could, partially, resolve. Unsurprisingly, then, ethicists have offered a range of positive cases for cultivated meat, and ethics has been an important part of the broader conversation about the technology. However, academics continue to raise new ethical challenges to cultivated meat. In this paper, to bolster the positive ethical cases for cultivated meat offered elsewhere, we respond to three recent challenges to cultivated meat. These are Ben Bramble's argument that we should not want to be the kind of people who want to eat cultivated meat; Carlo Alvaro's suggestions that a virtuous individual would not eat cultivated meat and that cultivated meat will fail to eliminate animal agriculture; and Elan Abrell's claim that endorsing cultivated meat represents a missed opportunity. All three challenges, we contend, fail.

*Keywords:* Meat, cultivated meat, cellular agriculture, food ethics, animal ethics, animal activism, virtue ethics, philosophy of food, effective altruism

We find the arguments that animal agriculture is a moral disaster compelling. Annually, humans kill tens of billions of terrestrial vertebrate animals for food at a fraction of their natural lifespans. Many of these animals will have led lives of suffering, facing mutilation, close confinement, and the frustration of their natural inclinations. Humans kill many more aquatic animals and invertebrates, but numbers are hard to calculate. Animal agriculture creates serious environmental problems, through the release of greenhouse gases and water pollution, the former leading to climate change, and the latter contributing to ecosystem collapse. It uses huge areas of land, both for the animals themselves and (especially) to grow their food, contributing to deforestation. And it poses serious public health risks through, *inter alia*, the threat of zoonoses.

Advances in food technology offer the prospect of animal products without animal agriculture. Cultivated meat – also called *in vitro* meat, cultured meat, clean meat, and other names – is perhaps the most evocative. Beginning with animal cells, food technologists can grow meat in a bioreactor. At time of wri-

ting, such meat has very limited commercial availability, but dozens of companies aiming to produce this meat exist, supported by significant funding from governments, charities, and especially venture capital.

Ethicists have offered many defenses of cultivated meat against the background of the ethical problems with animal agriculture (see, e.g., Schaefer and Savulescu 2014; Hopkins and Dacey 2008; Robison-Greene 2024). Indeed, the debate is sufficiently advanced that it has broken into sub-debates (see, e.g., Chauvet 2018; Bacchini and Bossini 2023). Additionally, appraisals of the ethics of cultivated meat find a prominent place in non-philosophical explorations of the technology (see, e.g., Zhu et al. 2023; Baggini 2023).

Defenses of cultivated meat take many forms. For example, some (e.g., Robison-Greene 2023) frame cultivated meat as a “non-ideal” strategy for challenging animal agriculture. Such cases observe that arguments for veganism have achieved only limited success when faced with people’s desire for meat. But cultivated meat can overcome this challenge, allowing people to eat meat without supporting animal agriculture. The technology thus presents a promising route towards genuine change. Other defenses (e.g., Milburn 2023) position cultivated meat as part of an “ideal” society. Despite the problems of animal agriculture, says this approach, meat isn’t all bad. Better to keep meat if we can – and cultivated meat offers that opportunity.

Strikingly, cultivated meat has also faced significant criticism from some ethicists. In this paper, we focus on three recent challenges. Rather than offering a positive defense of cultivated meat – something done in the works cited in the previous paragraph – we take up the challenge posed by the technology’s critics.

We write as philosophers. Our focus is on moral challenges to cultivated meat. We acknowledge that there are (for example) important technological barriers to overcome before “cellular agriculturalists” can produce cultivated meat cheaply at scale. Engineers and other scientists are best placed to answer these questions. We also accept that advocates of cultivated meat have crucial legal, economic, and marketing questions to answer. But moral questions are important, too. Such questions ask whether cultivated meat is a technology that “we” should support – as individuals, as societies, as “movements” – and in what *sense* we should support it.

In this paper, we respond to recent ethical challenges to cultivated meat from Ben Bramble (2024), Carlo Alvaro (2022), and Elan Abrell (2023). Respectively, these challenges concern the idea that we should not want to be the sort of people who want to eat cultivated meat; that cultivated meat raises worries about both political strategy and vicious characters; and that support for cultivated meat represents a missed opportunity. We show that these challenges fail.

Our arguments complement the positive defenses of cultivated meat identified earlier. We assure those ambivalent about cultivated meat that these challenges are far from decisive; remind supporters of cultivated meat that, despite the wealth of moral argument on their side, some people remain unconvinced; and invite those skeptical about cultivated meat to recognize the technology's potential.

### *Ben Bramble and the people we should (want to) be*

For Ben Bramble, the question, when it comes to cultivated meat, “is not what we should *do*,” but “what sort of people we should *be*” (2024, 122, emphasis Bramble’s). He believes that we should not be the sort of people who would want to eat cultivated meat.

Bramble holds that the thought of consuming another person’s body is repellent. This is not mere squeamishness, but the product of understanding “the role of our bodies in all the value and disvalue of our lives” (119). Cultivated human flesh is “*the same sort of stuff* that embodied selves come in,” and this means that it will feel equally “off” to a well-informed individual (120, emphasis Bramble’s). The bodies of sentient animals tie intimately to value and disvalue in animal lives, parallel to how humans’ bodies tie to human lives. Thus, a well-informed individual will feel repulsed at the thought of eating a sentient animal’s body. Cultivated meat comprises the same material as an animal’s body, and so it, too, will repulse a well-informed individual. Since we should want to be well-informed individuals, we should want to be people who find cultivated meat repulsive. And as we do not want to eat repulsive things, we should want to be people who do not want to eat cultivated meat.

In the remainder of this section, we will do four things. First, we challenge Bramble’s reliance on anti-cannibalistic intuitions. Second, we interrogate his metaphysical account of the “stuff” that flesh is. Third, we propose an alternative vision of the need to respect the bodies of humans and animals grounded in the relationship between the body and conscious individual. Fourth, we challenge the importance that Bramble places in the need for us to become better people.

### *Anti-cannibalistic intuitions*

Historically, many cultures have practiced cannibalism, including communities in North America, South America, Asia, Africa, and Australasia. (Attestations are contentious; colonialists used accusations of cannibalism to justify violence.) Naturally, cannibalistic practices vary. Among real-world customs

are cannibalistic practices included as part of respectful funerary rites. These kinds of activities were practiced into the 20<sup>th</sup> century by (e.g.) the Wari' in Brazil and the Fore in Papua New Guinea. We should be cautious about dismissing these practices as inherently disrespectful.

There are now few communities practicing cannibalism in the sense that (perhaps) Bramble imagines. But more innocuous cannibalism continues worldwide. The consumption of placenta remains moderately common, while Roman Catholics (18% of the world's humans) consume the literal body and blood of Christ during the Eucharist (or so a belief in transubstantiation suggests). And parts of our bodies end up inside other humans in many ways. Blood transfusions and organ transplants provide stark examples. Bramble doesn't say what he thinks about placental consumption, organ transplants, and the like – we return to them shortly – but he *does* say what he thinks about cannibalistic cultures like the Wari': "The people in these cultures were mistaken. They did not sufficiently understand the value and disvalue that is possible in human lives or the way in which our bodies are the special condition of this, our intimate companions throughout our lives" (120).

For Bramble, this is not just a claim of the superiority of the institutions of one culture over the institutions of another. Instead, Bramble holds, human aversion to cannibalism is natural. In a sense, we agree. It isn't hard to imagine that humans *evolved* an aversion to cannibalism (cf. Milburn 2016). Instincts discouraging interference with corpses are evolutionarily advantageous. But if we have an evolutionary explanation for a particular instinct, we should treat that instinct with caution in moral reasoning. After all, evolution offers tendencies likely to increase our chances of passing on our genes (in a given ecological context), and not necessarily good moral principles. Bramble acknowledges this but holds that there is "more to" our disgust than an evolved tendency – he "cannot prove" this, though (120).

*Contra* Bramble, we suggest that we should treat intuitions about the wrongness of cannibalism with caution. Many things intimately associated with cannibalism do raise ethical (aesthetic, health...) concerns, such as interhuman violence and interference with corpses. But cannibalism *itself* isn't as obviously ethically objectionable as Bramble takes it to be.

We must be careful about leaning too strongly on our "natural" intuitions when they may be culturally variable and amenable to evolutionary explanations, as they are – we suggest – when it comes to intuitions about cannibalism. We urge particular caution in this case, for two reasons.

First, Bramble uses "natural" intuitions to condemn practices that are not obviously bad for anyone. Cannibalism as part of a respectful funerary rite, for example, does not involve people hurting or killing anyone, nor does it involve

them doing to a person's body anything that the person would not want to happen. (Admittedly, cannibalism led to negative health outcomes for the Fore people. But such outcomes are not inevitable.) Similarly, there is no obvious victim when parents cook and consume a placenta, or Roman Catholics accept the Eucharist.

Second, Bramble explicitly uses the "natural" intuitions to criticize the practices of cultures very different from his own as "mistaken." This is something that we must do with caution. We (the authors) are not moral relativists, and thus accept that it is sometimes appropriate for people to morally condemn the practices of cultures of which they are not a part. But we do recognize that moral philosophers must explore such criticism with care. For example, we must interrogate whether, inadvertently or otherwise, critics apply different standards to the practices of other cultures than their own. (To use an apt example: many westerners are very ready to condemn those who eat dogs, even while they themselves continue to eat pigs.) Similarly, we must be careful not to allow our criticism to become motivated by non-moral considerations. For example, the practices of those in cultures quite unlike our own may seem strange, unpleasant, or unnecessary. But these are quite different things from them being *immoral*.

To be clear: alien practices that are not obviously harmful could, indeed, be morally suspect. But we suggest that, for methodological reasons, moral philosophers should be cautious of labelling them as such. This is because of the possibility of (inadvertently) motivated reasoning.

### *Metaphysics of stuff*

But let's imagine Bramble is correct about cannibalism. Still, it might not follow that we should reject consuming cultivated meat. As noted, Bramble takes it that cultivated meat is the same "stuff" as flesh from a corpse. This is on the grounds that "physically speaking, it is identical" (121). This is an optimistic assessment of the current state of cultivated meat technology. It's also metaphysically suspect, taking for granted that only *material* questions are relevant to whether A and B comprise the same sort of stuff.

But this needn't be so. For example, there might be metaphysical significance to the stuff's *history*. To explain: perhaps part of the stuff's *stuffness* is how it came about, not just its material constituents. This means that two things that are *materially* similar might nonetheless comprise different stuff. For example, Robert Elliot (1982) famously argues that there is a difference between a forest that has occurred naturally and one that humans have "faked." Even if the "natural" forest and the "faked" forest are *materially* indistinguishable, their

different histories mean that there is a metaphysical difference between them. (And ethical differences can arise from these metaphysical differences.)

If, as with Elliot's forests, the nature of the stuff we call human flesh depends partially upon its history, we could hold that cultivated human flesh is *not* the same kind of stuff as flesh from human bodies. This is because the two agglomerations of stuff have different histories: some of the stuff arose in a human body, some arose outside of it. A difference like this could allow us to retain our commitment to, say, respect for corpses, without having to condemn cultivated meat. This is because some historical features of a given kind of stuff may be moral features, or at least morally *relevant* features, and these moral features may serve to distinguish that bit of stuff from another bit of stuff that is *materially* identical. So, if cultivated meat is a different sort of stuff from the flesh in a corpse, even if materially indistinguishable, we could owe respect to parts of a corpse (and, crucially, things made of the same stuff as parts of a corpse) without owing the same respect to cultivated meat.

If, on the other hand, history *isn't* metaphysically relevant when determining the nature of certain body-like stuff, we must question the ethical significance of shared stuffness. Human bodies mostly comprise oxygen, carbon, hydrogen, nitrogen, calcium, and phosphorus, with a little potassium, sulfur, sodium, chlorine, and magnesium. But we don't and shouldn't recognize other objects made of these elements as comprising the same "stuff" as our bodies. What matters about a body, we will shortly suggest, might be its relationship with a person, not its material.

It is worth acknowledging a final puzzle about the metaphysics of cultivated meat: is it a *part* or a *product* of a body? Bramble sometimes writes as if *any* use of bodies is off-limits. It's "disgusting to eat a dead person's body (or to use it in other ways, say, by extracting and selling their hair and teeth)" (119), he says. But this is implausible, as it condemns many clearly laudable practices. A person could donate her organs to humans in need of transplants, or her body to medical schools, saving human lives. The medics and researchers clearly use the body parts of this person. But that isn't disgusting (in the morally significant sense). Indeed, it might be the opposite. To echo Bramble's language, perhaps someone who fully understands the role that our bodies could play in saving lives would want their organs donated to the ill, or bodies donated to science. We should *want to be* the sort of person who requests that others use their body like this. Bramble might object that there's a difference between taking and using a body part with consent and taking and using a body part *without* consent. There surely is. But this is not the point. The point is that there are at least some cases in which the use of a part of another's body is *not* disgusting. And if that's so, Bramble owes us more explanation of why the

consumption of parts of an animal's body is necessarily disgusting.

Other times, Bramble distinguishes between parts of animals' bodies and things that, when removed, cease to be parts of it, like eggs (128). He is right that there is potentially a moral difference between using bodies and using bodies' *products*. But he does not argue that cultivated meat *is* a part of an animal's body. (His case, recall, depends on it being the same *stuff* as an animal's body, which we have challenged.) Indeed, we contend that – even if it's made of the same “stuff” as individuals' bodies – we could think of cultivated meat as the *product* of a body. After all, cellular agriculturalists grow cultivated meat outside of, and quite separately from, paradigmatic instances of animals' bodies, much as an egg (once out of an animal's body) exists completely independently of it. Cultivated meat does, based on current technology, require biological material from an animal at some point in its production process. (Even if we could create cultivated meat from immortal cell lines, that cell line needs to start somewhere.) But that starting point could be eggs, feathers, hair, umbilical cords – it needn't be an animals' body in the straightforward sense.

### *Self-body relations*

Rather than starting with metaphysical questions about “stuff,” we can challenge Bramble's argument by beginning with the connection between self and body. Bramble's claim that living beings stand in special relationships to their own bodies is plausible. But we can ground this special relationship by recognizing a *relational* property – namely, the relation that obtains between conscious creatures and their bodies. (We understand consciousness by simply noting, echoing Thomas Nagel (1974), that there is something that it is like to be a conscious being. There is something that it is like to be one of us, you, or a bat. There isn't, panpsychism aside, something that it is like to be a cup.) On this framing, if we think that special moral considerations hold when it comes to the pairing of consciousness with body, it's *because they're paired*. When the relation between the two no longer obtains, the special moral considerations can disappear (or otherwise change) with it. (On this picture, incidentally, there's no reason to believe that the “stuff” a body comprises carries any moral or metaphysical significance.)

An analogy makes this argument clearer. Imagine that you hear music, seemingly produced on a trumpet played in a breathy, Chet Baker style. You have a variety of reactions – aesthetic, moral, and more. You might think the song moving and soulful, and the artist deep and evocative. You might have (implicit) attitudes about the artist's entitlements (to appreciation or pay, say). Imagine further, however, that you learn that a person didn't produce the music at all; the sound was simply the wind blowing through a bottle bank. The

relationship you thought existed between artist and instrument does not exist. It *never* existed. Now, your aesthetic and moral responses change. You may no longer be inclined to use “deep” as a descriptor, because you reserve judgments about depth for the behaviors of cognitive, emotive beings. You might conclude that there’s no reason to be concerned about appreciation or compensation for the “talents” of wind or glass, as it’s only when a relation exists between artist and instrument that these judgments are apt.

Similarly, when a conscious being stands in a relation to a body, it makes sense to have aesthetic and moral reactions to that embodied creature. We may now feel both aesthetic and moral disgust when someone treats the embodied being as a mere thing. But this does not apply to body-like things when they have never had a relationship of this sort with a conscious being. And even if a body has previously had such a relationship, when, for whatever reason, the relation no longer obtains between the conscious being and the body, the judgments ought to change as well. This could happen either when the being dies or when someone separates a part of the body (e.g., a scientist extracts their cells). This is just an instance of judgments changing as the facts of circumstances change. To say that we should continue to regard the flesh in the same way in which we viewed the relationship between flesh and consciousness is to claim that the physical stuff is still somehow haunted with properties that applied to the relation. To borrow Bramble’s language, perhaps a morally well-developed person will adjust beliefs and behavior in response to this kind of change.

### *Better actions vs. better people*

A final concern for Bramble’s view is one that is common to virtue-theoretic approaches. In circumstances in which significant and preventable harms remain unaddressed, such approaches can seem like navel gazing. It is, of course, important for us to consider the kind of person we ought to (want to) be. It is even plausible that engaging in this kind of introspective activity is part of what it is to live well. That said, considerable attention to virtues of character can fail to promote good and prevent harm. We’ve already noted the harms of animal agriculture. We maintain that lessening these harms should be our priority, rather than the cultivation of good character. If we become better people through our efforts, all the better, but that shouldn’t be our primary focus.

The insidious nature of this problem is revealed when we see that sometimes aiming to become “better” people can lead us to actively oppose harm-reduction. Bramble seems to think that we should keep intensive animal agriculture because it offers us opportunity for moral development. Switching to cultivated meat would be, he accepts “a good thing in one way” (126). (He’s

talking about benefits to animals.) But, he says, a move away from factory farming “will make it much harder for us to have some kind of reckoning about our treatment of animals” – it makes self-deception “all too easy” (126).

We are uneasy about this argument. Imagine a parallel argument about refusing to rescue someone facing domestic abuse on the grounds that this would prevent their abuser being able to have a “reckoning.” We do not, and should not, find such an argument compelling. We hold that it is wholly reasonable to believe that animal agriculture’s harms are more morally weighty than maintaining an opportunity – that, so far, we’ve collectively ignored – for moral self-development.

Bramble, it seems, believes that we can achieve both aims at the same time: become better people *and* help animals. He may have a strategy in mind according to which everyone recognizes that experiencing disgust in response to flesh is what virtue requires. This approach would require that 1) We can change our aesthetic responses; 2) People care what virtue requires; and 3) People will quickly change these attitudes *en masse*. Absent a clearer sense of what this strategy entails, we worry about its feasibility. A strategy utilizing cultivated meat, we suggest, is more promising. It offers the opportunity to seriously reduce harm to animals, and, at the very least, wouldn’t *prevent* humans from having the kind of moral reckoning – or even change in aesthetic sensibilities – for which Bramble calls.

### *Carlo Alvaro and virtuous consumption*

Carlo Alvaro (2022) challenges the efficacy of a strategy endorsing cultivated meat to combat the ills of currently available (or slaughter-based) meat, as well as the ethics of consuming cultivated meat. We address these challenges in turn.

#### *Effective strategy*

Championing cultivated meat, Alvaro says, is “fighting fire with fire,” which “often backfires” (788). Cultivated meat is still *meat*, so (he says) people can consume it healthfully only in moderation. He quotes Mark Post, the “father” of cultivated meat, for whom vegetarianism is a more environmentally friendly diet than a diet containing cultivated meat.

These observations are fair. We accept that we could healthfully consume cultivated meat only in moderation, and that a completely meat-free diet will typically be more environmentally friendly than a diet containing moderate amounts of cultivated meat.

Alvaro then argues that these observations create a problem for cultivated meat, because a “plausible consumer reaction to messaging that aligns [cultivated meat] with a sustainable food systems agenda may well be indulgence or overindulgence in meat” (788). Undeniably, food activists and manufacturers shouldn’t oversell the potential benefits of cultivated meat. But Alvaro seems to want to say more than this. Perhaps he holds that widespread availability of cultivated meat will lead to unhealthier or less sustainable diets than are prevalent at present – i.e., a move to cultivated meat will backfire. But, if so, he needs to offer more argument than he does.

We are not clear on what this further argument might be. Even if cultivated meat’s prevalence leads meat-eaters to eat more meat – it’s pure speculation that it would – a shift to cultivated meat could still lead to overall health and environmental benefits. For example, widespread adoption of cultivated meat would lead to a reduction of intensive animal farming, and thus a reduction in associated pandemic risk and antibiotic use. Meanwhile, assuming (only) modest environmental benefits of cultivated meat relative to slaughter-based meat, the increase in meat consumption would have to be considerable before the promotion of cultivated meat would “backfire” – even if a vegan diet would be more environmentally friendly than a diet high in cultivated meat.

Considering only the potential impact of cultivated meat on human health and the environment – and ignoring its impact on animals – we agree with Alvaro that promoting cultivated meat could, in principle, backfire. But we contend that he has not offered us reason to believe this likely.

Alvaro’s second objection is that there are “two possible routes” to “convince meat eaters to embrace” cultivated meat (788). One is an “anti-democratic” approach favoring “aggressive advertisement and lobbying” to encourage people to “buy [cultivated meat] against their desires” (788). The other is a legal route, “forc[ing] people to buy [cultivated meat] and reduce or discontinue traditional meat consumption” (788). This is a false dichotomy. For example, when Alvaro introduces his own preferred approach – shifts towards significantly lower meat production – he suggests that we should “educate people and make them realize the necessity of transitioning to more sustainable food systems” (788). But it is unclear why this “education” route is open to Alvaro but not to advocates of cultivated meat. Further, Alvaro’s advocate of cultivated meat feels like a straw man. For example, while there are advocates of cultivated meat who support banning (most) animal agriculture (e.g., Milburn 2023), this is quite different from requiring the consumption or purchase of cultivated meat – vegans, who buy and consume only plant-based foods, could continue to exist in the envisioned society. Indeed, to our knowledge, nobody supports *forcing* people to buy cultivated meat.

Alvaro claims both that “consumers are quite happy about eating meat and are not interested in [cultivated meat]” (788), and that we should favor a transition towards veganism rather than a transition towards cultivated meat. These claims are in tension with one another. Alvaro takes consumers’ apparent satisfaction with slaughter-based meat to be an argument against the development of cultivated meat, but not against transitions towards veganism. It’s unclear why he does this.<sup>1</sup> But, in any case, he oversells his claims about consumers not wanting cultivated meat.

In the opening lines of his paper, Alvaro claims that “meat eaters are not interested in consuming [cultivated meat] on a regular basis, let alone replacing traditional meat with [cultivated meat]” (788). He cites Matti Wilks and Clive J.C. Phillips (2017). Wilks and Phillips’s study of 673 American adults (some, but not all, meat-eaters) found that 65.3% of respondents were definitely or probably willing to try cultivated meat, with a further 11.7% unsure. While fewer were open to incorporating large amounts of cultivated meat into their diet, the authors did find that 32.6% were definitely or probably willing to eat it regularly, while 31.5% were definitely or probably willing to replace slaughter-based with cultivated meat in their diet. (30.8% and 26.3%, respectively, were unsure.) And, in fact, these numbers are slightly lower than the percentage for meat-eaters in the sample, as – in-line with other studies – meat-eaters were *more* likely to be open to eating cultivated meat than veg(etari)ans in Wilks and Phillips’s study.

There are obvious problems with basing assumptions about what a large demographic will do based on a single study – especially one testing only participants’ self-expressed willingness to engage with a (hypothetical) product. But based on this study alone – the study Alvaro cited – it’s hard to conclude that meat eaters are “not interested” in regularly consuming cultivated meat.

There is a further problem. Alvaro’s argument that consumers don’t want to give up meat is a dangerous one for his position. If consumers don’t want to give up meat, that would be, it seems, a partial argument in favor of advocating cultivated meat *rather than* advocating veganism. (Recall the “non-ideal” case for cultivated meat we mentioned in the introduction.) One would expect consumers’ unwillingness to give up meat to mean it was *harder* to encourage them to shift to veganism than to shift to a *different kind* of meat. And this is, at least in part, supported by Wilks and Phillips (2017), who found that, among their respondents, 47.7% reported that they were more willing to eat cultiva-

<sup>1</sup> Incidentally, the claim about consumers’ satisfaction with “meat” depends upon the idea that cultivated meat is *not* meat, when his “fighting fire with fire” critique depended on the claim that cultivated meat *is* meat.

ted meat than soy-based meat substitutes, while only 20.1% reported that they were less willing. Cultivated meat – based solely on the study that Alvaro cited to illustrate its unattractiveness – sounds *more* attractive to consumers than vegan alternatives to meat. (Alvaro would presumably express skepticism about these “substitutes” as well as about cultivated meat, but the point stands.)

A full assessment of veganism vs. cultivated meat as “non-ideal” solution to problems with the food system is a complex exercise. It will involve assessing the ability of the respective strategies to right wrongs, the likelihood of their respective success (i.e., dietary uptake), and – crucially – their ability to bring us closer to the ideal. Of course, this also means that we need to have a clear sense of in what the “ideal” for which we’re aiming consists. We’re thus unable to offer a full case for cultivated meat as a non-ideal strategy here, and do not criticize Alvaro for failing to offer a full case for veganism as a non-ideal strategy, which would be beyond the scope of his paper. But we have, we believe, demonstrated that Alvaro’s critiques of strategies favoring cultivated meat leave much to be desired.

### *Virtuous consumption*

For Alvaro, a virtuous person will be temperate, and thus have “a rational and harmonious approach to appetite and food pleasure” (789). In particular, she will not be “particularly attached to a certain food simply because it may taste good or because it generates pleasure” (789). For the virtuous individual, Alvaro says, “food pleasure is relatively important [but] the main purpose of eating food is to acquire energy for growth and for proper functioning and health” (789). The virtuous person, then, “may consider that optimal health does not require the consumption of any animal products” (789). The temperate (and just) individual will seek “satisfactory alternatives” to current systems of meat production. But, says Alvaro, we *already have* satisfactory alternatives: “plant-based, vegan diets, or forms of agriculture that may include very low amounts of meat” (789). On the other hand, encouraging the uptake of cultivated meat carries with it a “financial burden and strategies to convince people to abandon what they see as perfect and natural (factory farming) to embrace something unnatural made in the lab that they do not want” (789).

We have already challenged Alvaro’s worries about strategies for convincing people to eat cultivated meat, and his assessment of how people “do not want” cultivated meat. But we accept that the development of cultivated meat carries with it a financial burden. Might there be any reason for the virtuous person to champion the development of cultivated meat *even despite* the financial cost?

A first answer again stresses the *non-ideal* character of some arguments in fa-

vor of cultivated meat. Perhaps the temperate person will not call upon cellular agriculturalists to develop cultivated meat *for her sake*. But the virtuous person might call for it *for others*. The just and compassionate person will champion those strategies that could lead to a reduction in the harms of animal agriculture. The wise and patient individual will recognize that, often, we are unable to instantiate a perfectly just social order, so must favor a second- or third-best option. And the magnanimous individual will forgive those others whose temperance falls short, allowing that there should be some space for intemperance.<sup>2</sup>

A second response, however, argues that the eating of cultivated meat might sometimes be a virtuous activity, and thus that the virtuous individual might champion the production of cultivated meat for her own sake.

Alvaro holds that, since the main function of eating food is to support good health, we should eat the most healthful diet that we can, eschewing foods, like meat, that are not consistent with that. But virtue theorists could reasonably take other approaches to temperance. Virtue theory is a matter of using one's reason to guide one's emotions and behavior to fall in line with the mean between two extremes. What Alvaro suggests seems extreme, rather than moderate.

This contrasts strongly with Aristotle's position. Aristotle does not say that humans ought to consume food purely to remain in good health. What he says is that the virtuous agent must do that which is "conducive" and "not detrimental" to health:

But such pleasures as conduce to health and fitness he will try to obtain in a moderate and right degree; as also other pleasures so far as they are not detrimental to health and fitness, and not ignoble, nor beyond his means. The man who exceeds these limits cares more for such pleasures than they are worth. Not so the temperate man; he only cares for them as right principle enjoins. (*NE*, 1119a)

There are many diets that match this description, including diets containing some moderate amount of meat (cf. Haile 2013, 91-2). Indeed, the virtuous agent *should* include pleasure among their motivations when it comes to what they eat. To abandon all gustatory pleasure to pursue some (perhaps illusory) picture of an ideally healthy diet is to be insensible<sup>3</sup> – a vice of deficiency:

Men erring on the side of deficiency as regards pleasures, and taking less than a proper amount of enjoyment in them, scarcely occur; such insensibility is not human.

<sup>2</sup> Indeed, if intemperance was impossible, *temperance* would be impossible, too. Virtue does not exist in a vacuum. We must practice it.

<sup>3</sup> Compare the critique of picky eating from Matthew J. Brown (2007).

Indeed, even the lower animals discriminate in food, and like some kinds and not others; and if there be a creature that finds nothing pleasant, and sees no difference between one thing and another, it must be very far removed from humanity. (*NE*, 1119a)

So, Aristotle thinks that pleasure is an important part of consumption *and* he has difficulty imagining any kind of animal pursuing a diet without it. He does not describe the ideal moral agent as engaged in a quest to determine what the ideally healthful diet would be. Indeed, he admits considerable variability when it comes to healthful diets.

Aristotle does argue that there are many ways that we can go wrong when it comes to pursuing pleasures:

But in regard to the pleasures peculiar to particular people, many men err, and err in many ways. For when people are said to be ‘very fond of’ so-and-so, it is either because they like things that it is not right to like, or like them more than most people do, or like them in a wrong manner; and the profligate exceed in all these ways. (*NE*, 1118b)

This passage provides us with three ways of thinking about temperance. None of these three entails Alvaro’s claim about the obligation of the temperate individual. Aristotle thinks that a person can go wrong in their pursuit of pleasure by delighting 1) In the wrong things; 2) More than most people do; and/or 3) In the right things in the wrong way. One way of reading Alvaro is that he is saying something like (1) – that delighting in less than ideally healthful food is intemperate. The problem with this, as we’ve already explored, is that it seemingly equates temperate behavior with extreme behavior.

We think that a more useful contemporary way of thinking about “delighting in the wrong things” has to do with the relevant moral features of those things. In this case, the relevant moral aspects are clear – one is delighting in the wrong things if those things cause avoidable harms, especially if those harms are severe. We think there is every reason to believe that the harms associated with industrial animal agriculture are severe. But we can’t see a virtue-based reason to think that it would be necessarily wrong to delight in the consumption of cultivated meat, which need not involve harms (severe or otherwise) to animals.

Alvaro has not provided us with good reason for thinking about temperance in the way in which he suggests rather than another plausible alternative. We have argued that the temperate person need not abandon a desire to experience the taste of meat. What they must do is consume the right kind of meat (i.e., meat not produced in harmful ways).

We also note that Alvaro places a lot of weight on temperance, without ex-

ploring what non-temperance virtues might say about meat consumption. Put simply, Alvaro seems to assume that an individual (who has the option of eating a vegan diet) who chooses to eat meat does so solely because they like the taste of meat. But there could be other, more virtuous reasons for eating meat.

Admittedly, vegetarian perspectives predominate in discussions about the virtues of meat-eating.<sup>4</sup> But these cases against meat have often relied upon the violence to animals inherent in food production. Once we *remove* that violence – as cultivated meat can – we open the door to virtue-based arguments in favor of meat-eating. Christopher Bobier (2021) stresses how a virtuous individual might eat animal products rather than plant products when doing so is less harmful to animals. But once we allow that meat-eating can be harm-free, we could explore a wide range of cases for virtuous meat-eating. Could there be virtue in honoring the (meaty) traditions of our cultures? Could there be virtue in admiring the (culinary) creations of our friends? Could there be virtue in showing hospitableness to our (non-vegetarian) parents? We suspect so. Could these justify us in eating, or at least hoping for, harm-free meat, even if its consumption will not be fully temperate? Again, we suspect so.

We are sympathetic to the idea that the virtuous individual will abstain from slaughter-based meat, given the horrors of animal agriculture (Hursthouse 2006). But we don't think that this extends to cultivated meat, even for someone who agrees that temperance speaks against the eating of *any* meat. Surely, for example, the virtuous individual would not refuse a friend's hospitality, creating tension at the table, just because the harmless food they serve is a little lavish. And it seems that's what Alvaro is saying the person served cultivated meat must do.

Alvaro anticipates the possibility that meat is not as bad as he makes out. But if that's so, he says,

it would seem that the virtuously temperate person would have considered that intensive animal agriculture is bad for the environment and for animals, that [cultivated meat] is not supposed to replace traditional farming and that traditional farming is supposed to continue. (2022, 789)

Thus, he says, the temperate individual will favor the continuation of "ethical and responsible non-intensive animal farming" rather than the development of cultivated meat (789). We struggle to understand this argument. We are unclear who is "supposing" that cultivated meat will not replace ani-

<sup>4</sup> In addition to Alvaro's own work (e.g., 2019), virtue-based cases against meat include Nobis 2002, Hursthouse 2006, and Shafer-Landau 1994. There are exceptions, though (e.g., Haile 2013).

mal agriculture; instead, we contend that virtuous individuals could champion systems in which slaughter-based meat is replaced by cultivated meat. This possible future is, we think, no more utopic (in the pejorative sense) than an envisioned vegan future.

On the other hand, Alvaro may be pointing to how the production of cultivated meat continues to require the keeping of animals – cultivated meat cannot entirely replace animal farming. But cultivated meat requires far *fewer* animals than slaughter-based meat – that is, it’s an animal-efficient method of producing meat. And the production of cultivated meat does not require the *killing* of animals; it might even allow new ways of living with animals (cf. Dutkiewicz and Abrell 2021; Weele and Driessen 2013). A virtuous individual wouldn’t favor killing animals for meat when she can have meat *without* killing animals.

Let us summarize. Alvaro argues that the temperate individual would favor a vegan diet over the production of cultivated meat. We argue that the virtuous individual could nonetheless champion the production of cultivated meat *for others*, or, conversely, could hold that temperance speaks (or non-temperance virtues speak) in favor of the consumption of cultivated meat at least occasionally. Meanwhile, Alvaro argues that if there *is* room for meat consumption, we should produce this meat in some unspecified “environmentally responsible” way “that enables the ethical treatment of farmed animals” (2022, 789). We reject this, holding instead that the virtuous consumer should favor cultivated meat over killing animals.

### *Elan Abrell and opportunities missed*

Elan Abrell, a cultural anthropologist and former senior regulatory specialist at the Good Food Institute, worries that a focus on cultivated meat may represent an opportunity missed. Abrell doesn’t oppose cultivated meat as such. He believes “the overwhelming magnitude of the many harms caused by animal agriculture outweigh the potential harms of cultivated meat” – an idea echoed in our responses to Bramble and Alvaro – and expresses sympathy with the idea of “investing public funds in the advancement of meat-culturing technology so that it can at least help reduce the size of the conventional animal agriculture industry” (2023, 155). But he nonetheless worries about cultivated meat as a *primary* strategy to combat the ills of animal agriculture.

Abrell expresses doubts about whether the technology will be able to produce meat on a scale that would make replacing factory farmed meat realistic – even if the industry is able to overcome some of the technological barriers it currently faces. Perhaps it will eventually be possible for cultivated meat companies to produce enough meat to satisfy current demand, but

it's unlikely they'll do so in the necessary timeframe to combat the climatic impact of animal agriculture. Abrell points out that mega-facilities dedicated to producing cost-competitive cultivated meat by 2030 could produce roughly 22 million pounds of cultivated meat in a year. The largest cattle slaughterhouses produce that amount of slaughter-based meat in a week.

We should be wary, Abrell says, of the technology as an instance of "disaster capitalism." That is, we should be aware of the possibility that venture capitalists may be using our anxieties to make money quickly, without offering any realistic solution. He evokes the spirit of Audre Lorde's assessment of oppressive systems, claiming that "a capital-based activism strategy will never dismantle the capitalist system of animal exploitation that is rapidly destroying our planet" (156). Abrell argues that what we need is not change driven by capitalism, but, rather, a radical political and ethical shift in how we think about our relationships with animals. What we need to do is to end animal agriculture now.

### *Technological skepticism*

We focus our response on Abrell's normative claim, but first we quickly note that we don't think that his pessimism about the state of the technology is the only reasonable way to understand the state of the cultivated meat industry. Indeed, we note that there have been major breakthroughs even since Abrell wrote his paper. We give just two examples.

One major technological hurdle acknowledged in the cellular agriculture world (and mentioned by Abrell) is the use of fetal bovine serum (FBS), a gruesome slaughter co-product, as a component of cell culture media. If the cell growth required to produce cultivated meat requires slaughter, it would hardly constitute progress. The fact is, though, cell growth *doesn't* require FBS. The cultivated meat company Mosa Meat has been producing its product without FBS since 2019. A paper outlining their method was recently published in *Nature Food* (Messmer et al. 2022). There's room for lingering concerns, of course. As Abrell points out, the cultivated meat industry as it presently exists relies on capitalism. Mosa Meat has obligations to funders and a profit motive. They've seemingly acted transparently by releasing their methodology, but they've also pursued a patent. This may have the implication that Mosa Meat can use the technology, but other tech companies can't. If this is the case (and assuming that other groups can't find their own way to a similar outcome) that limits cultivated meat's radical potential. That said, we now know that alternative production methods are not impossible.

There have also been new developments in distribution and authorization sin-

ce Abrell made his arguments. The United States Food and Drug Administration declared cultivated meat safe for human consumption in November 2022. In June 2023, California's Agriculture Department gave approval for two companies, Upside Foods and Good Meat, to sell cultivated chicken meat. Restaurants in both California and Washington D.C. plan to serve the product. Of course, this doesn't settle whether cultivated meat will eventually be scalable. But the technology is moving forward. Abrell claims that "[t]he promises of cultured meat have proven to be illusory" (2022, 157). While it's possible that the promises *may yet* prove illusory, we suggest that his conclusion is, at present, too hasty.

### *Strategies for change*

We turn now to Abrell's main normative claim: rather than relying on capitalist strategies to solve the problems that (Abrell claims) capitalism created, we ought to focus our resources on strategies that change the political structure that, Abrell contends, allows for the oppressive system of animal agriculture in the first place.

We offer several responses. The first is that Abrell presents a false dichotomy. Animal advocates can be strategic pluralists. We can champion cultivated meat *and* support political strategies to end animal agriculture (or capitalism). For example, again echoing comments from our introduction, we might see cultivated meat as part of an array of "non-ideal" strategies to move us towards a vegan world in the long term while limiting harm in the short term. Or we might envision a future in which animal agriculture as we know it is abolished, replaced by cultivated meat – and there's no reason this future couldn't be socialist (Dutkiewicz 2019). Venture capitalism has played a part in the technology's development, but there is no reason that cultivated meat couldn't be part of a food justice agenda (Broad 2019).

What's more, we probably *need to be* strategic pluralists. Though Abrell critiques cultivated meat strategies for being incapable of making a difference soon, he provides no reason for thinking that his strategy fares better. Even if we directed all the resources currently directed toward cultivated meat towards political change instead, it may still not be possible to bring about the change Abrell calls for.

Indeed, we worry that Abrell's characterization of "effective" animal advocates (i.e., animal advocates sympathetic to the philosophy of "effective altruism") calling for the movement to "channel all our resources" (2022, 151) into cultivated meat is a straw man. He envisages Animal Charity Evaluators (ACE) "channeling significant funding streams away from vegan outreach and other strategies" (152) towards cultivated meat, on the grounds that ACE con-

sistently recommends donations to the Good Food Institute (GFI), an organization that aims for food system change through support for cultivated and plant-based meat (and other plant-based/cultivated products). But he doesn't mention that ACE *also* consistently recommends donations to organizations focused on vegan outreach (plus other strategies and cause areas), as detailed in the next paragraph.

Abrell (153) quotes ACE's own estimates that it influenced donations to GFI of around \$3.2 million in 2020. The first thing to say is that the report Abrell quotes (ACE 2021) *also* detailed millions of dollars to *other* organizations, too, including over \$3.5 million to The Humane League, and hundreds of thousands of dollars to each of the Albert Schweitzer Foundation, Anima International, The Wild Animal Initiative, Compassion in World Farming USA, Faunalytics, Sinergia Animal, and Sociedade Vegetariana Brasileira, none of which focus on cultivated meat. Consequently, it'd be unfair to frame ACE as championing cultivated meat at the expense of other strategies and areas of concern – *even if* GFI focused exclusively on cultivated meat, which it doesn't.

But let's imagine that GFI is solely concerned with cultivated meat, *and* we ignore the money that ACE has raised for other causes. Let's also imagine that Abrell is right that ACE's actions lead to donors redirecting money from other areas of animal advocacy – a claim for which Abrell does not offer evidence – rather than generating new donations or redirecting donations away from non-animal causes. Even then, we think, he'd be wrong to frame ACE's activities as "channeling significant funding streams away" from other areas. Ultimately, \$3.2 million is a drop in the Ocean. Battersea Dogs & Cats Home in London (a paradigm less "effective" organization) had a 2022 income of £56.527 million (\$71.286 million), including donations/legacies of £53.41 million (\$67.37 million). Dogs Trust had an income of more than £124 million (\$156 million), with over £111 million (\$140 million) in donations/legacies. For Cats Protection, the numbers were £86 million (\$108 million) and £62 million (\$78 million).

In short, it's not clear that ACE supports investment in cultivated meat as "the main solution to the problem of animal agriculture" (Abrell 2023, 156), nor that – even if they do – their activities have led to a "channeling [of] significant funding streams away from vegan outreach and other strategies" (152).

What would we need to achieve the changes Abrell calls for? In addition to time, energy, and resources, we'd need a substantial political will. The best available inductive evidence suggests that this doesn't exist. Vegans have been arguing and demonstrating for political change for decades, but have made little progress.

Abrell wants political change. Most advocates of cultivated meat want that, too. This is no argument against cultivated meat; instead, it supports a nuanced

strategy that includes it. The more strategies we have at our disposal, the more likely we are to be able to bring about substantive change.

### *Conclusion*

Many ethicists have made a positive case for cultivated meat. Nonetheless, new ethical challenges to the technology continue to arise. In this paper, we have closely examined three recent and high-profile challenges to cultivated meat, finding them all wanting. Only time will tell whether cultivated meat will live up to the promises of its most optimistic advocates. But, we contend, there's a moral case to hope that it will.

Two recurring puzzles arising from the analysis of this paper concern virtuous eating and political strategy. Future work on the ethics of cultivated meat, thus, could focus on these areas. Here, we responded to Alvaro and Bramble's specific virtue-based arguments, but stopped short of offering a full-fledged virtue-based case for cultivated meat. We would welcome further contributions to the literature that take up this line of enquiry. We would also welcome sustained analyses of the potential of cultivated meat to offer significant food system change (with an eye to impacts on animals, the environment, and/or public health); a puzzle that arose in our conversations with both Alvaro and Abrell. There is value in comparing political strategies championing cultivated meat to political strategies championing veganism. Crucially, however, anyone offering such a comparison should remember that this need not be an either/or. If we are right about the magnitude of the moral problem our current food system poses, perhaps it is only right that we collectively pursue a range of strategies to lessen animal agriculture.

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# Cultivated Meat: A New Lifeworld for Human Beings

Luca Lo Sapio

*Abstract:* Several reports indicate that industrial animal agriculture significantly contributes to environmental pollution, resources depletion and the suffering of billions of animals. With the rising global demand for animal protein, partly driven by changing diets in countries like China and India, there is an increasing interest in more sustainable and humane alternatives. In this context, cultivated meat has emerged as one of the most promising food technologies for mitigating the impact of conventional meat production. In the first two paragraphs, the article briefly describes what is cultivated meat and what impact it may have on the environment and non-human animal wellbeing as well as the technical and socio-economic challenges it poses. In the third paragraph, it succinctly examines some positions from the ethical debate, with particular attention to Singer's consequentialism and Francione's abolitionist approach. Francione's negative conclusions closely align with certain versions of virtue ethics. Paragraphs 4 and 5 will examine two such positions, specifically those of Carlo Alvaro and Ben Bramble, which have significantly influenced reflections in the field. In paragraph 6, contrasting the pessimistic views of Alvaro and Bramble, the article will present cultivated meat as a new opportunity for reshaping the human lifeworld. The final paragraph will discuss five key elements associated with cultivated meat and its moral implications.

*Keywords:* cultivated meat, virtue ethics, transnaturalism, Humanistic technorealism

## 1. *A General Overview*

The global population has surpassed 8 billion, with an estimated annual increase of 81 million people. The United Nations projects a rise to 9.8 billion by 2050, according to the FAO's "Future of Food and Agriculture" report (2022). This growth coincides with a significant increase in meat consumption, particularly driven by changing diets in countries like China (Wang 2022) and India (Mohan *et al.* 2022); over the past fifty years, meat production has tripled to more than 340 million tonnes annually (Ritchie *et al.* 2019; González 2020). In this context, the environmental, animal welfare, and health impacts of meat consumption are significant (Salter 2018).

In response, organizations such as the UN emphasize sustainable development and advocate for eco-friendlier dietary habits. They propose strategies to reduce the environmental footprint of food, particularly meat production. These strategies include reducing meat consumption, adopting plant-protein-based diets, utilizing new food sources like insects (Milani *et al.* 2022), and exploring innovative production methods such as precision fermentation and cultivated meat (IPCC, ch. 5). Cultivated meat, authorized in regions like Singapore, represents a promising solution for tackling environmental and ethical<sup>1</sup> concerns related to traditional meat production. This method involves growing meat from animal<sup>2</sup> cells (harvested through a harmless biopsy) in a bioreactor, bypassing conventional farming and slaughtering processes (Bhat *et al.* 2019; Bodiou *et al.* 2020). As technology advances, scaling up to industrial production becomes more feasible.

Cultivated meat may offer multiple advantages. Firstly, it could significantly reduce the number of animals harmed. Only a few animals are needed to produce a substantial amount of meat, eliminating the need for the extensive procedures required in traditional livestock farming (Bertero *et al.* 2023). This includes avoiding practices such as crowding large numbers of animals into confined spaces, limiting their behavioral repertoire, and implementing procedures like tail docking or beak trimming. Additionally, cultivated meat can be tailored for nutritional enhancement and safety (Mancini *et al.* 2022), and it can be free from many contaminants found in conventional meat products. It also has the potential to replicate various types of meat, offering new culinary options while reducing the environmental impact of livestock farming. Moreover, this technology is not only beneficial for terrestrial purposes but could also support long-term space missions and extraterrestrial colonization (Chodkowska *et al.* 2022).

In what follows, I will briefly examine the technical and socio-economic concerns regarding cultivated meat (§ 2) and some ethical views supporting or contrasting the use of this food technology (§ 3). Then I will go in depth with the analysis of Ben Bramble's and Carlo Alvaro's perspectives based on the centrality of notions such as virtue, moral character and human flourishing, scrutinizing the reasons they present for opposing the introduction of cultivated meat.

In the last two paragraphs, I will present reasons for supporting cultivated meat by examining how this technology could foster new opportunities for a renewed lifeworld and counteract the negative aspects of conventional meat

<sup>1</sup> In general, I will use the terms ethics, moral, ethical, and morality interchangeably, though I will primarily use ethics to refer to matters related to human behavior, the impact of human actions, and the philosophical reflection on those actions.

<sup>2</sup> In this article I will use animals and non-human animals interchangeably.

production and consumption. I will also discuss five key elements associated with cultivated meat and its moral implications.

## 2. *Feasibility and Socio-Economic Issues*

It is impossible to thoroughly analyze all the objections raised against cultivated meat. However, we can categorize them into three main types: (1) technical objections, (2) socio-economic objections, and (3) moral objections (Lo Sapio 2022). The technical objections focus on two primary concerns: 1) cultivated meat might be less sustainable than many believe, and 2) current technology does not yet permit the production of cultivated meat on an industrial scale or, if it does, it cannot be produced at a competitive price.

The socio-economic objections, on the other hand, concern the potential loss of jobs in the traditional animal agriculture sector and the possible impoverishment of gastronomic cultures in regions that are closely tied to and identified by their meat products.

Some studies indicate that cultivated meat would not be as sustainable as imagined (Risner *et al.*, 2023). The production process, for instance, would release more CO<sub>2</sub> into the atmosphere than that associated with industrial beef production, and industrial-scale production would generate considerable environmental damage (Lynch *et al.* 2019). It is impossible to provide definitive answers to empirical questions. However, it is important to note that cultivated meat was developed to impact the market broadly, not to remain a niche product. Its goal is to mitigate the negative effects of the current food system on the environment, human health, and animal welfare. Therefore, those involved in the cultivated meat sector aim to produce something significantly more sustainable than conventional meat at a comparable price (Chen *et al.* 2022). Otherwise, the entire project would fail. While socio-economic objections raise valid concerns, they should not serve as reasons to oppose this new technology.

Regarding the potential loss of jobs, it should be emphasized that all significant socio-economic transformations can impact specific employment sectors (da Silva *et al.* 2022). Historically, the labor market has undergone profound changes with the introduction of new technologies and tools. It is crucial to ensure that workers in the meat industry are not left in dire straits during this transition phase. They should be supported with state aid programs to help them adapt and find new opportunities.

On the other hand, although the preservation of gastronomic cultures has unquestionable cultural value, it cannot be a compelling reason to ban or discourage the introduction of a product that would benefit the environment, animal welfare, and human health.

It is important to notice that, apart from the arguments considered so far, it is possible to raise ethical concerns against the production and consumption of cultivated meat. Although these concerns are not always given the consideration they deserve in public debate, they are influential because they provide principled reasons against cultivated meat. In the following paragraphs, I will focus on the ethical aspects of cultivated meat. I will briefly address the consequentialist and abolitionist approaches and then delve more deeply into how a virtue ethics approach may challenge the introduction of this innovative food technology.

### 3. *The ethical debate: Cultivated Meat Between Consequentialism, Abolitionism and Virtue Ethics*

Many authors have grappled with cultivated meat based on different approaches. Usually, the consequentialist approach, and especially utilitarianism, offers an excellent basis to support this technology (Fernandez 2023). Savulescu and Schaefer published one of the first philosophical papers on the subject in 2014, examining possible objections to the use of cultivated meat and highlighting the potential of the new technology. Singer, for his part, while having yet to dedicate a specific work to the topic, did devote some thoughts, for instance, in *Animal Liberation Now* (2023). He states that if cultivated meat and other meat alternatives can compete with conventional meat in terms of taste, texture, and price, they could play a crucial role in promoting ethical eating on a global scale. A concept he also reiterates in some popular articles and interviews (Singer 2013, 2021, 2023b).

If based on a welfarist approach, such as Singer's, the introduction of cultivated meat may be an appropriate strategy to mitigate the impact of industrial animal agriculture; the situation for the so-called abolitionists appears to be more problematic. If Regan had never explicitly expressed himself on the matter, things are different for Gary Francione who gave a negative assessment of cultivated meat, for example in *Why veganism matters* stating that "in any event, cultured meat involves the institutionalized exploitation of animals. It perpetuates the idea that animals are food. Moreover, cultured meat will likely not replace traditional meat; it will just supplement the supply, given that the projected increased demand for meat will exceed the capacity to raise whole animals" (Francione 2020: 153). The most significant criticism, however, has been made based on virtue ethics<sup>3</sup>.

<sup>3</sup> Although, as will become evident in the following paragraphs, there may be points of overlap in the conclusions of Alvaro, Bramble, and Francione, their starting points differ significantly. Alvaro and Bramble focus on the moral character of those who would consume cultivated meat, essentially addressing the question: what kind of person would want to eat cultivated meat? In contrast, Fran-

This approach is particularly interesting because it would point out that although the effects of the introduction of cultivated meat might be beneficial for non-human animals, human health, and the environment, this technology might be immoral because it would not convey adequate human flourishing. Virtue ethics, unlike the utilitarian and deontological approaches, places the character of the moral agent at the center.

Indeed, although the notion of 'human flourishing' is present, to a greater or lesser extent, in all forms of normative ethics, from consequentialism (in particular, utilitarianism) to deontological theory, it is in virtue ethics that it assumes a central position, together with the notions of moral character, virtue and vices.

Of course, there are different theoretical options within the realm of virtue ethics. However, despite the peculiarities of each view, recurring underlying patterns can be identified. Whether it is a eudaimonist, agent-based, exemplarist, target-centered, or Platonistic approach, the key terms of virtue ethics remain the same: *aretè* (excellence or virtue), *phronesis* (practical wisdom), and *eudaimonia* (happiness or human flourishing).

Opting to consume cultivated meat, rather than undertaking a journey of self-improvement through deliberate dietary modifications, is unlikely to nurture the character traits traditionally associated with virtue or the pursuit of personal excellence. This approach bypasses the opportunity to cultivate practical wisdom, which is the nuanced ability to discern and respond appropriately to various situations. Practical wisdom involves a deep understanding of context, ethical considerations, and the implications of one's actions. By choosing cultivated meat over intentional dietary discipline, one misses out on the valuable process of refining judgment, self-control, and moral insight – essential components of character development and the attainment of true excellence.

#### 4. *Ben Bramble and what kind of people we want to be*

In the text *Against Flesh*, Ben Bramble points out that we *should not* promote cultivated meat for the same reasons that *we should not encourage the consumption of* human meat and the consumption of meat from slaughtered animals. Bramble's argument is built around two key elements: 1) the feeling of disgust that we feel even at *the idea of* eating human meat and that *some people* feel even at the idea of eating meat from slaughtered animals (or from animals that died of natural causes); 2) the recognition of relevant factors that

cione emphasizes the characteristics of non-human animals, arguing that sentience alone is sufficient to confer full moral status on non-human animals. This position rejects any instrumental use of animals, leaving no room in an abolitionist perspective for gradualist approaches or compromise solutions aimed at increasing animal welfare.

make the body of a human being and, similarly, the body of an animal *what de facto* allows a human being or an animal to do the kinds of things they do. In Bramble's words, "the role our bodies play in all the valuable (and disvaluable) experiences of our lives" (Bramble 2023:118). Such recognition is why we do not eat human meat and would not eat it even if it was offered to us by its "owner". One of the possible objections that could be raised to Bramble's argument is that if we *are to* pay particular respect to the body, as it is intimately tied to our *personal identity*, then we would be entitled to eat the flesh of a fetus, as it has no particular connection with its own body. Similarly, since meat cultivated with the cell donor animal has no specific connection, we should have no compunction whatsoever when eating it. However, Bramble advances a counter-argument by pointing out that "it is not necessary that the dead body in question was the body of an actual self. It is enough that it is the same sort of stuff that embodied selves come in" (Bramble 2023: 120)

According to Bramble, this objection can also be applied to cultivated meat in the sense that even if it is cells and not a whole body, it is enough that it is the same sort of stuff that embodied selves come in. So, suppose we want to be the kind of people who recognize, based on adequate information, what the body is to an animal. In that case, we should not even consume cultivated meat because, in fact, it does not allow us to change our character in a way that makes it *repulsive* to the possibility of *eating meat*.

Bramble's argument, however, does not seem convincing to me for a number of reasons. First, Bramble dwells too little on the nature of feelings of disgust and repulsion, which can sometimes provide us with cues concerning actions to perform or not to perform but which often need to be subjected to critical scrutiny as to whether the cues are cogent or not. Bramble's proposal seems to take little account of the role of reason in character *formation* and more of the role of feelings and what *seems to be natural*. That there is this more or less explicit reference to nature, we ascertain from the very words of Bramble, who states, speaking of feelings of disgust and repugnance, that "these feelings of disgust are not something I have tried to cultivate or achieve. They have come naturally, as I have come better to understand the richness of animals' mental lives, the value (and disvalue) possible in them, and the role of their bodies in all this value".

Second, and on this, one can agree with Bramble, the recognition of the importance of the body to an animal's life story *should* prompt us to place such a value on it that we should be prevented from *doing what we want with it*, and in the worst scenario subvert its primary function, transforming it from a *medium of the* animal's experience of the world to an *object to be consumed for the satisfaction of human desires*. However, such recognition suggests we should not deprive ourselves of the opportunities offered by cultivated meat since the

bodily integrity of the animal would be preserved by this technique. Moreover, it should be pointed out that the introduction of cultivated meat technology may well temper our character. While it is true that to build virtuous character, *we should not want to be* the kind of people who *disrespectfully* eat the (body parts of) animals, we might nevertheless *want to be* the kind of people who eat meat *only if* it comes from *cellular cultivation* (or from sci-fi techniques such as *creatio ex nihilo* of pieces of meat). Bramble's example that the people who would eat cultivated meat would be the same people who, if that kind of meat produced by that kind of technology were no longer available, would resume eating conventional meat does not take into account at all what I mentioned earlier. I may have built my character so that *I am willing to eat meat only if cultivated*.

What Bramble does not otherwise take into account in his analysis is a more articulated phenomenology of potential consumers: there is the vegetarian (or vegan) who would not eat cultivated meat in any case; however, there is also the vegetarian who would like to eat meat again if it were obtained through cellular agriculture technology; then there are the meat eaters who would like to stop eating meat but (slaves to a palate that compels them to compulsive consumption) because of weakness of will cannot. Finally, there are the occasional meat eaters and the meat eaters who, in any case, would continue eating conventional meat in favor of cultivated meat. In the face of this multifaceted picture, it serves little purpose to say that we *should want to be the kind of people who do not wish to eat the kind of things comparable to an animal's body* because 1) there are multiple pathways to self-perfection, and reducing them to a single standard constitutes a stretch concerning people's concrete moral lives (in addition to suggesting an *over-performing* model that at best could be read in terms of super-erogatory); 2) it provides a misrepresentation of what cultivated meat is, in particular, because it obscures that the origin of this product represents a *morally relevant difference* that cannot be erased by the fact that the finished product is *equivalent* to the conventional one (with the understanding that this is not even entirely true). It is precisely the origin of the product and the conditions surrounding the origin that makes it possible, at least according to most projections, to drastically cut down land and water consumption and greenhouse gas emissions, avoid the use of hormones and antibiotics, and save the lives of billions of animals.

Between the scenario Bramble proposes – the world leader giving a public speech in which he announces that he will take measures against meat consumption because he has realized the true extent (in moral terms) of killing animals and eating their meat – and the implementation of a technology that, having overcome a number of technical hurdles, could be deployed on the market within a handful of years, the second seems more realistic. Indulging

in the hope that the first scenario will come true could even convey character traits to be disfavored because it would lead to an attitude prone to reverie and poor confrontation with reality.

Ultimately, even in Bramble's position, the idea seems to emerge that cultivated meat might discourage *genuine* self-transformation of the individual *by dealing with* technical rather than *spiritual* change. However, separating the two risks makes us lose sight of the fact that technical change and spiritual change are part of a seamless single movement. *To think* that change lies only in technology opens the door to technological determinism, a *technological fix* that is counterproductive to an effective understanding of the specific human situation, but also to think that change lies only in spirit puts one in the form of *neo-Luddism* that is counterproductive to an effective understanding of the specific human situation.

## 5. *Alvaro and Virtue Ethics*

Among the proponents of the ethical model based on virtue and character development is Carlo Alvaro, who develops his thoughts in a slightly different direction than Bramble. Alvaro emphasizes how a possible consumer reaction to the message of promoting cultivated meat as a sustainable product would be to develop indulgent attitudes towards meat consumption, which should, on the contrary, be discouraged.

In other words, Alvaro insists on the risk of increasing the number of people who see meat-based eating as permissible, developing indulgent attitudes towards this type of consumption. To support his reflection, he also recalls the words of one of the founding fathers of cultivated meat technology, Mark Post, who stated, "Quite frankly, vegetarians should remain vegetarians; that's better for the environment than cultured beef".

Indeed, Alvaro argues that what matters in a morally connoted action is not so much (or at least not only) the impact this action produces but what character traits it conveys. Certain actions, by their very nature, have the potential to foster self-improvement in human character while simultaneously discouraging traits typically regarded as vices. These actions promote the development of virtues such as discipline, patience, and empathy, encouraging individuals to strive for personal growth and moral integrity. At the same time, they help to diminish undesirable traits like laziness, impulsiveness, and selfishness. By engaging in such actions, individuals can refine their character, cultivating habits that contribute to a more virtuous and balanced life.

Alvaro describes a truly virtuous person, echoing some of the analyses Aristotle presented in the *Nicomachean Ethics*, as one who possesses the most

important of all virtues, namely magnanimity or greatness of mind. Indeed, such a person possesses the virtues of courage, temperance, generosity, fortitude, and justice. The magnanimous person then 'is not too concerned about material goods, and they would give up their possessions or even their life for the sake of honor without any sense of loss' (Alvaro 2022: 788). It is endowed with self-control and a strong will and can modify its diet to benefit itself and the environment. Thus, since a critical character trait of the virtuous individual is temperance and the temperate individual has a rational and harmonious approach to appetite and food pleasures, they are not particularly attached to a specific type of diet because it is the one that generates the most pleasure.

If consumers, therefore, commit to adopting, in some way, the principles of virtue ethics, they are likely to internalize temperance and justice by choosing options that reflect these values.

Although the author himself is aware that it could be subject to various criticisms, Alvaro's reflection nevertheless presents a problematic element that could be more helpful for comparison with actual consumption scenarios.

Alvaro starts by observing that many meat eaters would not give up their carnivorous diet in favor of cultivated meat since the latter is seen as unnatural and arouses disgust and disapproval. He goes on to state that since many consumers find cultivated meat unnatural and unappealing and that encouraging the consumption of this product does not convey any human flourishing, it would be preferable to encourage a switch to veg diets rather than invest in a technology that, from the point of view of virtue and character ethics, appears problematic.

Alvaro's reflection, however, seems to underestimate the role that technology can play in fostering forms of self-improvement and the importance of having multiple options available to pursue morally appreciable results since there is no single form of consumer and especially the transition from an omnivorous diet to a veg diet entails a symbolic investment and a gestalt leap in terms of adherence to a specific life-world that is difficult to implement. Cultivated meat, in this sense, could help certain types of consumers to embark on the path of symbolic reinvestment through a medium that is not entirely different from the one habitually used (indeed, in many respects, it is superimposable) and, at the same time, not altogether superimposable either (in aspects that are not irrelevant). In addition, Alvaro's reflection appears to be too crushed on an anthropocentric perspective in that to focus on the character of the moral agent; he underestimates a vital component of the entire discourse, namely the suffering of non-human animals that could be significantly mitigated through the use of cultivated meat.

## 6. *Cell-Based Lifeworld*

In a 2013 paper, Van der Weele and Driessen Clemens showed a possible direction for thinking about a cell-based life-world. In the view of the two authors, cultivated meat over and above consumption concerns could convey new possible scenarios of existence for humans, new models of morality, and new forms of interaction with non-human animals.

The two authors argue that although ‘new technology and new morality’ (in terms of attitudes and behavioral patterns) are often presented as ‘opposite roads to social change’ (Weele *et al.* 2013), de facto, they are not. They contrast the idea of the techno-moral dichotomy with the notion that new technology often functions as a tool for change that produces new scenarios that convey transformations in attitudes and behavioral patterns.

Among these is the idea of the ‘pig in the backyard.’ In the words of the two authors, “In the future we might all have a pig in our backyard or in our local community, from which some stem cells are taken every few weeks to grow our meat, either in a machine on our kitchen sink or in a local factory [...]. It typically takes the form of pigs or cows in urban farms or backyards, held as pets and serving as donors of muscle stem cells” (Weele 2013).

This scenario would entail reshaping our patterns of interaction with some of the non-human animals currently employed in intensive livestock farms, transforming them into companion animals with whom we can share our life-worlds. On the one hand, such scenarios allow us to train our character to be open, respect others, recognize diversity, and strive for shared living spaces. On the other hand, such scenarios would be less likely in a life-world in which everyone turned to vegetarianism. In such a case, in fact, it would be more likely that animals would be considered irreducible alterities to be respected through a principle of non-interference that would, however, deprive both non-human animals and humans of opportunities for interaction and thus of reciprocal enrichment and flourishing of their life-worlds. Indeed, it makes sense to imagine that in a scenario in which everyone was a vegan, there would be a number of character traits that would not be solicited, such as those associated with virtues generally held to be valuable. On the other hand, such characteristics would play a role in a futuristic scenario in which cultivated meat was widely available. Such scenarios may also respond to concerns that see the use of technology as a possible (further) form of consumer alienation from food.

## 7. *Conclusions*

In this last section, I point out the five elements that I believe can be associated with cultivated meat concerning the moral consequences of the spread of such a product.

### *Alienation and Food Technologies*

It is not the food that produces consumer alienation concerning the product consumed but the devices, strategies, and procedures put in place by the actors involved in the food industry who, in certain circumstances, consider it preferable to obscure the processes behind food production. The case of cultivated meat, although market dynamics remain a risk that should not be underestimated and against which we must remain vigilant, presents a profile that is at least partly different from that of conventional meat, whose production processes are deliberately occulted to conceal the suffering of animals on intensive farms (Joy 2020). This difference stems from the fact that research on this food, at least up to now, is supported and promoted by start-ups (Mosa Meat, Cellular Agriculture Europe, Meatable, Bruno Cell, etc.) and organizations (Good Food Institute, Italian Complementary Proteins Alliance, etc.) that make the realization of a better world and respect for the welfare of non-human animals central goals of their activities.

It is clear, and indeed highly probable, that these organizations, especially in the case of start-ups, are also interested in making profits from this new sector of production. However, it is equally clear that this motivation 1) does not preclude the possibility that there are also ethically based reasons; 2) even if profit is one of the motivations, this does not exclude that the result is ethically commendable (as in the case of vaccine production, which is carried out by multinational companies intending to maximize their profits, but whose result is still ethically commendable insofar as it benefits billions of people).

In any case, the moral profile that underpins the world of alternative proteins and, thus, of cultivated meat cannot be approached, let alone superimposed, on that of industrial animal agriculture, whose *primary* objective cannot be animal welfare or sustainability but the maximization of profit, pursued even at the expense of the environment and human health, let alone the welfare of non-human animals. Suppose the genesis of the enterprise that underpins the production of cultivated meat has a moral profile. In that case, it is unlikely that the actors involved in this sector intend, in any way, to camouflage the mechanisms that underpin production since it is precisely these mechanisms that provide the product with a moral profile. It is in the interest of the produc-

ers of cultivated meat to make the steps in the production chain clear so that the risk of promoting consumer alienation is minimal. Although this is a very technologically sophisticated product, the relationship with the consumer may be more transparent, not based on forms of cover-up and self-deception necessary to perpetuate the industrial animal agriculture system.

Indeed, it is in the interest of conventional meat producers to render the way meat is produced opaque, because awareness of how meat is produced and how the non-human animals involved in the process are treated could have an impact on consumption. On the contrary, it is in the interest of producers of cultivated meat to make the whole process transparent and understandable because knowing how cultivated meat is produced could incentivize its use by those consumers who wish to adopt more ethical ways of eating.

### *Humanistic Techno-Realism*

Recent studies have delved into the psychological underpinnings that may lead a significant segment of potential consumers to resist cellular agriculture and cultivated meat (Wilks *et al.* 2021). A prominent finding is the role that perceptions of artificiality or unnaturalness, coupled with feelings of fear and disgust, play in this resistance. The significance of these findings extends beyond mere consumer preferences, impacting ethical and philosophical debates. As highlighted by Simona Stano in her latest work (2023), the discourse around clean eating primarily oscillates between the dichotomies of organic versus genetically modified and naturally derived versus lab-created foods. These discussions underscore the profound influence of nature-centric narratives on moral evaluations.

Opposing nature and culture, nature and technology generate a narrative favoring a pure and uncontaminated nature. However, cultivated meat, like other products that have become popular in recent years, for example, in the medical field (think of synthetic embryos or synthetic organisms produced by the Craig Venter Institute), increasingly prompts us to take note that technologies are increasingly shaping our existences and that this process is partly (and hopefully) non-reversible. This is not to indulge in forms of technological determinism but to take note that our species builds its survival strategies through technology and that in the face of the most recent advances, we have two options: 1) passively undergo these transformations, finding ourselves inserted in new worlds-of-life whose implications we will not fully understand, or 2) accompany these transformations with appropriate paths of scientific, cognitive and emotional literacy to equip ourselves with the tools to understand the new phenomena and stay within the change consciously by profitably

exploiting the opportunities (and knowing how to distinguish concrete risks from imaginary or overestimated ones). It is, therefore, a matter of adopting a form of humanistic technorealism. Technorealism is the sense of having a realistic and pragmatic perspective on technology that sees the latter as an essential and structuring part of the evolution of the human species without embracing uncritical technophobic or techno-enthusiastic positions. On the other hand, however, 'humanistic' in the sense of not forgetting that technical transformations primarily impact the structuring of our identity and the construction of the life-worlds that characterize us.

### *Virtue Ethics*

Cultivated meat can promote the development of virtuous character traits and foster paths of self-improvement in human beings. In this sense, it can be seen as a technology of the self that may allow us to reshape our behavioral patterns and persistence strategies in novel and positive ways.

It can give us a tool to confirm that vegans' and vegetarians' objections to meat consumption are, at their core, correct; to provide those who no longer eat meat for ethical reasons a way to enrich their dietary options and restore certain dietary practices; to give those who would like not to eat meat but are unable to due to weakness of will an extra tool to support their path of self-improvement and transformation. Finally, it would provide a robust tool to affirm that those who wish to continue eating conventional meat despite the existence of an alternative product that reproduces the basic taste and texture of conventional meat while avoiding the suffering associated with that product are acting in a morally unjustifiable manner because they are motivated by futile self-interests alone.

### *Instrumentalism and Relationalism*

Cultivated meat is not merely a technical solution aimed at addressing the sustainability issues associated with conventional meat production. While it is true that this innovative approach can significantly reduce the environmental impact, such as lowering greenhouse gas emissions, reducing water usage, and minimizing land exploitation, viewing it purely through an instrumentalist lens fails to capture its broader significance and potential.

Adopting a relationalist (see Umbrello 2024) perspective allows us to appreciate cultivated meat as a transformative technology that goes beyond solving ecological problems. It fundamentally reshapes our lifeworld, altering the way we produce and consume food. This new form of meat production offers the

possibility of creating novel pathways for hybridization, where traditional agricultural practices can intersect with cutting-edge biotechnological advancements. This fusion can lead to a more sustainable and ethical food system, addressing not only environmental concerns but also animal welfare issues.

Furthermore, cultivated meat has the potential to foster deeper connections with the external environment. As consumers become more aware of the origins and impacts of their food choices, this technology can promote a more conscientious and informed relationship with the natural world. By embracing cultivated meat, individuals and communities can engage in a more responsible form of consumption that supports ecological balance and biodiversity.

### *Transnaturality*

Although cultivated meat demands advanced technological and scientific expertise, achieving widespread distribution could allow us to restore natural living conditions for the non-human animals involved, specifically those donating the cells needed for this process. By respecting and promoting the natural behaviors of non-human animals, we can provide them with the means to lead lives that are more in line with their species-specific traits. The apparent paradox of cultivated meat lies in the fact that using highly advanced technology can foster a more appropriate relationship with non-human animals. In essence, this creates a new intersection between nature and technology, demonstrating that these two realms are not mutually exclusive (Sebeok 1972).

New technologies often demonstrate the continuity between nature and technology, as well as nature and culture. Cultivated meat exemplifies what I refer to as meta-natural and meta-technical (transnatural) objects (or naturally artefactual). This category includes artificial embryos, synthetic bacteria, and organoids. These objects are created using technical methods but, once completed, they are virtually indistinguishable from their natural counterparts, such as embryos, bacteria, and organs. While the classification of these objects is a subject for ontological research, it is also important to consider the ethical implications I have outlined in the preceding paragraphs.

Naturally artefactual objects help us move beyond the rigid dichotomy between natural and artificial, and natural and technical, which still influences how we perceive reality. Cultivated meat exemplifies this concept. Although produced through industrial processes and advanced biotechnology, it respects the behavioral patterns of donor animals, avoiding practices that disrupt their natural rhythms and physical structures. It can be antibiotic-free and, as previously mentioned, promote new forms of human-animal relationships, thereby reducing the objectification inherent in industrial animal agriculture. Thus, a technology that might traditionally be viewed as less natural actually fosters

a more balanced relationship with nature, effectively pushing us beyond the natural/artificial divide.

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# Cultured meat in between Anthropocene crises: A perspective from ecological feminism

Alice Dal Gobbo

*Abstract:* Cultured meat is an emerging food technology that promises to revolutionise not only meat production techniques but also the relations between human beings and other animals, and the rest of the biosphere. Cultured meat might be read as a food innovation for the Anthropocene, since it addresses ecological, health and inter-species issues that characterise this historical phase and its problematisation. I propose a reading of the potentiality and pitfalls of this emerging technology based on a perspective of political ecology, which I believe fundamental in highlighting the social shaping of innovation and its embeddedness in wider symbolic and material dynamics shaped by power. In particular, I engage with feminist debates over science, technology, inter-species relations and the issue of ecological crisis to put into light the highly ambivalent nature of this “hybrid” object. Given this complexity, I argue for a methodological approach to technoscience innovation and the shaping of future food imaginaries that draws on processes of mapping to stay close to marginal, unrepresented, and yet politically crucial voices.

*Keywords:* Cultured meat, Anthropocene, biocapitalism, political ecology, (trans)feminism

## 1. *Introduction. Contextualising an emerging food technology*

Cultured meat, also called “cultivated”, “cell-based” or (misleadingly) “synthetic” meat is an emerging food technology based on the proliferation of animal cells in bioreactors due to culture mediums. Biopsies are taken from living or dead animals, from which staminal cells are identified that, in the right conditions, can divide and multiply relatively rapidly. These are made to mature and differentiate in muscle or fat cells, making it possible to produce large quantities of animal protein starting from a very small mass of biological material (Melzener *et al.* 2021). The cells proliferate in thread-like strands and are then put together in the form of burgers or other similar unstructured products; alternatively, they can be distributed on a scaffold or 3D printed for better resembling meat in the form of steaks. The promises attributed to this technology are multiple, and it is presented as one of the most disruptive food innovations of the present (Guthman and Biltekoff 2021), not only, and possibly not mainly, in itself but rather for the role that it is taking up in future

imaginaries of food (Driessen and Korthals 2012) and the “promissory narratives” that technoscience deploys within the challenges of the multiple crises of the present (Stephens 2013; Jönsson 2016).

In this article I propose that cultured meat is peculiarly imbricated in the Anthropocene, understood both as narrative and as a condition: it emerges in a space where known relationships between human beings and the rest of nature are put in crisis (Haraway 2015). The multiple planes on which it is justified, narrated and contested concern crucial aspects of the Anthropocene. The most evident regards environmental and climate crises. It is said – although not uncontroversially – to minimise the environmental impact of meat production, with reduced soil, energy, and resource use (Tuomisto 2019). This would also allow to face emerging challenges related to climate instability and population growth: it would provide nutritious food to social groups in geographical areas that are not fit for food production, thus addressing issues of food security. Further, as a growing world population and the Westernisation of lifestyles are expected to put further strain on planetary ecosystems, cultured meat would provide a food production technology implementable almost everywhere with little resources. The second concern is health. Human health seems to be severely compromised by current rates of meat consumption, especially in terms of antibiotics resistance and non-communicable diseases, but also pandemics due to the degradation of wild habitats and the closeness of humans and farmed animals (Parker 2020). In the present, human physical and mental health conditions are the embodied expression of ecosystem and social collapses that link human and planetary destinies, showing their interdependence (Dal Gobbo 2023a). Thirdly, interspecies relations are a key element of this picture: the way human beings relate to nonhuman animals is certainly expression of wider categories and hierarchies separating humanity from nature and supporting its instrumentalization and appropriation. Cultured meat promises to “liberate” animals from suffering and domination, since it does not – in principle, although often not in practice – require the killing of animals (Lo Sapio 2019). Finally, the role of technoscience as a medium that shapes relations between humans and the rest of nature, and planetary destinies, is a key aspect of conceptualising the legitimacy and acceptability of cultured meat for the public, as well as a key part of Anthropocene narratives (Dal Gobbo and Leonardi 2020).

Despite a rather monolithically positive construction of cultured meat as a win-win solution not only by technoscience but also by mainstream discourses and marketing, the public sphere has been traversed by sometimes strong and heated controversies and political mobilisations across the scientific community and publics (Driessen and Korthals 2012; Dal Gobbo and Bertuzzi 2024).

The Italian case of the 2023 law that bans “synthetic products” from production, consumption, and distribution is probably the most telling (see Dal Gobbo 2023b). It produced a highly polarised debate, divided between subjects who supported cultured meat’s potentials for facing the multiple ethical and ecological challenges of meat production, and the ones who strongly opposed this novel food because of supposed threats to health, traditions, culture, and local economies. This debate is marked by a rather clear political siding: science’s proposal for technology is supported by leftists, while the right embraces a more “political” positioning with regards to this innovation, opposing it mostly out of value propositions rather than on scientific grounds. It has also been populated mainly by white privileged men. Beyond the specificities of the Italian context, this polarisation seems to put into light key questions pertaining to how the Anthropocene narrative shapes and constrains the possibility to truly promote just and sustainable food transitions. Technoscientific knowledge has supported cultured meat as neutral and apolitical (Paulson 2024) and, by consequence, the opposing public as simply ignorant and/or ideological (Neresini *et al.* 2024). This has delegitimated dissent and especially undermined the possibility of an open and informed democratic debate around the benefits and risks of this technology, and its contributions in terms of really meeting objectives of food sustainability and justice.

The aim of this article is to propose a reading of cultured meat from the lens of a feminist and intersectional political ecology, reflecting on its transformative potentials and risks with regards to existing power dynamics. These are understood as articulated along the multiple axes of modern-capitalist domination, and especially: gender, race, class, species, ability, etc. Feminism gives crucial contributions for the disruption of normative constructions of technological innovation as an inherently good and neutral instrument for human development, showing that science and research themselves are characterised by positionality and interests, as well as by systemic power relations that determine its pathways (Hartsock 1998; Avelino *et al.* 2019). The specific debates that I will draw upon includes feminist STS (Coole and Frost 2010) and a consolidating literature that holds together feminist, ecological and antispeciesist concerns (Gaard 2002; Timeto 2024). Adopting a political ecology perspective (Pellizzoni 2023) will help me read the multiple Anthropocene challenges considered above as intrinsic to the very nature of capitalist modernity, rather than “externalities” or incidents: its separation between “Nature” and society, its forms of labour and value, its expropriation and exploitation of life itself (Moore 2015).

The key questions driving my investigation are: To what extent might cultured meat disrupt or reinforce the patterns of domination that foreground multiple Anthropocene crises? And if the systemic drive of climate and oth-

er environmental crises are processes of capitalist accumulation and growth (Moore 2016): what role might it play within this logic? These questions hold a wider relevance in the context of the debates over the breaks and continuities that the Anthropocene epoch represents *vis à vis* the previous “modernist” phase of capitalist development (Povinelli 2017). In line with Stengers’ (2005) “cosmopolitical proposal”, the aim of this inquiry into cultured meat is not to determine once and for all whether this technology might or might not be beneficial (although a critical positioning will be developed), but rather to “slow down reasoning” (994), opening and complexifying the perception around this ontologically ambiguous object.

## 2. *Questioning or embracing technoscience? Inquiring into cultured meat from feminist perspectives*

The Anthropocene condition calls on human beings, especially those located in the global north and other positions of privilege, to re-think their situatedness in planetary ecologies, as well as the relations that they establish among themselves and with other beings. Feminist and trans-feminist strands of thought ranging from feminist STS and new materialism, through to eco-feminism and feminist political ecology have been at the forefront of these debates since decades (Coole and Frost 2010; Haraway 2016; Salleh 2017). These considerations, albeit often developing within the sphere of ecology and more-than-human relations have been interweaved with the more or less poignant critique of the capitalist political economy and its relations of (re)production. The crucial concern over the sphere of reproduction and the body has been an important leeway for a dialogue with antispeciesist and animal liberation debates. Often the parallel between the exploitation of human and non-human bodies has become the terrain to build alliances and common claims (Balzano 2021; Timeto 2020). One key discussion in this context has revolved around technology and the role that it might have in the context of these necessary transformations (Stephens 2024). Feminist lenses on food tech and innovation (see Lee 2018) have therefore a threefold interest: a) inquiring into the ontologies and epistemologies at the heart of cultured meat and evaluating the political ecologies that they foreground, including interspecies relations; b) considering their embeddedness into capitalist forms of value and labour; c) evaluating the role of technoscience therein. It is unnecessary to underscore that these three spheres are interrelated, so that it is not possible to consider them apart. The rest of this section is devoted to developing a theoretical and methodological reflection around the tools for investigating and think-with food innovation and technoscience in the Anthropocene, one that takes con-

troversies and the uncertainty of science as the starting point for a transformative politics of liberation and just transition (Lawhon and Murphy 2012).

### 2.1. *Hybridity and overcoming “Nature” as a space of domination*

Probably one of the reasons why cultured meat has the capacity – at least in some specific spaces and times – to ignite controversies is that it introduces an “ontological disturbance in which the things on which we rely as unexamined parts of the material fabric of our everyday lives become molten and make their agential force felt” (Whatmore 2009: 587-8). It puts into question established relations between human beings and non-human animals, offering, for the first time, the opportunity to eat meat without sacrificing their life (Stephens 2013). But it also introduces a further level of ‘strange(r)ness’: edible matter is no longer produced by and in an organism, but rather from cells. It is biological matter without a body, a tissue without an organism... a Body without Organs (Deleuze and Guattari 2014)? As such, it opens questions about the relationship between animal life and individuality and subjectivity. It contributes to de-stabilise an already shaky distinction between what is natural and what is artificial: cultured meat is certainly made by humans through highly technologized procedures, but developers claim that growth happens thanks to natural raw materials and that it just mimics what happens in nature. As such, this technology challenges the ontological foundations of the distinction between what is dead and what is alive, what is human-made and what is nature-made. It truly is a “hybrid” (Latour 1993) that lays bare what is already true for contemporary industrialised food production: that within modern capitalist ecologies of re/production there is no absolute distinction between humanity/technology and nature.

Feminist thinking, especially that engaging with ecological issues (Merchant 1989; Rocheleau 1996; Salleh 2017; Mies and Shiva 2014) and technoscience (Haraway 1991, 2016; Alaimo 2008; Bennett 2010), has for long underscored that the roots of degrading socio-ecological relations and climate crises are to be found in so-called “cartesian dualisms” that separate mind from body, humanity from nature, spirit from matter, man from woman, human from animal, culture from nature, productive from reproductive labour, civilised from savage, etc. (Plumwood 2003). According to a widely accepted reading, such hierarchical divisions would be the ideological (and practical) justification of the domination of men over women and of humanity over the rest of nature: the first “major” term would be able to appropriate, use and dispose of the second, “minor,” one which is deemed inferior (Deleuze and Guattari 2014). This process – albeit dating far back – finds its most forceful articulation in

modern capitalism, also thanks to emerging colonial relations (Salleh 2017; Maldonado-Torres 2007). In this moment, in fact, a stable and neat boundary between subject and object would be traced, distinguishing deserving life from an undeserving and largely dead matter that can be appropriated and used at will (Dussel 2018). This process of splitting has been interpreted as patriarchal since – throughout history – it has been the means for subjecting women’s reproductive capacities to men’s will. It also cuts across ecological, interspecies and race relations, so it can be understood from intersectional perspectives (Timeto 2020).

Precisely for their marginality, their positioning on the “minor” side of this dualism, women have been able to show the betrayal at the heart of the construction of the modern subject as a disembodied, abstract, white, able, and middle-class man. They opened the way for subjective positionality to become an imaginative space: one that would promote socio-ecological transformations based on the recognition and affirmation of difference and partiality. Starting from their historical attribution to the sphere of nature, a strategic alliance between women and the rest of nature has been proposed (Mies and Shiva 2014). Showing the primacy of reproduction (normally attributed to women, racialised subjects and non-human nature) on production has been a way of undermining the ideological construct that naturalised women’s inferiority compared to men (Barca 2020; Salleh 2017). Feminist stances have often intersected with species issues, for the common attribution of both women and non-human animals to the category of Nature has been part of the reinforcement of their common domination, subjection, and the reduction of their bodies to mere matter functional to social reproduction (Gaard 2002). Feminism and vegetarianism – intended as a stance against the appropriation and exploitation of non-human animal bodies for human eating/pleasure – are thus linked. Meat-cultures are, on their part, masculine, reinforcing the idea of domination and the possibility to make use of bodies as if they were purely objects. The female body itself has been animalised and reduced to “pieces” that, much like meat, are (sexually) enjoyable by men. Most importantly, women’s bodies have been understood and valued in as far as they were functional to childbearing, perpetuating the labour force, family lineage, class privilege, etc. (Adams 2015). Vegan eco-feminism has also underlined the intrinsically *ecological* implications of the women/animal subjection, showing how environmental destruction is weaved in the system of domination that objectifies all that is not identifiable with the hegemonic subjectivity of the able, white, male, owner subject (Gaard 2002).

The key root of ecological degradation would lie in the identification of the biosphere and of feminised, racialised, animalised bodies as a “Nature”

separated from humanity, measurable, abstract, appropriable at will. A process of “disenchantment” that has voided nature from its intrinsic worth (Federici 2021) and which would not recognise the inherent vitality of matter (Bennett 2010), the limits of the biosphere (Stephens 2024), and thus an inherent clash between the logics of planetary reproduction and those of capitalist accumulation (Dal Gobbo 2024). On these premises, it has been proposed that overcoming the nature/society dualism and imagining human and non-human beings as pertaining to one ontological plane, one “web of life”, where matter would be vital again, would be conducive to more horizontal, less dominative, socio-ecological relations (Moore 2015; Coole and Frost 2010; Bennett 2010). So, while the modern-capitalist shaping of, and detachment from, nature has been seen as a key contribution to ecological and interspecies crises, critical (eco)feminist thinking has been careful to underscore that human relations with the environment and other beings are always-already shaped by culture, hence, there is no pristine natural bond to be re-established. To the contrary, “nature” has become the ideological justification of domination (Gaard 2017, 2020). Debunking the idea that society/culture/technology and nature pertain to two different domains meant for women claiming the space and right to be *both* nature and society, not simply nature domesticated by society.

Part of the feminist debate has therefore *embraced* natural-technical hybridity as a space of liberation and de-naturalisation of such bonds of oppression. Technoscience has been, for some, a key part of this: it made concrete the un-closeness and un-naturality of bodily existence, meaning that any appeal to a biological determinism in outlining gender roles and life/reproductive practices was debunked (e.g. Haraway 1991; 2016; Barad 2003; Alaimo 2016). Haraway’s (1991) embrace of the cyborg as a space of hybridization the natural and artificial is one of the most significant examples of this optimistic embrace of technology as a space for the re-invention of the (post-)human beyond the limits of humanity itself. It gave the opportunity to go beyond the dualisms and rigid oppositions of self/other, subject/object, human/non-human that were part of the project of domination in modernity (Balzano 2021). Xenofeminism (Hester 2018) is possibly the highest expression of this approach to technoscience as transformative tool, since it promises to de-link the very reproduction of (human, animal) life from the biological restrictions of the gendered body. Current reproduction technologies, as well as less diffused ones such as ectogenesis (enabling biological reproduction outside human bodies) or the shaping of masculine bodies to make them able to carry out tasks that would be attributable to feminine bodies only (e.g. breast-feeding), would allow to rethink parenting and the mothering role therein, to go beyond the very idea of the “family” and detach reproduction from the heterosexual couple with its

fixed roles (Balzano 2021). This would imply emancipation for women but also for humanity as such, allowing to overcome natural limits or, maybe better, the *naturalisation* of existing social relations.

From this perspective, the ontologically ambiguous, hybrid, status of cultured meat might contribute to push beyond dualisms and the natural-artificial divide, unveiling how the “naturalness” that justifies the relations of domination involved in meat production is indeed a social construction (Gaard 2002). As seen, cultured meat disrupts established natural/artificial boundaries as well as the necessity of domination on other animals for eating. It draws on a vitality inherent in cells that partly challenges a modernist idea of materiality as dead and appropriable (Bennett 2010). This might politicise issues around diet, food production, inter-species and ecological relations, re-embedding the “natural” within a socio-ecological sphere of co-emergence and mutual accomplishment. Nature is no longer a separate and transcendent sphere that might dictate what is right or wrong to do, based on universal and unchanging rules. As such, it has the potential to reshape the relations of domination that have historically traversed meat eating, towards less violence and a way of eating animals that does not involve death. Technoscientific innovation would in this sense be liberatory, allowing to produce animal foods without the deep and violent involvement of their bodies, their exploitation, and their killing (Stephens 2015: 161). Possibly, this technology might also disrupt the identification of meat-eating with masculinity and of the woman’s body with the non-human animal as body-object whose task is procreation or being “slaughtering meat” (Adams 2015): a disembodied and dematerialised form of meat-production promises to de-link it from the concrete, factual, “carnal” elements of traditional farming (Guthman and Biltekoff 2021). Animal protein consumption might then be re-thought beyond the dualistic and appropriative meanings that have been shaping it throughout capitalist modernity. Technoscience would contribute to destabilise existing boundaries and contribute to the emergence of post-human assemblages and alliances, characterised by complexity and by the necessity of “staying with the trouble” (Haraway 2016) of an imbricated world.

## 2.2. *The capitalist quest for control over life: from reproduction to the bioeconomy*

From a feminist perspective, nevertheless, it is also possible to adopt a critical stance on cultured meat, emphasising that although technologies *can and do* transform socio-ecological and interspecies relations, they are also never neutral (Almazán and Prádanos 2024). The power-value networks in which they emerge are characterised by inequalities and practices of domination,

to which specific ontologies and epistemologies correspond. These may re-inscribe, rather than liberate, bodies, as well as perpetuate socio-ecological injustices and unsustainability.

Ecofeminist perspectives look at the intersection of ecological crises with gender, but also racial, class and species injustices. Critique to the unsustainability of the capitalist food system is not rooted in its *technical* or even technological organisation. Rather, the focus is on the ways in which capitalist relations of re/production are intrinsically prone to the extraction of reproductive labour from feminised, racialised and animalised bodies: one that is considered as infinite and free, and thus freely appropriable (Moore 2016). As this labour is plied to capital's demands of infinite growth and accumulation, the exhaustion of these "forces of reproduction" (Barca 2020) ensues. This process is mirrored in ontological and epistemological assumptions. Ecological crisis is, in fact, seen as the result of a patriarchal organisation of material and symbolic domains that favours abstraction, quantification, splitting, simplification and exchange over materiality and the embodied, organic, intermingling with the qualities that conjure to determine the worth (or use value) of things. Masculine-centred ontologies favour an ever-increasing *separation* between humanity and nature, whereby technoscience becomes the means for the realisation of human freedom through the domination not only of 'external' nature, but also of human nature itself (Adorno 1973). Such an approach is reflected in policies, markets and technologies that have become hegemonic in the last decades: from chemical inputs in the so-called "green revolution" to genetically modified crops (Giraldo 2018). Innovation aims at increasing yields and productivity, but it has been demonstrated to fail on social, ecological, health planes in the long run.

Ecofeminist thinkers have for long proposed a different philosophy for the cultivation of ecologically sound and socially just relationships with the land (Shiva 1988). This would be based on valuing local knowledges and technologies that emerge from the concrete labour that communities carry out in their daily practices of subsistence. In this, the labour of women is central because they are the ones who are mostly in charge of maintaining ecosystems through agriculture and forestry and water management, as well as of reproducing bodies and caring for their wellbeing (Resurrección 2017). Limit and sufficiency are values rather than hindrances from this perspective (Salleh 2009; Mellor 2019), since human and non-human flourishing are seen as based on cooperation and *commoning* both within our own species and across species (Federici 2019).

From this perspective, cultured meat seems the continuation of a project of domination, rather than the opportunity for liberation (Lee 2018). The most evident aspect would refer to the susceptibility of this food technology to pat-

ents, privatisation and continuing injustices in access to nutritious and safe food across the globe (Clapp and Isakson 2018). But on a more philosophical level, the idea of producing in a closed environment food from cells recalls the dreams of control, simplification and abstraction that are typical of the whole logic of capitalist, patriarchal, industrial food systems. Since Churchill's visionary proposition of culturing meat, the production of body-parts has always been utilitarianly reified as a way of making production processes more efficient (see Jönsson 2016). Stem cells, with their pluripotency and capacity to reproduce (possibly indefinitely), recall an imaginary of unconstrained abundance that might indeed produce its opposite: a scarcity produced by the enclosure of knowledge and technologies. And if, as Adams (2015) suggests, there is a coincidence between carnist culture and the objectification of female bodies as made up of juxtaposed "pieces", one might wonder whether cultured meat might indeed support the idea of life as made of discrete parts that can do without the organism as life form. From this perspective, cultured meat does not seem to change the ways in which life itself is valued, its objectification, its instrumentalization to the imperatives of profit and accumulation; it does not conjure to the creation of a culture where animals are considered subjects seeking for self-determination (Reggio 2022), or subjects of rights (Regan 1983). In fact, a future and hypothetical industrial production of cultured meat is welcomed as a way of further controlling biological processes, often in a mechanised way, and in so doing improving standardisation, efficiency, control over error and therefore food safety and hygiene. Indeed, one of the strengths advertised of this novel food is precisely its being "efficient" and avoiding the "waste" of rearing a whole animal – a whole living being – in order to produce, sell, and consume only parts of it (Jönsson 2016).

Surely, reasoning around access, distribution and property of technology is crucial for social emancipation. Yet what is also important are the ontologies, epistemologies and deeper logics that technologies embody. This product is not only mostly supported by financial investments from venture capital, but it also strongly relies on expert scientific knowledge and complex infrastructures that cannot be replicated easily by communities. Also, these processes involve further detachment of human beings from their very conditions of existence. Hence, from a point of view that favours sufficiency as well as access, autonomy and control by end-users, i.e. "conviviality" (Illich 1973; Gorz 1990; Vetter 2018), this technology appears unfit for both human self-determination *and* for rebuilding socio-ecological relations based on a non-anthropocentric respect of the intrinsic qualities and logics of life. From this point of view, a technology by itself will not change the *overall* socio-ecological relations nor their logic, hence even if we were to face partial improvements in terms of environmental

indicators and animal welfare, the separation, the quest for appropriation and the deployment of animals-as-objects and food as commodity might not be changed at all.

This goes for the theme of animal liberation too (Weisberg 2015). Reducing the suffering of animals is certainly an important endeavour (Singer 1975). Nevertheless, cultured meat does not – despite its own self-narrative – completely bracket out the animal body from meat production. Foetal bovine serum remains an important ingredient for culture mediums, which implies suffering and death for cows and calves. Despite the promises of overcoming this through the advance of research and the development of technology, results are lagging, implying that the achievements of science are relatively uncertain and shaky (Stephens 2015). Second, the need to continuously extract cells from living, able and “fitting” animal bodies confronts us with their materiality, the question of reproduction, of death, of what their destinies will be when they are no longer “useful” for the system (Ferrari 2024). In a political economy based on valorisation and accumulation it is difficult to imagine that technoscience achievements will allow a transformation of inter-species relations in the wider sense of re-positioning the animal body within a different hierarchy of being (Timeto 2020). Indeed, the narratives of efficiency and non-waste that underlie cultured meat production seem to further reinforce a utilitarian understanding of animals’ existence. Finally, valuing this technology might reinforce rather than diminish the value socially attributed to meat consumption.

Critical reflections over the “bioeconomy” or “biocapitalism” might be useful to better qualify from a different perspective and situate what has just been said (Birch and Tyfield 2013). While the idea of deploying stem cells and their productive capacity in production does seem to open up the recognition of the vitality of matter and its power of being (Bennett 2010), if one considers how this happens within capitalist processes of value production, it might be argued that food technologies are one of the most evident expressions of the capitalist drive to the real subsumption of life itself (Fumagalli and Morini 2009). In the context of an impending poly-crisis that invests the whole capitalist system on ecological, economic, human and social planes, conquering the very micro processes at the heart of life reproduction becomes the promise of a new frontier for accumulation (Cooper 2008). And indeed, as Cooper herself notices, neoliberal economics and governance rely on the con-fusion of human and non-human, while favouring deeper control of humans on matter and the principles of life reproduction. Technoscience plays an important role in “intensifying embroilments” between the natural and the artificial (Pellizzoni 2015; 2019). Now the confines between what is natural and what is artificial and human-made tend to vanish, there is a positive *embracing* of the openness

and malleability of matter, of the bio-physical world, of the complex capacities of bodies that become able to open themselves beyond the very constraints of biological limits. Indeed, as seen above, the narratives of hybridity and control play out together in cultured meat, as developers underscore both naturalness and the disruptiveness of this technology, particularly referring to the capacity of strictly monitoring and determining production processes.

Culturing cells is a step forward in a hybridisation process, yet one that – despite its promises in terms of ecology and animal welfare – does not grant much agency and vital capacities to matter and the non-human. This seems deeply linked to, and realised in, cultured meat’s commodity character: born for the market and from processes of capitalist investment and valorisation, it presents itself as purely exchangeable abstract matter, a meat finally dis-embodied and therefore purified of all the “uncontrollable”, singular, specific, qualitative and irreducible characters that are typical of living organisms and of the labour that subtends their re/production (Deleuze and Guattari 2014; Dal Gobbo 2023a). In this sense, the con-fusion of natural and artificial is not the means to put into question human control and domination, or the opening of the human/technoscientific sphere to the stubbornness of life itself (Bennett 2010). Rather, it becomes a way of perfecting that process of reduction of living beings to manipulable and quantifiable entities without qualities. Indeed, hybridisation might not be so disruptive of modern capitalist existence at all, if we follow Latour’s (1993) point that, despite the ideological opposition between nature and society being the bedrock of modernity, technoscientific advancements have always led to a “proliferation of hybrids” that confused the two spheres.

As such, cultured meat is well placed within the Anthropocene “Master narrative” – i.e. that produced by dominant subjects –, which suggests that an over-powerful Man (*sic*) responsible of such an epochal transformation would be well-positioned to solve it through the *further* deployment of technoscience (Barca 2020; see also Sexton and Goodman 2022). This narrative tends to obscure the possibilities of social and political transformation in practices and diets (e.g. meat reduction and the spread of vegan diets) as well as farming. This is even more striking as one recognises that what cultured meat represents in terms of “fixing” the Anthropocene crises is merely a promise, with little potential of material transformation (Stephens 2013; Jönsson 2016; Sexton and Goodman 2021). From this point of view, cultured meat seems functional to supporting the “economy of promise” that characterises the financialized bio-economy (Cooper 2008; Birch and Tyfield 2013; Stephens *et al.* 2018). It might then be argued that, despite stated objectives of reducing animal suffering and ecological impact, a food technology whose feasibility and availability are continuously deferred in the future might have little to contribute to achieving

food justice and sustainability (Jönsson 2016; Sexton and Goodman 2021). The putting-to-value of the vitality of matter itself seems a further appropriation in the interests of racialised, classed, gendered accumulation rather than the positive embrace of hybridity as a leeway for more horizontal human-non-human relations.

### 3. *Controversies around food tech and valuing situated knowledges*

The discussion up to now has meant to sketch a critical but also multifaceted view on cultured meat as simultaneously “disruptive” and in continuity with the modern-capitalist quest for control over nature, which matches a drive to the valorisation of life itself as part of a project of infinite accumulation. While some of its features, especially the promise of sparing animals from suffering and of reducing the impact of farming through a redefinition of the boundaries between “natural” and “social-technological”, do resonate with some feminist perspectives, I have also proposed a different, critical reading that goes to the heart of capitalist processes of valorisation and that sees cultured meat as a way of further subsuming life reproduction by capital and as an instrument for the inherently unsustainable expansion of the capitalist economy. Yet the futures of technologies and the social relations surrounding them are always open to redefinition. For this reason, it is important to stay close to the social discourses emerging around innovations: they point to unmet social needs, fears, hopes and the critical capacity to shape food futures by hegemonic, but also marginal, subjects.

Cultured meat has been invested of different and contrasting meanings, values, and political functions: from animal liberation to a conservative reactionary defence of current “business as usual”, from green growth to the push for agroecology as a response to food systems crisis. Some of these debates, like the Italian one, might seem disproportionate if one considers that there are no commercialised products in the EU and, at world level, they are so marginal that they do not seem to hold any significance in terms of socio-economic and ecological impact. Yet, their relevance goes well beyond the specific case and shows that the stakes at the heart of innovation for food transitions are more complex than what is often portrayed by the white, male, technoscience establishment (often portrayed by as the only and most authoritative voice). In this context, cultured meat has truly been an “actant” (Latour 2005): it has stirred a proliferation of discursive practices and defined a space of debate, delineating a political geography of consensus and dissent around the key themes that characterise the Anthropocene. Installed in a socio-technical and political-ecological field characterised by tensions and power asymmetries, this novel food can lay visible existing unequal socio-ecological relations and distribution

patterns, most notably those regarding interspecies justice (Weisberg 2015), the role of techno-science in “sustainable transitions”, the possibility and opportunity to fuel growth within planetary boundaries (Guerrero Lara 2023), the ownership of knowledge and biological material (see e.g. Cooper 2008; Birch and Tyfield 2013). Its ontological novelty opens a space for public debate over the foods of the future, and the futures of food.

While for the “promissory narratives” (Jönsson 2016) of technoscience cultured meat is a straightforwardly positive endeavour that will be integrated into human and non-human food practices in the more or less near future, contestations, legislative measures, approval processes, fears, and expectations shape a far less linear and simple trajectory. They problematise a narrative of technological development as neutral and disembedded from the social that silences a wider reflection around the forms and pathways of ecological transitions, and the spaces of technoscience therein (Jasanoff 2010). A feminist, intersectional, political ecology approach starts from these discursive margins to make evident all those practices that might support fair and secure access to food for all. Often, while not much represented by the media, those who are critical of cultured meat are not rejecting technoscience *per se*, but rather valuing the spaces for the autonomous emergence of “convivial technologies” (Vetter 2018) that respond to the concrete needs of human and non-human subjects. Feminism pushes researchers to study these matters from the perspective of “situated knowledges” (Haraway 2020): a perspective that allows to show the partiality and embedded character of technoscientific innovation, opening up spaces for the promotion of difference and the recognition of marginal forms of knowledge. Included in this proposal is a tension towards justice, for the recognition of multiple voices within a debate means uncovering the hidden dynamics of domination and (in)visibility within a field. A situated inquiry helps to uncover the implicit premises of different positionalities, while also questioning their power effects in the complex tracing of the material and symbolic field of food innovation.

Methodologically speaking, mapping these knowledge controversies (Whatmore 2019) allows to understand technoscientific objects such as cultured meat as emergent assemblages of matter and meanings that are created in between and across laboratories, industries, financial markets, social movements, and the civil society at large (Jasanoff 2010). Mapping means drawing objects’ trajectories both as they are born and as they are “received” and – as such – re-born. Seeing processes from within, from the eyes of the actors but also from the perspective of the *practice* of innovation rather than its self-depiction as unilinear and uncontradictory process is one first way to address the situatedness of scientific knowledge, to highlight and share the uncertainty, messiness, and

complex nature of innovation as it is both local and idiosyncratic *and* inserted into global chains of value, labour, and power. On the other hand, inquiring into cultured meat controversies from an “outside” perspective – i.e. that of its publics – is one way to contextualise it as part of wider processes. While Bruno Latour (1993) argues that social critique needs to engage with the “small” and banal gestures and choices of actual subjects, it is also important to situate these gestures in a field of forces that partially transcends them and that they contribute to reproduce or resist.

Mapping can bring to the fore the emerging contradictions, openness, and self-questioning that technoscience itself constantly carries out, to give it back to a public debate in need of complexity to navigate complex times. Here the work on technoscience and its own narratives and practices encounters the work on publics: for it is at their intersection that development trajectories get delineated and the spaces for resistance and transformation open (Neresini *et al.* 2024). This does not mean rejecting the role of technoscience as such, but rather questioning its principles within a space of multi-species planetary existence “in the ruins” of capitalism (Tsing 2017). Mapping from a feminist intersectional perspective also means paying attention to, *caring for*, the voices that are often invisibilised because distant from the hegemonic subject that is considered as the producer/custodian of “right” knowledge: the rational, disembodied, able, white, owner Man that stays on the Human side of the great modern divide (Puig de la Bellacasa 2017). For instance, what are the views of women, agroecologists, antispeciesist, climate justice and political ecology activists? Listening to these voices opens the space for alternative views and practices of technoscience that might be able to deal with contemporary “troubles” (Haraway 2016) without the need to resort to the promises of solutions to come, and to a displaced space-time of climate change mitigation/adaptation. The embodied and positioned practices of care that non-hegemonic subjects put in place as part of the re-weaving of socio-ecological and sociotechnical relations in times of crisis might thus become the bedrock for a situated and partial food knowledge in the Anthropocene, whose temporality – while opening to future questions – is in the present, in the existing reparative practices that are daily put in place by subjects engaged in food production, consumption and exchange (Guerrero Lara 2023).

Mapping practices and voices contributes to building collective democratic spaces of deliberation, showing how they trace a non-neutral space of ecological intervention and adaptation to changing planetary ecologies. From a feminist intersectional perspective, mapping is not tracing (Deleuze and Guattari 2014): it is not just simply the neutral and “balanced” accounting of relations in a field. It is a process that considers powers of (in)visibility and is positioned

with the minor subjects, those whose voices and practices contest modern-capitalist promises while enabling caring relations. It is also a militant project of opening up contradictions, showing spaces of domination and resistance, evidencing the cracks and transformative opportunities within hegemonic dispositives themselves. It is a practice of careful and affectionate hacking that listens to, and speaks with, the marginalised who claim justice, equity and a societal transformation towards liberation and non-domination. Like in Stengers' (2005) "cosmopolitical proposal", social scientists might become "diplomats" that slow down reasoning and open such pathways of debate. Yet the complex conundrum of crisis also compels us to take sides, to promote a politics of the living beyond present matrices of domination.

#### 4. *Conclusions*

This paper's aim was to introduce a critical appraisal of cultured meat and its embeddedness into capitalist systems of domination and accumulation from a perspective of political ecology rooted in feminist thinking, ranging from debates in feminist STS and new materialisms, through to ecofeminism and critiques of the bioeconomy. Political ecology is in this sense the home to a multitude of approaches that help us read ecological issues and alternatives as always political and never neutral. The centrality of climate and environmental crisis, human and planetary health, and interspecies relations in the narrative supporting and justifying research on cultured meat well positions this food technology into the Anthropocene – here understood as a political and historical space where human beings recognise to be part of a wider planetary history, but also in which their established relationships with the rest of nature seem to fail (Chakrabarty 2014). The present condition of crisis extends well beyond nature, to encompass social, economic and political breakdowns. The current contradictions of industrialised food systems embody and show many of these issues: highly entropic, polluting and anti-ecological production practices that favour the production of excess food are at the same time responsible for malnutrition, waste, and the degradation of local and planetary habitats. Animal farming is responsible for a huge part of these effects. Alternatives to the current capitalist industrial food regime (McMicheal 2009) and its farming complex (Schneider 2017) exist and are widespread: agroecology and peasant agriculture, practices of sustainable procurement, vegan and vegetarian diets, etc. Yet, under the spell of a projected population growth and increasing meat consumption, many efforts have been devoted to the development of high-tech "alternative proteins" (Guthman and Biltekoff 2021) that could resemble their traditional counterpart, to move the unconvinced towards more sustainable

eating. Cultured meat emerges in this context as possibly the most disruptive technology, one that for the first time promises to deliver ‘real’ meat without killing animals (Stephens 2013). This food innovation would provide a win-win solution to the challenges of the Anthropocene, without the need for any change in cultural or daily practices.

Despite such positive presentations, several controversies have emerged around cultured meat, of which the most heated happened in Italy with its ban by the current government in 2023. The public sphere seemed to be divided between enthusiasts and sceptical. While the latter position is repeatedly presented by a white, male-centred and privileged elite of experts as the result of mere ignorance, ideology or self-interest, I started from the very observation of controversies as a means to disrupt hegemonic knowledge and bring to the fore the existence of multifaceted voices worthy of being heard. As such, controversies show the *political* rather than technically neutral pathways of food innovation, asking who does it benefit and what kinds of future worlds does it enable. Interrogating the politics of cultured meat from a feminist perspective seemed particularly useful (Dal Gobbo and Bertuzzi 2024). Feminist perspectives have been crucial in critically situating modern technoscience within wider questions that regard systems of domination, rather than simply exploitation and/or class control over the means of production. It has gone to the core of the ontologies and epistemologies embedded in technology itself, showing its non-neutrality and the way it reproduces social hierarchies and systems of value. As such, the feminist contribution opens to a wider intersectional critique of technoscience and innovation, allowing to see how gender is part a modern/colonial “matrix of domination” (Quijano 1992) that works on shifting balances of race, species, ability, and age domination and oppression. Feminist approaches are also key to the theme at hand because they have thoroughly considered the intersection between the “post-human” as part of technoscience innovation (Haraway 1991), as well as questions around inter-species justice (Timeto 2020).

The first issue that I addressed is the role that cultured meat might have in pursuing ecologically transformative objectives in the current situation of crisis. I started from the widely accepted premise that Anthropocene crises are really to be understood as “Capitalocene” ones – i.e. emerging within the specifically *capitalist* world-ecology (Moore 2016). Working with feminist STS and new materialisms, I have shown how this “hybrid” (Latour 1993) object makes tensions between “naturalness” and “artificiality” evident, with the potential to disrupt naturalised orders of domination and re-position human beings *vis à vis* other species. In this sense, hybridity and the technologization of reproduction might be liberatory for human and non-human bodies, lifting them of the

burdens of reproduction under conditions of domination. Nevertheless, from the perspective of ecofeminism and even more evidently from the critique of biocapitalism it emerged that hybridity and overcoming dualisms is not *per se* sufficient for a liberatory politics of food and innovation. First, at a closer look, the abstract and bodiless production of meat from cells in industrial plants seems to *continue* rather than question a modern anthropocentric and instrumental attitude towards the materials that, like food, support our existence. Second, the vitality of matter is subsumed by capital through patents and financial operations that re-inscribe it into the laws of value and accumulation (Cooper 2008). In this sense, cultured meat seems to contribute to the logics of growth and profit that are among the main drivers of crises of the present (Hickel and Kallis 2020). Ecological crisis, with its forceful “intrusion of Gaia” (Stengers 2017), makes evident that the project of reducing the biosphere and living bodies to value is failing to support the continuation of life on earth. And yet, as part of a feminist approach, I have also argued for the importance of “staying with the trouble” (Haraway 2016) and mapping controversies and voices as part of a process of integration of socio-technical innovation within the social and ecological spheres.

This paper is a first and limited attempt at considering cultured meat and its potentials for the promotion of just and sustainable food systems transitions from a feminist perspective, holding together questions of political ecology and economy, inter-species relations, culture and technology. This is also its key contribution: to bridge fields of debate and concerns that tend to be treated separately, like inter-species relations and biocapitalism, or ecofeminism and technoscience – showing how there might be a fruitful space of dialogue for unveiling the mutual shaping of intersectional domination, the appropriation of reproductive forces and the development of food tech. Given the breadth of these preoccupations, none of these issues could be truly considered sufficiently in-depth. I recognise the partiality of this contribution, as it seems to propose an agenda and some provocations, rather than a fully-fledged theory. Still, I believe the lines proposed might be fruitful for further research and I would like to close with some comments in this sense. First, a latent but not developed aspect of my discussion has been the theme of coloniality, something that will be important to consider in the future. Second, a potentially fruitful investigation might be devoted to the relations between feminist approaches on food technoscience and the post-growth debate on “convivial technologies” and “post-growth innovation” (Vetter 2018; Pansera and Fressoli 2021). This might be a way of reconceptualising socially-liberatory technologies from the perspective of planetary boundaries and social justice – including a technology like cultured meat. This also relates to the question of animal liberation:

under what conditions can a technology transform inter-species relations for emancipation? What role do *social* relations play? The role of innovation in the “economy of promise” of late capitalism seems an important avenue for inquiring into how promissory narratives are functional to the delay of both climate crisis and feasible solutions to another time-space, the delay of the visibility of ecological alternatives in the present. Finally, it might be worth delving into how – and if – cultured meat, as part of the capitalist bioeconomy, represents a novelty in capitalist logics of accumulation, or rather their continuation under a specific guise (Birch and Tyfield 2013).

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# An ontological guide to make novel foods *familiar*

Nicola Piras\*

*Abstract:* The goal of this paper is to develop strategies for novel food familiarization based on ontological modelling. I begin by offering an array of criticisms to standard definitions of novel food, focusing on the European Union (EU) approach as a case study, showing its difficulty in identifying and categorizing novel foods (§1). Next, I refine the EU approach by setting up a more robust ontological categorization suitable for assessing kinds and grades of food novelty (§2). Then, I add a further layer to this ontology outlining initial steps to incorporate novel food items within already known and accepted ontological categories (i.e., local food and symbolic food) (§3). I conclude by arguing that the decision-making process regarding novel food ontological categorization should include input from stakeholders (§4).

*Keywords:* novel food, food ontology, philosophy of food, food ethics, food stakeholders.

A growing scholarship on the impact of livestock farming insistently draws attention on its role as one of the main drivers of climate change and, more in general, environmental degradation. Just to provide a brief glimpse, livestock farming alone is responsible of 14.5% of worldwide greenhouse gas emissions and 64% of total ammonia production, a key element of water acidification (see, e.g., Aidoo *et al.* 2023; Espinosa-Marrón *et al.* 2022; Scanes 2018).

The production of alternatives to traditional meat, such as cultured meat, plant-based meat, or edible insects, would instead account for a far less environmental burden; for instance, a wide review by van Huis and Oonincx (2017) points out that the production of 1g of edible protein from mealworms requires about two to three times as less land and 50% less water in comparison to poultry production; depending on the context, poultry farming produces between 32% and 167% more greenhouse gas emission than mealworm farming. Additionally, in a recent review, Pingali *et al.* (2023) showcase that greenhouse gas emissions from beef are circa 13 times higher than plant-based

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meat, while pork and poultry production account for 3 to 2 times more greenhouse gas production than plant-based meat.

Thus, a more or less dramatic shift in dietary patterns, significantly diminishing global greenhouse emission, would mitigate some of the more severe effects of climate change (see, e.g., Smetana *et al.* 2023).

However, despite the availability of alternative options and although international health organizations guarantee the same safety and the similarity in nutritional profile (FAO 2021), Western national governments and individual consumers continue to harbor skepticism towards dietary shifts away from traditional meat.<sup>1</sup> Among the many drivers of such a food refusal, a common one regards the cultural import of those alternatives which fail to be recognized as proper meat by consumers (Hansen *et al.* 2021) and instead are suspected of having a disruptive impact<sup>2</sup> on the extant shared food ontology.

Before proceeding further, it is important to clarify this term, “food ontology”, which will play a fundamental role in the following argumentation. A food ontology, in a nutshell, is the systematic collection in meaningful categories of the most basic components of the food domain, i.e., those items, processes, habits, customs, perceptual states, and, broadly speaking, all possible objects, that belong to the food experience of an agent (e.g., the eater, the producer, the regulator, the community  $x$  living in the region  $y$ ), according to a given criterium. For instance, the ontological category “traditional food” collects ingredients, preparation methods, flavors, and so on, associated with a certain gastronomic tradition, while “ethnic food” covers all those food-related items and behaviors associated with allogeneic traditions.<sup>3</sup>

Most alternatives to traditional and less sustainable foods are usually collected under the broader category of “novel foods”, in order to stress their character of novelty in respect to an extant culinary milieu. The European Union legal framework makes sense of this novelty by including under the label all those foods, substances, and production techniques, lacking a significant history of usage before May 1997:<sup>4</sup>

<sup>1</sup> See, for instance, the systematic review on food acceptance of insect products in Western countries by Kröger *et al.* (2022).

<sup>2</sup> Food refusal, technically called food neophobia, rests on a variety of factors that range from disgust to the perceived risk, to trust in the producers, to social positioning of the consumer, and so on. See, *inter alia*, Çınar *et al.* (2021); Siegrist and Hartmann (2020).

<sup>3</sup> To delve into more details regarding what a food ontology is and how to characterize it vis-à-vis the contemporary debate falls outside the scope of the paper. For a detailed account, see Borghini *et al.* (2021), especially section 2.2.

<sup>4</sup> In what follows I will focus on the legal framework and the food ontologies of those countries adhering to the European Union, for the sake of brevity and precision. However, I’m confident that the same argument can be applied to other countries adopting slightly different legal frameworks,

any food that was not consumed “significantly” prior to May 1997 is considered to be a novel food. The category covers new foods, food from new sources, new substances used in food as well as new ways and technologies for producing food. [...] Traditional food is a subset of novel food and refers to food that is traditionally consumed anywhere outside Europe.<sup>5</sup>

This categorization, that clusters all novel foods using a temporal criterion, provides a simple and handy way for individuating those in need to be assessed whether they comply with the fundamental principles endorsed by the EU regarding food sale and distribution. These are usually summarized in the following form:

- (i) being safe for the consumer;
- (ii) being properly labeled to avoid misleading consumers;
- (iii) being nutritionally equivalent to any food it is intended to replace.

As an example, the European Union (EU) includes the following items in the novel food category:

new sources of vitamin K (menaquinone) or extracts from existing food (Antarctic Krill oil rich in phospholipids from *Euphausia superba*), agricultural products from third countries (chia seeds, noni fruit juice), or food derived from new production processes (UV-treated food (milk, bread, mushrooms and yeast)).<sup>6</sup>

For sure, not all novel food represents a more sustainable alternative to traditional foods, nevertheless at least some can play a role in the fight against climate change and environmental degradation (Mazac *et al.* 2023), replacing more traditional and less sustainable ones, e.g., pork, poultry, and beef meat.

This paper will take seriously the hypothesis – already explored in the literature (e.g., Tan *et al.* 2016; Gumussoy *et al.* 2021) – that making novel foods more familiar in respect to a food ontology shared by a group of eaters can help attempts to shift their diets to a more sustainable one. One of the ways for achieving this process of familiarization could be to highlight the closeness of novel food to already known and accepted foods.<sup>7</sup>

e.g., the USA or South Korea, see, e.g., Vapnek *et al.* (2021).

<sup>5</sup> See the European Food Safety Authority website: <<https://www.efsa.europa.eu/en/topics/topic/novel-food>>.

<sup>6</sup> See the page dedicated to novel food on the official website of the European Commission: <[https://food.ec.europa.eu/safety/novel-food\\_en](https://food.ec.europa.eu/safety/novel-food_en)>.

<sup>7</sup> On the role of familiarity for alleviating so-called food neophobia, see, e.g., Mattavelli and Riz-

However, we still lack two basic tools required to accomplish this task. First, a tool for assessing how and to what extent novel foods are either novel or familiar in respect to an extant food ontology. In fact, the time constraint adopted by the EU definition fails to accomplish such a task as it only indicates whether a food is novel, without specifying in what way or to what degree a food is novel. Second, we lack a tool for mitigating the novelty of those foods making them more familiar to the eaters.

The goal of this paper is to develop such tools by means of ontological modelling to be used in strategies of novel food familiarization by other scholars, practitioners, and policy makers. I adopt a method in tune with current debates on the ontology and metaphysics of food within the analytic tradition which have already systematically ameliorated, re-engineered, and revised other food concepts, such as wild food (Borghini *et al.* 2020), local food (Borghini *et al.* 2022), healthy eating policies (Piras 2024), in order to serve selected epistemic and political goals.

In what follows, I begin by offering an array of criticisms to the EU definition of novel food showing its difficulty in identifying and categorizing novel foods (§1). Next, I refine the EU approach by setting up a more robust ontological categorization suitable for assessing kinds and grades of food novelty (§2). Then, I add a further layer to this ontology outlining initial steps to incorporate novel food items within already known and accepted ontological categories (i.e., local food and symbolic food) (§3). I conclude by arguing that the decision-making process regarding novel food ontological categorization should include input from stakeholders (§4).

### 1. *A Critical Assessment of EU Food Ontology for Novel Food*

According to the EU definition, what characterizes a food as novel (or a part thereof, or the production technique) is whether it has or not a significant history of consumption before May 1997. This definition might be useful for cashing out criteria for deciding which foods deserve tailored tests of healthiness and safety as they lack a previous history of consumption that can be verified for their culinary reliability.<sup>8</sup> Yet resting only on the debut in the market of a food might be not sufficient, and sometimes not even necessary, for establishing whether it is novel in respect to an existing food ontology shared by a group of eaters. It is reported, for instance, that the more a food is *perceived* or *considered* as novel, the higher the likelihood of it being rejected by consumers (e.g., Siddiqui *et al.*

zoli (2022); Raudenbush and Frank (1999).

<sup>8</sup> See note 6.

2023). And, in fact, only some novel foods are strongly rejected by consumers, while others are instead easily accepted and adopted, even if they all equally meet the novelty requirements nailed down by the EU (e.g., see Rosenfeld *et al.* 2023 on the case of meat alternatives). A method for assessing such novelty is still missed, and yet it can be crucial if the introduction of a novel food is key for the achievement of a specific goal, for instance, the replacement of slaughtered meat with bloodless or more sustainable alternatives.

Unfortunately, the EU definition fails to explain where the difference lies as it is not able to capture the grade of novelty, familiarity, or even indifference, of novel foods in respect to extant food ontologies exactly because it does not take into account perception, conceptions, consideration, and beliefs of European eaters. This lack of reference to cultural contexts might lead to include under the label of novel food those food which are not novel, while excluding food which instead should be considered as novel. Here, to support this criticism, I provide three brief counterexamples, each focusing on a specific component of the definition which, if not related to an extant food ontology as context-reference, ultimately, make the definition unsuitable to deliver sufficient or necessary conditions to categorize novel foods.

A first component of the definition states that a food is novel if it was introduced in the EU market after May 1997. Even if it seems reasonable to label something as novel when its history in a context corresponds to less than a certain fixed time, this condition fails to be sufficient in the case of food as the novelty of a food seems to be determined by the perception and reaction of eaters. To illustrate, consider the use of monomethoxy polyethylene glycol (a synthetic polymer) as a chewing gum base, whose use for consumption has been authorized by the EU from January 1, 2022. While it lacks a history of consumption in the EU before May 1997, it hardly might be conceived as a novel food in respect of the European cultural context as European eaters are usually insensitive to the changes in chemical components of chewing gums. At most, such chemical components might be regarded as novel at the lowest level in a scale which, however, is missed in the EU definition. Furthermore, this role of perception of eaters involves the possibility that foods with longer history of consumption might still be deemed as novel due to, say, their exotism, undermining also the necessity of the condition (see Chen *et al.* 2023 on the case of avocado in China).

A second component of the definition unpacks what must be included under the category of novel food, that is, either products (“new foods, food from new sources, new substances used in food”) or “new ways and technologies for producing food”. However, as explained above, not all new products deserve the label of novel food and such a “novelty” can be less relevant for an eater

than the alteration or recombination of already used ingredients to make a brand-new food – even without resorting to new technology – which instead might deserve the label of “novel food”. For instance, imagine a liquid, produced following only accepted protocols, using only accustomed technology, and containing only already used chemicals, that provides nutrients suitable to replace a whole meal. Technically, it would not count as a novel food, while it might be deemed as novel by consumers who find it in a supermarket shelf and are unaccustomed to such a kind of food. Other examples of modifications that do not involve the introduction of a new substance but that might be considered novel in respect to an existing food ontology might regard the shape or consistency of a traditional food modified for a specific reason. For instance, all those foods whose texture is softened to make them more palatable to elderly people (see Aguilera and Park 2016 for a review of various methods, most of which do not require the use of new technology).<sup>9</sup>

Two other counterexamples might be raised against the spatio-temporal range of the definition. In fact, the definition cover indiscriminately all the European Union *de facto* running the risk of overlooking peculiarities of specific sub-regions. Consider the introduction of snails as food in European regions with no tradition of consuming them, such as those in the Northern part of the continent. As snails are staple foods in many Mediterranean regions belonging to the EU, they are not classified as novel foods in any European region, even though they might be considered so by those eaters in Northern Europe – even if the definition, not taking into account the different regional contexts of consumption in the EU, fails to acknowledge their specific local novelty.

Moreover, the strict time constraint of the definition is unable to discriminate between those food totally lacking a history of consumption in Europe and those whose history of consumption has been forgotten and then remerged in recent years. Think about the recent rise of edible insects in the European food market. Despite their consumption being widespread across Europe for centuries (Svanberg and Berggren 2021), they are nevertheless regarded as novel food by institutions and many consumers.

The examples below highlight serious shortcomings of the current EU framework, thus, calling for a more nuanced categorization of novel food including different conditions rather than only abstractly considering debut on the market of new substances and technology.

<sup>9</sup> Other examples can be found in the realm of so-called high cuisine, where traditional foods are modified for pursuing aesthetic or artistic ends. For instance, the renowned dish *Five ages of Parmigiano Reggiano, in different textures and temperatures* by chef Massimo Bottura, who modifies the consistency and shape of the traditional Italian cheese Parmigiano for gastronomic reasons (Passera 2021).

## 2. *A Relational Ontology for Novel Food*

An alternative approach to identifying and understanding why certain foods might be deemed as novel can employ methods and models developed in the flourishing literature on the metaphysics of food (e.g., Amoretti and Frixione 2020; Borghini and Piras 2022; Engisch 2023).

Starting from the criticism raised in the previous section, such attempt to categorize novel food should be based not only on the composition of the food, the technology employed in its production, and when its consumption began. As already suggested, a more nuanced approach should rest on the types of relations that a food enjoys with the cultural context of consumption and its eaters. In fact, an investigation on the cultural context can reveal which characteristics are accepted by the eaters and customary in that context and, thus, where to draw the line between traditional and novel foods. Such an investigation can involve the physical characteristics of foods (e.g., biochemical, microbiological, gustatory, and so on) to assess differences between new and old products; the social role of food in that context, for instance, what is the meaning assigned to local and traditional food (e.g., the criteria for defining a local food might require that all ingredients are produced in a given region, or that those ingredients are only processed there);<sup>10</sup> what is the range of functions assigned to specific kinds of food (e.g., foods rich in carbohydrate assigned to fulfill the function of lunch dishes, foods rich in protein assigned to fulfill the role of food for athletes, and so on) in order to find out what and how a novel food can replace an old one in the accomplishment of the same task and which new functions can be brought out by novel foods.

Such an ontological categorization of novel food would deliver categories based on the various ways a product interacts with its context, taking into account the customs and beliefs of eaters regarding what they consider as *their* food and what, instead, they regard as a novelty. This approach can help to tease out, by contrast, what a novel food is, i.e., a food that does not fit within the categories set out following accepted criteria among European eaters.

To set up these ontological categories, more attuned to the context of production and consumption, we can still deal with the core assumptions of the EU definition, trying to lay down a more robust structure useful for practical actions and strategies. Particularly, the ontological categorization should pro-

<sup>10</sup> For instance, Champagne wine product specification requires that all its ingredients are produced in the North-East region of France, while Modica Chocolate product specification requires that only the transformation process of the ingredients is implemented in Sicily, while cocoa beans can originate from South America (see Borghini *et al.* 2022).

vide robust way for implementing the core aspects of the definition for cataloging purposes, i.e., the food composition, the spatio-temporal range of food production, the function that a food is supposed to fulfill.

The first category stores food on the basis of its physical composition (*Physically Novel Food*). This categorization rests on the physical relations of similarity and difference that a novel food entertains with those other food which already belong to the ontology at stake. The underlying idea of this category somehow revisits and delves deeper into the fundamental thesis of the EU novel food definition, i.e., that a food to be considered novel must be physically different from those currently in circulation (resorting to the words used in the EU definition “new foods, food from new sources, new substances used in food”).

A second category rests on the locations where the novel foods originated, deepening and enhancing the EU thesis that the reference point for defining a novel food should be whether it already belongs or not to the European context (*Spatial-temporal Novel Food*). This category relies upon the spatial-temporal relations that a food has, or might have, with the place where the food ontology under consideration is at stake.

The third category relies on the role that the foods are supposed to play in the European context of consumption, collecting novel foods based either on their capacity of replacing extant foods in their role, or on their capacity to establish new roles (*Functionally Novel Food*).

These three categories take into account different aspects under which a food might be novel in respect to a given food ontology. This does not exclude the possibility that a same food might fall in more than one category, e.g., a food might be novel both because it comes from a foreign location as well as because it plays a new role. Likewise, it does not exclude that a same food is novel in only one respect, e.g., because it plays a new role, but not under another one, e.g., it is made of an already known substance.

Now, I characterize the three categories by outlining their building blocks and internal articulation in order to provide a useful map for those involved (e.g., stakeholders, policymakers, and practitioners) in order to navigate and categorize the novel food domain and its basic components.

*Physically Novel Food:* This category encompasses all foods whose physical components are at least partially different from those already included in the relevant food ontology. This can be divided into two distinct sub-categories:

- *Existentially novel food*, i.e., all items (or parts thereof) not classified as foods within an existing food ontology. It encompasses what the EU standardly defines as novel food—substances that were not considered food before a specific date, and generally, all newly introduced foods within a

food ontology. For example, monomethoxy polyethylene glycol could be considered as an existentially novel food.

- *Qualitatively novel food*, i.e., these foods whose at least one property has been modified without introducing a new substance or food in an ontology. For example, nutrient supplementation, such as milk with modified iron content to meet specific dietary needs, or texture modification, such as the high-pressure processing used to soften food while maintaining its flavor intact to facilitate chewing for elderly people or those with bone or muscle problems (see Barba *et al.* 2015).

*Spatial-temporal Novel Food*: This category encompasses foods deemed novel due to their provenance, that is, they originate from other food ontologies and are subsequently introduced into the ontology under consideration. This classification is based on the spatial-temporal relations that foods entertain with the existing food ontology.

- *Locally novel food*, i.e., all those foods that come from a different location in respect to the area where it is adopted the food ontology at stake. For instance, chia seeds whose consumption was already spread in South America, before becoming food in Europe (2009). This category can be made more precise by exactly specifying the area of interest, e.g., North Europe.
- *Temporally novel food*, i.e., all those foods that originate from a different era compared to the timeframe of the food ontology in question. This category includes all so-called forgotten foods, i.e., those foods whose consumption was widespread in the past but no longer belong to the food ontology at stake.<sup>11</sup>

*Functionally Novel Food*, i.e., those whose novelty is related to the function that they can play in the ontology at stake.

- *Replacement novel food*, i.e., all those foods that might replace an old food while performing the role of the former within the food ontology. This category necessarily intersects with the others as it refers to how novel food can fulfill older ones. For instance, an *existentially novel food* such as a hamburger made of cultured meat can replace hamburger made of slaughtered meat or a *locally novel food*, such as cricket flour can replace flour made of raw grains.
- *Emergently novel food*, i.e., all those foods that establish a new function within a food ontology (e.g., capsule food supplement made of spirulina taken at a specific moment of the day traditionally not associated with a meal).

<sup>11</sup> On forgotten foods, see the manifesto written under the auspices of FAO and EU, published by The Global Forum for Agricultural Research and Innovation (GFAR) (2021).

As already anticipated, these three categories are not mutually exclusive and, furthermore, a food might be novel in some respects, falling in a given category, whereas not novel under others. For instance, cultured meat might be considered existentially novel and replacement novel, while it is not locally novel (as it might not come from a different setting). Whereas, insects can be considered existentially novel, as well as either locally novel (in those parts of Europe that lack a history of entomophagy) or temporally novel (in those parts of Europe where there is an ancient history of entomophagy). Moreover, high-pressure processed food for elderly people can be considered qualitatively novel, and a spirulina capsule existentially and emergently novel (see table 1 for an illustration of the ontological model).

This approach provides a more nuanced and precise categorization than the traditional EU strategy, while, still, being in tune with the original definition. It, in fact, is able to showcase under what respect a food is novel, whereas the original definition collected all novel food under one and a same category. The original definition was also unable to assess the grade of food novelty. Now, arguably, the categorization outlined here can help in accomplishing this crucial task: the more categories a novel food falls under, the more novel it is. Yet it is not always the case. For instance, one might argue that cultured meat is more novel than snails in Northern Europe, even though the former falls under two categories (existentially and replacement novel) and the latter, say, under three (existentially, locally, and temporally novel). The categorization alone cannot still provide the grade of food novelty in respect to a standard. Thus, each category must be equipped with a metric to measure the distance to a given threshold based on, say, consumer perception or traditional dietary patterns. A fully-fledged development of such metrics falls beyond the scope of the paper but, to illustrate, one can imagine that, for instance, the existential novelty of a food might be measured in terms of the relative importance of the new substance in the light of consumers' attention. Hence, monomethoxy polyethylene glycol might have a relatively low grade of novelty in comparison with cultured meat. Furthermore, the novelty of a replacement novel food might be measured in terms of differences in preparation in respect to its traditional counterpart.

|               | <i>Physically Novel Food</i> |               | <i>Spatial-temporal Novel Food</i> |            | <i>Functionally Novel Food</i> |            |
|---------------|------------------------------|---------------|------------------------------------|------------|--------------------------------|------------|
|               | Existentially                | Qualitatively | Locally                            | Temporally | Replacement                    | Emergently |
| Cultured meat | x                            |               |                                    |            | x                              |            |

|                              |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|
| Insects                      | x |   | x | x |   |   |
| High-pressure processed food |   | x |   |   | x |   |
| Spirulina capsule            | x |   |   |   |   | x |

Table 1. Illustration of the ontological categories.

### 3. *An Ontology of Familiar Food*

One of the main challenges facing policymakers, activists, and other practitioners is convincing consumers to switch to more sustainable diets by integrating novel foods. A significant barrier to this change is neophobia, the fear of unfamiliar foods compared to usual consumers' dietary patterns. Many studies in recent years have reported the emergence of neophobia among eaters in respect to edible insects, plant-based meat, and cultured meat, *de facto* preventing the gradual and partial replacement of slaughtered meat with more sustainable alternatives (see, *inter alia*, the essays collected by Meiselman and Lorenzo 2023, especially parts 3 and 5).

Since switching diets is recognized as key for advancing mitigation actions against climate change, recently, a whole range of strategies has been developed for alleviating food neophobia (for a review, Siddiqui *et al.* 2023), focusing either on specific class of agents, e.g., children (e.g., Lafraire *et al.* 2016), or on specific foods, e.g., cultured meat (see, Hamlin *et al.* 2022). Some of those strategies address one of the main drivers of food neophobia, i.e., the so-called food unfamiliarity (see, *inter alia*, Monaco *et al.* 2024; Fidder and Graça 2023; Aldridge *et al.* 2009). Food familiarity might be defined as the “knowledge of a product [...] developed from multiple and accumulated product-related experiences, including past experiences and information or knowledge about the specific product” (Xu and Zeng 2022).

In this section, I outline a strategy for addressing food neophobia based on the hypothesis that making novel food more familiar (see, e.g., Tan *et al.* 2016; Gumussoy *et al.* 2021) can be a useful way for alleviating neophobia. I pursue this strategy by adding a further layer to the ontological model, whose first step has been developed in §2. This second part of the model introduces two more ontological categories (local food and symbolic food) suitable to collect novel food items by using criteria that are already familiar to the eaters. Thus, it might reinforce and boost a kind of comparative thinking among eaters suit-

able to assess the closeness of novel foods with those more familiar ones (on the strategy of comparative thinking for familiarizing with novel food, see Matavelli and Rizzoli 2022). In particular, the local food category collects novel food focusing on their links with a familiar place, while symbolic food category emphasizes the symbolic role of novel foods within existing familiar symbolic and cultural frameworks.

This strategy is currently theoretical and should be understood as a preliminary step toward more practical interventions, which should be tested in controlled empirical settings by psychologists and other scholars collaborating with stakeholders. The reader might ask whether this strategy runs the risk of exploiting the epistemic authority of those stakeholders who should decide when and whether a food is familiar to them. I will take care of this issue in the last section. For the sake of explanation in what follows, I will use edible insects as an example, which, I submit, can be replaced with other kinds of novel foods.

### 3.1 *Local (Novel) Food Category*

A recent emerging trend in contemporary gastronomy, which traces its roots all the way back to the early '70 in California, is represented by so-called locavorism, the ideology that local food is healthier, more socially and environmentally sustainable than processed and foreign food (on a critical history of the locavolist movement see McWilliams 2010; for a philosophical analysis of its political tenets, see Werkheiser and Noll 2014). While whether relying on local food diet is a feasible recipe for adjusting the food system is still questioned (e.g., Desrochers and Shimizu 2012), several studies report that when a food is explicitly associated with a specific region its level of familiarity increases among the eaters (e.g., Perito *et al.* 2019; Skallerud and Wien 2019), regardless of whether these eaters entertain any social connection to that region at all (Xu and Zeng 2022).

How can a novel food be turned into a local one in order to make it more familiar to the eaters? The relation between a region and a food is complex and it might assume at least three different forms, as some recent works have highlighted (Borghini *et al.* 2022). Each of these forms require a tailored strategy of novel food categorization in order to make it local. In what follows, I will outline some initial caveats, while a second step, which will be briefly touched upon in the last section of the paper, will be to involve local eaters and other food experts in assessing the cultural and political validity of such a categorization. A last and third step, which I leave for another occasion, will be to implement this strategy in practical interventions.

First, a food can be local when its consumption happens at less than some fixed distance (usually calculated in terms of food miles) from its production place. For instance, if I live in Nottingham (UK) a tomato produced in a greenhouse located on the outskirts of the city counts as local, while a tomato coming from Spain does not. Edible insects can thus be categorized as local food by focusing on their place of production. For instance, if mealworms are produced nearby Nottingham, they can fall into the category of local food as long as they are consumed by eaters in Nottingham. This can be useful for emphasizing the role of insect production in the local economy and their low carbon footprint in respect to, say, beef from Argentina. Furthermore, depending on the adopted criteria – specifically, how stringent they are regarding the geographical location of food components – the same category can also include all those insects whose production occurs far away (e.g., Argentina), but whose processing (e.g., drying, smoking, fermentation) is located close to the consumption place (see note 10 above).

Second, a food can be local if it owns its specific, unique, and often renowned, characteristics due to its production place features, regardless of where it is consumed. The relevant features of the place usually include all its physical qualities, such as soil composition, climate patterns, rainfalls, and so on, that contribute to the flavor of the product. Additionally, the knowledge rooted in the local heritage and the historical links with the product entertained by the local community are often claimed to partake to its culinary value. This is the case of so-called geographical indications, such as *Parmigiano Reggiano* (Italy), *Alheira* (Portugal), or *Kampot Pepper* (Cambodia), whose unique characters are supposed to be determined by their production place. Edible insects can be categorized as local delicacies if their production happens in a place particularly favorable to the development of specific gustatory profiles (e.g., worms grown in a terrain rich in minerals suitable to increase their balsamic or salty flavor). Furthermore, ancient traditions can be linked to the production of specific insects, recovering lost or forgotten memories, claiming the role of specific local knowledge and techniques used for their production.

These first two first kinds rely on the principle that local food should be understood in spatial or geographical terms. A third conception, instead, privileges the social aspects of local food, namely, that a food is local when its supply chain fosters direct social interaction between the producer, the retailer, and the consumer (see Ho 2020). For instance, the strong social and emotional relation between a consumer and the retailer, increasing the knowledge of the product and the trust on its, say, healthiness and taste, can make it local. In this last case, edible insects can be categorized as local food if sellers and producers are invited to familiarize with consumers in order to trump the level of trust in

their products as well as the knowledge of the farming process. This might create a direct link between all those involved in the food chain fostering common goals (e.g., reinforcing local economy, developing more sustainable dietary patterns, avoiding the consumption of big mammals).

### 3.2 *Symbolic (Novel) Food Category*

That a food can be the symbol of something else is not news, e.g., a food can represent a social tie, a status, a religious observance, a political idea, and so on (on this, see Telfer 1996: 36-40). And eating a specific food is often a way for reinforcing a social position and being acknowledged as a member of a certain community or supporter of some ethical, religious, or political principle. In the case of meat, the symbolization process has been studied by a wide range of scholars, starting from the cultural evolution of our species to its role in contemporary society, often as the symbol of the supremacy of white man over women and those other belonging to different racial groups (Adams 1990). Some foods thus might play an identity marker role, singling out its eaters as members of a certain community, belonging to a specific social and cultural milieu, carriers of a certain social position (see Montanari 2006: 91-141). A food whose symbolic role is acknowledged as key for one's own identity is more familiar to the eater, than a food whose role is totally unrecognized by them. Thus, how can edible insects become a symbol of something important for the eaters to be categorized as familiar foods? For the sake of explanation, we can bring out three symbolic roles, without any claim of exhaustivity, that edible insects might abstractly play to then be implemented in more specific contexts of agency and utterance.

*Common history-symbol:* as it is by now well known, edible insects have a history of consumption even in many European countries. For instance, Hunter (2021: 43) reports that:

In *Insects as Human Food: A Chapter of the Ecology of Man* (1951), the Israeli entomologist F. S. Bodenheimer described 'relics' of insect eating in the West, such as records from the 1700s and 1800s of various kinds of plant galls (abnormal growths caused by insect infestations) that were appreciated by peoples in Crete, France and the Levant. He also mentioned widespread eating of cockchafer beetles (*Melolontha* spp.) in Europe and noted a number of authors who recorded people in France and Russia consuming various species of grasshoppers into the 1900s.

Edible insects thus can fall into the category that collects all those foods that somehow represent a common and shared historical identity tracing back to

the origin of a given community, reinforcing their role as a key to access to a common past.

*Political-symbol:* Edible insects can fall into the category of food suitable to symbolize political ideals and values if those who consume that food attest or reinforce their political identity by eating that food. Those might be freegans against global food chains, or who retain to eat meat as a political choice, or environmental activists. We already have some first attempts of this symbolization of insects, as reported by Legendre and Baker (2022). One of the hypotheses tested and proved by the authors is that the consumption of edible insects increases when it is underpinned by purchase activism, i.e., “a motivational state to exercise their purchasing power for a cause one supports, leading to greater purchasing intentions”. Thus, categorizing edible insects as related to the support of a specific political ideal, might be pivotal in increasing their consumption by making them more familiar to those involved in such a political action.

*Natural-symbol:* The question of what constitutes a natural food remains open (see Siipi 2013 for a taxonomy), as does whether food can ever truly be natural or is always a social object or artifact (Borghini & Piras 2020). However, some might believe that eating insects can be a way for approximating to the natural world or creating a stronger tie with the environment. For instance, following Siipi, if one believes that natural foods are those more authentic, i.e., those that have “a contrast to artificial or synthetic” (2013: 806), all edible insects that lack artificial or synthetic intervention (such as genetic modification or use of flavor additives), can be categorized as authentic and thus natural. And if eating naturally is a way of being closely linked to nature, eating edible insects can allow eaters to take steps toward the natural world.

#### 4. *Food Stakeholders and Food Expertise*

In this paper so far, I critically discussed the extant EU definition of novel food, proposing an ontological model that provides a more nuanced and detailed categorization of those food items. I then add a further layer to that model introducing some more categories that should collect novel foods emphasizing their familiarity with the eaters. Beyond conceptual structure, both ontological moves require specific normative choices on what should fall into a specific category. To illustrate, consider whether edible insects should count as temporally novel in those areas with an ancient history of consumption. Contemporary eaters might or might not consider themselves as linked to that history, depending on when they locate the historical and cultural roots of their community. Likewise, one might or might not consider edible insects as a local

food depending on their own locality criteria: previous history of consumption in that area, relations with other traditions, origin of, say, the worms.

So: who should be in charge of taking such decisions? And what ground food expertise in the case of novel foods?

The camp of food expertise is vast and complex even when focusing only on novel food. Food experts to be taken into account include food historians, chemists, biologists, anthropologists, sociologists, and so on.

However, resorting only to these experts to determine whether a given food item should fall into one of the categories of novel food may fall short of providing a reliable answer from both an epistemic and political standpoint. In the footsteps of previous works on how to define and categorize specific food items (Borghini *et al.* 2023), I argue that the answer, in fact, should be provided in a joint effort involving food stakeholders. That is, as Borghini *et al.* (2023: 553) explain, “any agent who has a stake on the nature and functioning of a business or institution (customers, retailers, stockholders, employees, etc.) [...] an individual has stakeholder status in a food item if that item is a salient aspect of a practice that is part of the culture of a community to which the individual belongs”.

Consider, again, the case of edible insects and whether they should, first, be classified as temporally novel food, and second, whether they might be regarded as a local food, according to the perspective mentioned above – namely, that a local food derives its characteristics from the specific place where it is produced.

In region  $x$ , there was an ancient history of consumption of mealworms which has been dramatically interrupted five hundred years ago. A contemporary food historian, acknowledging that old heritage, suggests treating mealworms as temporally novel food, i.e., food originally coming from a different age but still linked to a common history. However, food stakeholders might reasonably contend that they do not feel linked to that distant past which is not even a part of their cultural heritage. Thus, terming mealworms as “temporally novel food”, as long as there is not a recognized connection between that past age and their extant daily life, would be misleading. In fact, self-recognition can be considered as a crucial part of being a part of a historical pattern which is not just the purely ascription of some genetic relations between subsequent groups of people. In this case, as it turns out, food expertise should be complemented with the self-recognition of the local community in a common history including both those anciently producing mealworms and themselves.

The very same argument can be used to argue that edible insects, as any other novel food, can fall into the category of “local food” only when the link with the place where they are farmed is recognized by the local community. Suppose that a microbiologist points out that some gustatory qualities of the

mealworms derive from the specific minerals of the soil of a land  $y$ . Nevertheless, the local community refuses to recognize those worms as local insofar as they fail to meet the parameters of the local diet, which, say, includes only those foods with a long history of consumption there. In this case, while the food expert can trustworthily put forward the microbiological link between a food and soil qualities, they cannot arrogate to themselves the right to grant the label of local food to that item as long as the community denies ascribing it to the mealworms. Any attempt to impose the label of local food to the community there, could be termed as a sort of conceptual domination (Shields 2021), as a concept which should belong to the local community (local food) is mastered and managed by external agents.

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# Is this meat after all?

## Novel food technologies and conceptual change

Elena Bossini, Fabio Bacchini

*Abstract:* The supposedly shared understanding of what meat is has been undermined by the appearance of foodstuffs that claim to be meat even though they are derived from vegetable sources (plant-based meats) or are produced by cultivating animal cells in vitro (cultivated meat). After introducing the actors partaking in the negotiation over which foods can legitimately be called ‘meat’ – and demonstrating that the crux of this dispute is ontological rather than merely linguistic – the divergent concepts of “meat” that arise in this debate are analysed to elucidate their respective strengths and weaknesses. Subsequently, it is proposed that meat could be interpreted as an artefact represented by a functional concept apt at incorporating plant-based and cultivated meat into its content. Lastly, by examining this operation through the lens of conceptual engineering, the functional understanding of meat is presented as an epistemic, or even potentially semantic, amelioration of the concept of “meat”.

*Keywords:* plant-based meat, cultured meat, food ontology, conceptual amelioration, artefacts.

### 1. *The meat of the matter: an ontological dispute*

Assessing which foodstuffs should be considered meat may seem a straightforward task at first sight, but as soon as one attempts to establish a common and clear definition of *what meat is*, the boundaries of this food category reveal themselves to be blurred, negotiable, and variable over time and in different contexts. Unsurprisingly, in conceptual analysis ‘meat’ is used as an exemplary case to illustrate how the same term can evolve, by changing both its meaning as well as its extension, to express a completely different concept (Sawyer 2018). Indeed, a glance at the Merriam-Webster dictionary shows that the word ‘meat’ was used to refer to any solid food, as opposed to beverages. It was not until modern times that its extension was restricted to foodstuffs made of animal flesh – even though its etymology is closer to the word for meal than to the word for flesh (Marder 2016). Because of this major change in the meaning of ‘meat’, it is widely held that if two speakers from different times were to debate whether a particular object, say a vegetable, is meat or not, their disagreement would be purely verbal (Koch 2023): each of them uses the word ‘meat’

according to the linguistic norms of the community to which they belong. And yet, this problem becomes more than a case of linguistic confusion when it is the people who supposedly have a solid and shared understanding of *what meat is* who disagree about whether a particular object falls within the food category designated by that term.

When novel foods that cannot be clearly and easily categorised as meat or not meat appear on our plates, the problem they pose for our food categories is thus ontological rather than verbal. A stroll down the supermarket aisle confirms that ‘meat’ is now used to label not only animal-based products, but also some plant-based ones and, at the same time, newspapers discuss the possibility of producing and eating meat grown in laboratories. The supposedly stable and unproblematic definition of meat – meat as animal flesh eaten as food – has been challenged by new food technologies, raising the question of where to draw the boundaries of this category. The outcome of these negotiations would have an impact on the culinary, social and cultural practices that revolve around meat, as well as on food labelling and marketing legislation.

Over the past years, a growing body of literature has critically examined and interrogated both how plant-based meat (PBM) and cultured meat (CM) seek to affirm their identity as meat products, as well as how they prompt a revised understanding of what meat is (see, e.g., Jönsson *et al.* 2019; Sexton 2018; van der Weele and Driessen 2019). In the case of PBM, narratives and communication strategies put forward the claim that meat is something that can be made and obtained from plant-based ingredients (Broad 2020; Sexton 2016), thus severing the identity of this foodstuff from the materiality of animal flesh. The identity of PBM is built upon its aesthetic similarity with traditional meat: if it seems like you’re cooking, smelling and eating meat, then it’s meat – just a plant-based one. CM, conversely, is portrayed as meat mostly because it is made roughly from the same components – animal cells – of the objects that we already include in this category (Stephens *et al.* 2019). In this case, producing foods that are aesthetically similar to well-known meats is obviously important for increasing consumers’ acceptability. Still, aesthetic similarity is not used as a reason for claiming that CM is meat: the claim is grounded upon the literal interpretation of what material reality meat is constituted of, namely, animal flesh.

The debate entered the realm of legislation through the development of laws aimed at preventing the use of the term ‘meat’ on novel foods’ labels, going from the “Missouri Meat Advertising Law” (2019) to the recent Italian ban on meat-sounding advertising (Gazzetta Ufficiale 2023). These bans are usually justified by appealing to two risks: the violation of consumer trust and the threat to the cultural heritage of meat production and consumption (Tai 2020). Even if it is unlikely that consumers would be misled by labels such as ‘plant-

based' or 'vegan meat' – given that the aim of these nomenclatures is precisely to avoid the products from being mistaken for traditional meat – what is relevant from a philosophical perspective is that the risk of misclassification is based on an ontological commitment: since meat cannot be separated from its being flesh (as PBM products claim), nor can it be reduced entirely to its cellular composition (as CM narratives convey), defining these products as meat is wrong. In other words, these labels are fraudulent because they are based on a false interpretation of what meat is.

The same ontological commitment also underlies the second risk, namely the threat to the identity of heritage meat foods through their misrepresentation. According to this view, referring to PBM and CM as 'meat' allows foods that do not faithfully represent what meat is to be considered proper instances of this category. The situation is aggravated by the fact that the use of the term 'meat' by PBM and CM is not a neutral speech act, but a political one (Gleckel and Colb 2020): the marketing strategies of these foods explicitly claim that meat can be replaced and that it is not necessary to produce it with traditional methods. Describing meat as 'plant-based' or 'vegan', 'cultivated' or 'clean' moves this word into a semantic sphere, and more generally into a discourse, that is the one of veganism, which has historically opposed the consumption of meat and its related culinary culture. From this perspective, the appropriation of 'meat', with its values and traditions, by a discursive framework associated with stakeholders whose identity is built upon the rejection of it (vegans), deepens the perception of an attempt to intentionally misrepresent, 'mock', or mangle the identity of this food. However, to claim that meat is misrepresented requires identifying a group of stakeholders, or an institution, that has the authority to ground what authentic and proper meat is.

Debates in the food domain about which foods are authentic, and which ones are fraudulent misrepresentations, often require the identification of their associated authors: as Borghini and Gandolini (2020) show in the case of recipes, the norms for defining who has the authority to decide on the naming – and related identity – of a recipe would vary depending on the relationship between that recipe and its author(s), be it a culinary tradition, an institution, a brand or a chef. Similarly to the case of «institutional recipes» (145) that owe their identity to an institution, certain meat foods must be produced according to the approved manufacturing protocols, such as in the case of *Prosciutto di Parma* or *Bresaola della Valtellina*: the identity and name of these foods are determined by a consortium that protects its products by monitoring and taking legal action in the event of misrepresentation or improper use of its product names on the food market.

However, the term 'meat', which refers to a wide range of foods, seems more closely related to the case of «open recipes» (148), where it is not pos-

sible to identify a group of stakeholders who can reclaim authority over the ontological status of meat and thus over the correct use of this name. Since those that pushed the Italian ban on meat-sounding are the associations of meat producers, one might think that these stakeholders have the authority to settle what meat is because they are, *de facto*, the only authors of meat products to date. Yet, this does not exclude there may be different, non-traditional, ways for producing different, non-traditional meat by other authors who can make their own product. Given that meat alternatives do not claim to be the same as traditional meat, invoking a national or cultural tradition is not sufficient to restrict the use of the term. It could be sufficient for defending a specific *method* for producing a specific *type* of meat and the proper *name* associated with it by its *author(s)*, but not for claiming that the traditional method of producing meat is the only legitimate one – and that those who deviate from it are misrepresenting an entire food category.

When it comes to the general definition used in ordinary language, or to meat foods that do not have an identity linked to a particular author,<sup>1</sup> the dispute cannot be resolved by appealing to an authority that can dictate what meat is and what it should be. Rather, the shared definition of meat should emerge from the negotiation between stakeholders with divergent intuitions about which ontology better informs the concept of “meat” in a given linguistic community.<sup>2</sup> For this reason, it is essential to analyse which arguments can support each definition of meat at stake.

<sup>1</sup> Consider, for instance, those names that denote certain processed foods – such as ‘nuggets’, ‘sausages’, or ‘burgers’ – whose identity is not linked to any specific stakeholders or authors.

<sup>2</sup> Negotiating a shared definition of “meat” requires identifying the relevant actors who can legitimately participate as stakeholders. Given that the concept of “meat” informs social, cultural, and religious practices, a fair negotiation should involve all those whose interests in a given community are likely to be affected by the outcome. Therefore, legitimate stakeholders should not be limited to those involved in the production of traditional or novel meat, as this could marginalize other voices and reinforce unequal power dynamics. However, the expertise of those actively engaged in the food industry should still be considered, as it can provide valuable insights to advance the negotiation. Alongside identifying legitimate stakeholders, another crucial task is determining how the negotiation should be conducted and by what means. The philosophy of food has offered reflections on how to choose decision-making processes based on food-related disputes (Borghini, Piras, and Serini 2023). These two tasks—identifying stakeholders and determining the negotiation process – are indeed fundamental, but they go beyond the scope of this paper, as our focus is to map the strengths of the arguments and intuitions that support a particular understanding of “meat”, with the aim of facilitating the negotiation process by making explicit the underlying assumptions that could potentially undermine it.

## 2. *Debated meat concepts and competing ontologies*

Philosophical investigations have provided a clear map of which competing concepts and respective definitions are available when considering what meat is. Struthers Montford (2022) introduces the distinction between a substance-based and a relational-based understanding of meat. A similar partition can be found in Robison-Greene (2023), who distinguishes between a material and a causal definition of meat, and Milburn (2023), who presents a third option constituted by a culinary definition of meat. Depending on the definition one is willing to commit to, the tracked objects would differ. The analysis of each of the differences between these definitions is crucial to exhibit their advantages and disadvantages, both in terms of logical consistency and in terms of their capability to fairly represent stakeholders' intuitions, thus providing a clear space for negotiation.

Firstly, consider the material or substance-based understanding of "meat". In this case, the identity of meat foods is grounded on the stuff they are composed of. This is the position of the American Meat Science Association, which states that meat is «skeletal muscle and its associated tissues derived from [...] species commonly harvested for human consumption. Edible offal consisting of organs and non-skeletal muscle tissues also are considered meat» (Boler and Woelener 2017:8). According to this definition, PBM does not qualify as meat. Conversely, the position of CM is more complicated. CM is composed of animal stem cells arranged to mimic the structure of skeletal muscles, but is this sufficient to make it a skeletal muscle? Indeed, this object was never used for moving a body, and it will never be, since it is not being manufactured for that: the process of mimicking the features of skeletal muscles is aimed at providing the texture and mouthfeel of eating meat, rather than an object that can be a functioning organ for a living animal.<sup>3</sup> These considerations put into doubt whether CM is a skeletal muscle or not and, therefore, given that meat is defined as a skeletal muscle, it is unclear whether CM is meat.

However, shifting the interpretation of meat from the material object that constitutes it (skeletal muscle and associated tissues) to the components of these objects (cells) allows to dissolve this confusion. Robison-Greene gives a straightforward definition for this intuition: «A substance counts as meat if it is cellularly identical to the cellular material of the edible parts of an animal» (2023: 84). Here, CM does not have to be, strictly speaking, skeletal muscle or tissue to be considered meat, but it is sufficient that it is made up of the

<sup>3</sup> Although the technology behind CM production was originally developed in the biomedical field to create artificial organs for human transplantation, CM research and development projects aim to provide an object that matches the characteristics and functions of meat as food.

same cells. This view perfectly captures how meat is approached by scientists working on the development of CM – namely as a structure of cells that can be rebuilt from the bottom up from its most basic components – and it makes sense of the fact that CM can cause the same allergic reaction, called Alpha-gal Syndrome, as meat does.<sup>4</sup>

Interpreting meat in terms of its biological composition permits to obtain an objective standard for capturing and investigating its material reality, which is fundamental for processing purposes in manufacturing settings, where such kinds of definitions are already widely used (Lautenschlaeger and Upmann 2017), but also for food safety once the meat products reach the market. Yet, despite being useful in certain contexts, this definition seems to capture only what animal flesh is, rather than how it becomes food for humans. It has been suggested that identifying meat with its component is too reductive since it does not take into account the social meanings and values that revolve around this food (Kaplan 2020; Thompson 2014). The interesting point here is not only whether the material definition overshadows the social meanings of meat, but whether these meanings are fundamental to the identity of this object, as they may be what grounds its transition from mere edible flesh (a part of an animal carcass) to food (meat).

This question is part of a broader framework of inquiry into what food is: philosophers of food have offered a variety of reflections that lean towards interpreting food as a relational entity (Heldke 2012), a «multi-directional network» (Szymanski 2017: 7), or a type of entity that is «both objectively real and culturally constructed» (Kaplan 2020: 7). Common to these intuitions is the fact that edible objects are not inherently food, but are made to enter this category through relationships, networks or interpretations. This is also true of traditional meat. In food production, slaughterhouses play a central role in transforming animal corpses into food, not only through the actual disembodiment of animals but also through a complex system of symbolic representations aimed at de-animalising these animals during the moment of slaughter (Vialles 1994). In food consumption, the same goal is obtained through the interconnection of material, symbolic and semiotic dimensions (Evans and Miele 2012). In both cases, the separation between the animal body and meat is fundamental for interpreting the latter object as food rather than a piece of a carcass. Moreover, looking at the efforts of CM producers' campaign strategies to position their products as food (Sexton 2018) shows precisely that it is not enough to be made of the same mate-

<sup>4</sup> Alpha-gal syndrome is an allergy to red meat that affects people who have been bitten by an infected tick carrying the Alpha-gal molecule; since CM could cause the same allergic reaction, research is being carried out to see if it would be possible to engineer CM in a way to make it suitable for people with this condition (Bryant 2020).

rial as meat to be perceived as such. It may be sufficient to be flesh, but flesh, to become meat, has to become food, and becoming food requires an agency that, through social meanings and practices, places certain edible entities in a category that makes them fit to be on our dinner tables.

A definition that captures what meat is once it has reached our tables is that offered by Milburn (2023) according to which «a substance is meat if it matches the culinary features of meat» (63). Understanding meat through its culinary properties permits making sense of how it is used, approached and perceived in ordinary settings, namely as a food with specific sensory characteristics. However, PBM and CM may or may not be considered meat depending on how loose or strict one is going to define the culinary characteristics of meat that novel products must meet. Firstly, the definition may be too strict for certain potential types of CM: if a company were to produce a drastically different version of CM, one that did not resemble current meat on the food landscape, would it not be meat? Conversely, stakeholders with a stricter intuition of what meat should taste like may be reluctant to accept that PBM and CM actually match the culinary features of familiar products. Even if these novel foods meet the high expectations of some meat eaters, certain culinary characteristics are difficult to replicate because of their dependence on the causal process from which they are derived. An example of this case is the belief that through meat one can taste the good life of the animal from which this food is obtained (Yates-Doerr and Mol 2012), suggesting that the symbolic dimension is an important part of the eating experience.

However, these features may be constitutive of what free-range meat is, but not of the identity of CM or PBM. To answer all these criticisms, one could try to interpret the concept of “meat” as a cluster concept, in which some of the culinary characteristics usually associated with meat are neither necessary nor sufficient for a food to be meat. From this perspective, PBM and CM could be, at least for now, borderline cases positioned almost at the very edge of the category of “meat”. Through this more open understanding of what meat is, it is possible to envisage that, as culinary practices evolve, meat foods will also incorporate novel culinary features, offering tastes that are linked to the novel production processes and that do not aim to provide the same eating experience as traditional meat.

It is precisely because such an open interpretation of meat makes it difficult to decide which culinary characteristics are central to its identity and which are not, that one might try to fix the identity of meat on more stable grounds. Think of the problem of identity in the case of art. If you have a notational code (Goodman 1968), as happens with symphonies, you don’t need to appeal to the causal process of their production to define them. If you don’t have a notational code,

as in painting, you may not know which are the constitutive properties and which are not, and all are potentially constitutive: you cannot neglect any of them, and the criterion of identity of an individual artwork becomes having been produced by the artist. Thus, when you have no way of telling the constitutive properties of X from all of its other properties, it may be reasonable to appeal to the causal process of the production of X for defining X.

This consideration leads us to the last definition, the causal definition of meat, according to which the essential characteristic of meat is that it is produced through a specific causal chain that must involve the slaughter of an animal. A clear example of this definition can be found in the petition submitted by the US Cattlemen's Association to the US Department of Agriculture, which requested that the use of 'meat' must be limited to «the tissue of flesh of an animal harvested in the traditional manner» (2018: 2).

Despite capturing how meat is traditionally produced, someone supporting the material or the culinary definition might try to reverse the burden of proof and ask why exactly the slaughter of an animal is essential for a food to be meat. Regarding the material definition, recall the case of the Alpha-gal Syndrome: if something has to be meat to cause this allergy, and if CM can cause the same allergy, then CM *is* meat and it should be labelled as such to avoid compromising consumer safety; in this case, the fact that meat is produced by a different method would seem irrelevant. Regarding the culinary definition, an argument by analogy is that meat could be similar to those many foodstuffs that can be recognised as instances of a given food category even if they are not produced through a specific causal chain (i.e., bread (Milburn 2020), and in general the already mentioned category of open recipes). Moreover, it is possible to point out that even slaughtering has changed drastically in the 19th and 20th centuries: the activities of workers in modern slaughterhouses are very different from the way butchers would have slaughtered animals before the centralisation of this process. The underlying intuition, common to those who commit to the material or culinary definition of meat, is that it is not straightforward to think that a change in the production process of X would necessarily result in a change in the identity of X.

Yet all these examples involve, at some stage and in some way, the death of an animal. Perhaps what matters is that this death has taken place – whether by industrial technologies, by butchers, or unintentionally in a car crash. The relevant question is, however, whether the death of an animal is part of the way in which meat is currently thought of and interpreted, and not simply the way in which it has been produced until now. As the influential work of Adams (1990) has shown,

Behind every meal of meat is an absence: the death of the animal whose place the meat takes. The *absent referent* is that which separates the meat eater from the animal and the animal from the end product. [...] Once the existence of meat is disconnected from the existence of an animal who was killed to become that ‘meat,’ meat becomes unanchored by its original referent (the animal), becoming instead a free-floating image (13).

For meat to be food, its relationship to the death of an animal is normally blurred and made invisible, otherwise, this edible object would risk to appear to be mere flesh and therefore not fit for human consumption. Adams’ intuition has also been used to argue that the understanding of meat typical of Western societies is, in fact, flawed. Borghini, Piras and Serini (2021)’s analysis reports meat as one of the cases of defective food concepts because, among other things, it does not sufficiently and faithfully represent the death of animals in its data and its ontology (11). Thus, despite being a fundamental part of the material practices that constitute the production of this food, the causal process is absent from the *concept* of “meat” itself. Indeed, the extensive research literature on the problematic relationship between flesh (the part of the dead animal) and meat (food) reveals the many ways in which Western culture has worked to remove the killing of animals from our thinking when meat foods reach the dinner table: media and communication (Buscemi 2018), the semantics of advertising (Martinelli 2019), and the technologies of industrial animal farming (Efstathiou 2022). From this perspective, it is possible to understand why it wasn’t until the emergence of CM that the act of killing was defended as essential for defining the identity of meat: when faced with the risk of actually being removed from the production process, the absent referent had to be temporarily set aside and the death of food animals had to be exposed and reaffirmed.

Indeed, even the reference to the meat *cuts* is nowadays much more often taken as mere reference to the shape, consistency, and associated list of most reliable ways to be cooked than as mention to where the meat pieces come from on the animal. Again, the dichotomy between game and non-game meat is no longer understood as referring to whether the meat comes from the carcass of an animal belonging to a species traditionally killed during some upper-class ritualised hunting practices, and is rather a classification directly interpreted in terms of taste, consistency and nutritional properties, where the ‘game’ term appears as merely homographic to the word meaning “an activity or sport usually involving skill, knowledge, or chance, in which you follow fixed rules and try to win against an opponent or to solve a puzzle”, as specified by the Collins online dictionary.

Once the defectiveness of meat has been recognised, there are at least two ways forward. The first is to explicitly reintroduce the killing of animals as

fundamental to the definition of meat, in line with past and present production practices. This is the route taken by the causal definition of meat, which now may appear more as a revisionist strategy rather than a description of the content of the concept of “meat”. Curiously enough, this is the same strategy that opponents of meat consumption have used to reduce the concept of “meat” to the materiality of flesh in an attempt to expel meat from the realm of food, for example by claiming that «by using the more general term ‘meat’ we avoid facing the fact that what we eat is flesh» (Singer 1975: 96). However, it is important to note that it is not contradictory that actors with opposing agendas have adopted the same approach: depending on the underlying interpretation of slaughtering – as either a legitimate practice to be preserved or as an illegitimate form of domination – its public exposure would yield different social outcomes.

The second way is to take advantage of the fact that “meat” is a free-floating concept, as PBM and CM do, and to break the link between slaughter and the *superordinate* category of “meat”. However, this raises the following question: what kind of concept could represent this broader category, a category that could include foods produced through animal slaughter, cellular agriculture, or plant-based ingredients?

### 3. *The functional concept of “meat”: between epistemic and semantic amelioration*

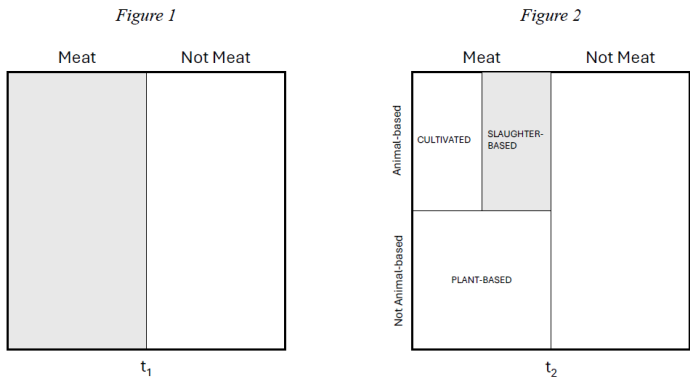
Technological and scientific innovations can disrupt our conceptual repertoire by impeding or preventing the continuation of ordinary categorising practices. The task of dealing with deficient concepts, broadly understood as representational tools, has been the prerogative of conceptual engineering, a philosophical method that seeks to revise our concepts in the light of meta-physical, ethical, or epistemological goals. For example, artificial intelligence asks us to clarify what we mean by being an agent, artificial wombs question the concept of “birth”, sex robots challenge what love is, medical instruments blur the line between life and death, and so on. In all these cases, conceptual engineering research has addressed the challenges posed to existing classification systems (Hopster and Lohr 2023). Haslanger’s work on conceptual engineering (2020) provides a valuable framework for distinguishing between two types of conceptual change, namely epistemic and semantic amelioration: by relying on this distinction, the following section delves into analysing how emerging food technologies have the potential to change the concept of “meat”.

Let’s start by considering the case of epistemic amelioration. Epistemic amelioration is defined as the improvement of our understanding of the informational content of a given concept (242): the possibility of the occurrence of

this amelioration is based on the consideration that we may have questionable or incomplete beliefs about the basic constitution of our own concepts. The example Haslanger gives is that of war. Even if war used to be fought only on land or at sea, the development of nuclear weapons opened the doors to the emergence of another kind of war. Indeed, the concept of war now includes the possibility of nuclear war, meaning that the concept was epistemically refined in light of a wider or deeper understanding of this phenomenon, and our assessment of possible scenarios becomes more complete.

In a similar vein, novel food technologies can lead to a fine-grained partition of the content of the concept of “meat” by showing that there may be more types of meat than we could imagine. Moreover, this technological advance helps to highlight something that was already pointed out by Adams (1990) namely that although “meat” tracks foods that are slaughter-based, slaughter itself is not present in the content of the concept – making it, in fact, defective. Epistemic amelioration, as Haslanger explains, is usually used for debunking beliefs and exposing ways in which we are taking for granted the ontological foundation of our concepts; it does not necessarily happen through technology process but can be carried out via conceptual genealogy, as Adams (1990) did. In both cases, what happens is that epistemic improvement takes the form of denaturalisation (Struthers Montford and Taylor 2020): the ontology of meat is exposed as contingent, allowing the emergence of new possibilities to inform our concepts.

This operation makes it possible to expand the content of the concept of “meat” to accommodate PBM and CM:



*Figure 1* depicts the concept of “meat” at time  $t_1$  prior to the advent of novel meats. Conversely, *Figure 2* illustrates the evolution of this concept at time  $t_2$  following the incorporation of novel meats.

This epistemic change would also address the long-standing problem of the distancing between a specific type of meat (the traditional one) from the slaughtering practices that produce it. Indeed, to make room for PBM and CM, it is essential that traditional meat no longer coincides with the entire extension of the concept. It has already been noted that when CM enters the food landscape, the terms used to describe (traditional) meat foods could change because of its exposed specificity, a specificity that emerges precisely when confronted with CM (Driessen and Korthals 2012). From this point of view, the entities picked by “meat” at  $t_1$  would fall at  $t_2$  under the type ‘slaughter-based meat’, a term already present in the literature (see, e.g., Milburn 2023; Struthers Montford 2022) and which seems to best represent the original properties of the related entities.

Supporters of a causal definition of meat could object that, while the appearance of CM and PBM is a matter of fact, their nomenclature and the way they are categorised are disputable. Precisely because CM and PBM do not satisfy the causal definition of meat they shouldn’t enter this category. To reply to this objection one must show that the concept of “meat” is not necessarily built upon a causal understanding of what meat is: even though it is what we believed, novel food technologies have led us to realise that this assumption was not entirely accurate (indeed, as already mentioned, epistemic change is relevant insofar it allows to shed light on the errors of our past classifications and refine our conceptual tools accordingly). By troubling our understanding of meat, novel food technologies pave the way for recognising the artefactual nature of this object – that is, they instil the doubt that meat can be crafted even with different methods and materials – which leads to the possibility that the superordinate category is, and always has been, a functional concept, namely a concept that defines objects by appealing to the functions they have in a given system.<sup>5</sup> However, substantiating this claim requires demonstrating that (1) meat is an artefact, even if its artefactual nature has become apparent only with technological advancements, and (2) if (1) is true, “meat” is a functional concept apt to incorporate novel instances, like PBM and CM.

Starting with (1), the most straightforward method to acknowledge the artifactuality of even commonplace meat products is to consider how they came into existence: through human craft, often supported by advanced technolo-

<sup>5</sup> The expression ‘functional concept’ is often used to indicate a concept that fulfils a specific (socio-political) function. For example, according to Haslanger’s critical theory, “woman” is a concept that serves to limit women’s agency and constrict them to a subordinate role in our society. In this paper, however, the expression ‘functional concept’ is an ellipsis for “concept whose extension is determined just by looking at the functions items perform in a given system”, no matter whether the concept itself fulfils a function or not.

gies in the case of processed meat. Indeed, the disentanglement of meat from its animal origin, and more generally from a naturalised conception of how meat is produced, became prominent in the 19th century, starting with the industrialisation of the meat economy in Chicago (Cronon 1991). And yet, even before these technological advances, i.e. in times when little or no technology was involved, meat was produced through craft: animal flesh has to be manipulated using tools and skilled techniques that are acquired, transmitted, and generally that are part of a shared narrative of how farming and slaughtering should be done (see, e.g., Pollan 2006). From pasture to table, many actions are taken to transform animals into flesh and then flesh into meat, all of which point in the direction of considering meat as an artefact.

A full discussion of how to define artefacts goes beyond the present purposes, and it may suffice to recall what Preston (2022) requires for an object to be an artefact. First, the object must be produced intentionally, and meat ticks the box because it is always produced intentionally (even if the death of the animals is accidental such as in roadkills, the butchering is not). Secondly, the production of the object involves the modification of materials, and again meat requires skinning, deboning and sometimes other procedures aimed at preserving or enhancing some of its physical properties.<sup>6</sup> Lastly, to be an artefact, an object must be produced for a purpose, and in the case of meat, the purpose is indeed to obtain a foodstuff.

If meat is viewed as an artefact, then it typically embodies the defining characteristics of this category, notably being characterised by its functional essence (2). However, this does not suggest that all artefacts are solely defined by their functions – consider the realms of art or music. Yet, when artefacts are crafted to serve a purpose, act as tools, or fulfil a need, it becomes reasonable to classify them based on their capacity to perform the intended functions, rather than solely by their causal origins or material composition. Indeed, examining the literature on artefacts' ontology reveals a central focus on their

<sup>6</sup> According to Preston (2022), artefacts “must involve modification of materials, thus ruling out naturally occurring objects even when used intentionally for a purpose, such as sticks thrown to amuse your dog.” If we accept this as a necessary requirement, then some (very unusual) instances of eating animals are eating no artefact – for example, devouring a live bird in one gulp as it flutters before us. We may either say that in such rare cases meat is not artefactual, or proclaim that on such occasions we would be eating no meat but just flesh. A more promising option is claiming that, *pace* Preston, any artefactual category “X” potentially includes a subset of borderline cases, which we may call ‘zero-degree Xs’, created by mere ostension and without producing any physical modification of materials. In this sense, a cave chosen as a dwelling place is a zero-degree architectural work, and a live bird devoured in one gulp as it flutters before us is a zero-degree piece of meat as well as a zero-degree culinary work (Bacchini 2020). Zero-degree Xs are both full-fledged Xs and full-fledged artefacts.

functional aspects (see, e.g., Baker 2004; Houkes and Vermaas 2009; Kornblith 1980; Kroes and Meijers 2002; Wiggins 2001), albeit with variations in the interpretation and selection of functions. In a functional understanding, food is interpreted as meat when it fulfils the relevant functions associated with it, functions that range from nutritional gain to pleasure in eating, to communicating social status, to expressing symbolic meanings and cultural values, and so on. This perspective recognises that meat cannot be reduced to mere flesh, avoiding the limitation of the value of meat to a single dimension (as a source of protein, as a substance, or as an object suitable for certain recipes), but seeks to capture and represent the broader role that meat plays in our societies. Moreover, a functional understanding of meat is in line with the theories of the metaphysics of food mentioned above, in which the nature of such entities is understood as being in some way dependent on the relations, networks or social meanings in which they are a part of – or in this case, on the functions they perform. Finally, if “meat” is a functional concept, then it can incorporate novel instances such as PBM and CM: the idea is that the functional concept X initially includes only Y, but then other ways of fulfilling the functional role of X emerge, and Y is no longer the whole extension of X.

This supplies an answer to the objection that a substance-based understanding of “meat” provides a necessary requirement for being meat, no matter if it is not a sufficient condition. If this objection were correct, PBM would definitely be no meat, while it would be questionable whether CM is meat or not.

But the problem of a substance-based understanding of “meat” is not just that there are items made of the same substance of meat that are not classified as meat. It is also that the ontological exploration made possible by technological progress is revealing to us that there are alternative ways to be meat that make being of a certain substance irrelevant – just like, thanks to technological progress, we are discovering that there are paperless ways of producing books and even tree-free ways of producing (synthetic) paper. On a functional understanding of “meat”, the requirement that meat must be made of the particular substance it has been made so far is just conceptual laziness – just as presupposing that books are by definition made of paper and beams are by definition made of wood. “Meat” is better understood as similar to “pasta” – a concept denoting a food traditionally made of durum wheat, though essentially independent from its most typical material substrate – as the existence of lentil pasta, buckwheat pasta, chickpea pasta and quinoa pasta, which are all unquestioned members of the “pasta” category, clearly shows. Like “pasta”, “meat” is better thought of as essentially defined by its functions than by its composition.

In the same spirit, meat is discovered as independent of its traditional production processes, like death – thanks to technological progress – is pro-

gressively conceived as independent of the cessation of blood circulation and breathing, and being born is today conceived as requiring neither passing through the birth canal nor having developed in a woman's womb.

But how can we recognise the basic functions that characterise the superordinate category of "meat"? Houkes and Vermaas (2009) show that artefacts have historically been approached from two philosophical perspectives, either in a detached way, which requires an objective description of all their relevant functions, or in an involved way, in which «our knowledge about artefacts stems from and is applicable for practical purposes» (75). It is this involvement that allows stakeholders to recognise the many and various functions that meat performs in their everyday lives. These functions can be understood through bodily sensations, through the social events in which meat appears, and through the way it is cooked, served, and presented. For example, meat is usually at the centre of the meal, both spatially and temporally. Spatially, because it occupies the centre of the plate – meat is rarely a side dish – and temporally, as the main dish around which the whole meal is organised (Twigg 1983). The practices that allow meat to be recognised as such run smoothly in ordinary contexts, even if it is difficult to identify all the functions that ground its identity.<sup>7</sup> Certainly, as with all artefacts, materiality has its own constraints: not everything has a physical structure that is suitable for this role, which can take many forms as long as it remains able to satisfy specific and contingent affordances.

If "meat" is a functional concept, then it can incorporate PBM and CM because they share the same essential functions; however, these novel meats certainly possess further specific features that distinguish them from slaughter-based meat. These features can be interpreted as functions themselves, making the functional description of slaughtered meat different in turn from the one of CM and PBM. In her functional analysis of food, Siipi (2020) shows how certain functions are origin-related, and meat is an exemplary case. The experience of eating meat, but also its symbolic meanings and values, is of one kind when meat is obtained by slaughter – e.g. it allows tasting the life of an animal – and of another kind when meat is produced in a laboratory – e.g. it allows enjoying a taste that did not involve the taking of an animal's life. Thus, from this perspective, even if meat can be represented by a functional concept, the functional concept of slaughter-based meat does not coincide with that of CM and PBM. As such, Siipi (2020) advances the hypothesis that if an item deviates from the origin-related functions of a given food category, such as PBM or CM,

<sup>7</sup> Since some meat functions might vary from time to time and from place to place, we can have contextual applications of the superordinate category of "meat" which restricts its functions only to those relevant in the context of application. We thank an anonymous reviewer for raising this point.

it might be better understood as a substitute rather than an authentic type of the category. Nevertheless, acknowledging that certain functions are unique to specific subtypes of “meat” does not inherently negate the existence of a functionally defined essence of “meat” encompassing slaughter-based meat, CM and PBM collectively. The distinction between each subtype’s origin-related functions does not pose an issue, as the overarching category accommodates this partition, allowing each type to maintain its distinctiveness.

Moreover, as Siipi herself notices, the difference between substitutes and types may be a matter of culture rather than a matter of divergent functions (258). When they appear in a given context, at first these objects would be considered copies or substitutes, but their ontological status is historically and culturally contingent, thus open for change. For instance, an ethnographic study in Guatemala shows how meat made from soy has become culturally accepted as meat rather than a substitute, and central to its identity was its function in ceremonies and family tradition rather than its origin (Yates-Doerr 2015).

Thus far, the discussion suggests that the conceptual evolution of “meat” aligns with the notion of epistemic amelioration. However, an alternative perspective could categorise the change as *semantic*, the second type of amelioration delineated by Haslanger. To illustrate semantic amelioration, Haslanger provides the example of the concept “animal”: by shifting its content to include also human beings, who were in fact considered as not-animals, scientific research has semantically changed the content of this concept (2020: 242). In the case of meat, the acknowledgement that slaughter is not part of the concept sheds light on the fact that the concept itself has concealed the slaughter-based origin of the entities it tracks: this is the moment of *epistemic* amelioration. However, when the superordinate category of “meat” appears as a functional concept and it incorporates new types, the information we convey with “meat” no longer coincides only with animal flesh used as food, but it evolves to convey (and expose) the artefactual nature of meat itself: the amelioration here seems *semantic*. Indeed, one could say that the content of the concept has changed in such a way that this operation is not merely an epistemic amelioration (i.e., we discover that there are more kinds of meat) that refines the concept, but a semantic amelioration that entails a revision of the content of the concept. While considering “meat” as a functional concept undergoing semantic amelioration isn’t inherently problematic, it does raise two novel concerns. Firstly, meat at  $t_2$  could be just a different concept from “meat” at  $t_1$  and not an amelioration of it; secondly, this semantic change could be seen as unfair to certain stakeholders.

Let’s start with the former problem, which is the issue of conceptual replacement: the evolved concept seems so different that it may be difficult to as-

sume that we are discussing or thinking about the same thing. In other words, at  $t_1$  people had a concept  $C_1$ , with an informational content  $I_1$ , while at  $t_2$  there is a different concept  $C_2$ , with an informational content  $I_2$ . To maintain conceptual continuity, the strategy proposed by Haslanger is to look at the functions of the concept, that is, the role it plays in our practices and what it aims to do, which must persist through conceptual evolution to guarantee that the concept persists through its amelioration. It's crucial to distinguish between discussing the functions associated with a concept and the notion of a functional concept itself. In the former case, the functions in question pertain to the purposes for which we employ conceptual tools; in the latter, the functions are those that entities must fulfil to be included in the category represented by the concept.

Approaching conceptual amelioration through the lenses of conceptual functions is a debated issue in conceptual engineering, which can lead to different methodologies (see, e.g., Plunkett (2015), Nado (2021), Thomasson (2020)). Still, as shown by Jorem (2022), a case-by-case study of the functions of a given concept may be feasible if guided by the principle of functional goodness – i.e., the functions performed by a concept set the standards for evaluating it and showing where it is deficient – and most importantly by the principle of functional limits, according to which «a revision of a concept  $C$  is acceptable only if it preserves the capacity to perform functions already performed by  $C$ » (106). The question, then, is whether the concept of “meat” at  $t_2$  can perform the same functions as the concept of “meat” at  $t_1$ , thus revealing whether the concept at  $t_2$  is the ameliorated version of  $C_1$  or a novel concept  $C_2$ .

The primary function of a meat category is to organise our meals by selecting certain entities for specific actions and plans. Moreover, if there is a continuity in the use of the concept of “meat” in Western cultures, it would be that of signalling the highest place in the hierarchy of foods (Adams 1990; Twigg 1983). Would the semantic amelioration of “meat” cause our ability to organise meals to crumble to the ground? It does not seem so, since its function in organising culinary practices is left untouched. Thus, even assuming a change in content, the main function of the concept seems to be preserved in a way that speaks in favour of a conceptual amelioration rather than a conceptual replacement.

The second problem with semantic amelioration is normative and it concerns the social role of meat in a given culture: revising the concept of “meat” could be unfair to those stakeholders who value traditional meat because their tradition risks being threatened and dismantled. The issue here is thus whether the evolved concept undermines our ability to refer to the objects currently associated with “meat” causing us to confuse them with other objects.<sup>8</sup> Yet,

<sup>8</sup> In fact, there is a sense in which this semantic improvement is peculiar: unlike other semanti-

this does not seem to be the case, because slaughter-based meat foods would retain their specificity, which would also be emphasised by revealing their previously (conceptually) hidden origin. If anything, utilising a functional concept of “meat” that accommodates its various subtypes enriches our vocabulary and facilitates coordination in ordinary situations. For example, when drawing up a menu for a restaurant, it seems more efficient to use the term ‘plant-based meat’ to communicate how these foods should be understood than to introduce a new term. Furthermore, if the term ‘slaughter-based’ is deemed inadequate in accurately representing these food items by its associated stakeholders, it is up to the stakeholders themselves to engage in discussions to determine the most suitable terminology, such as ‘traditional’ or ‘conventional’. However, it’s important to note that this negotiation should occur without attempting to assert authority over the superordinate category.

Certainly, there is a way in which novel meats disrupt and interrupt the usual ways in which we recognise, think about and use meat: if they did not, they would not pose a challenge to our classification systems. Adams (2016), for example, tells the story of how she serves PBM under the guise of traditional meat and then, once the meal is finished, reveals that no animal flesh was indeed consumed. The intention is to show that slaughter is not necessarily for the pleasure of eating, and the outcome is not a devaluation or misrepresentation of a tradition, but rather a debunking of the assumptions taken for granted in that culture. Indeed, the game of deluded expectations that Adams tells us about can only work in a context where slaughter-based meat is considered the norm, while other meats are *novel*. It is because of their novelty that they can temporarily interrupt the smooth continuation of our practices. Conversely, if they become a staple type of meat, such interruptions would not occur.

Apart from this case (the use of PBM for political or social activism), as already mentioned in *Section 1*, it seems implausible to think that the introduction of a semantically improved concept of “meat” would prevent the continuation and fulfilment of the tradition of those stakeholders who value slaughter-based meat. The main disadvantage, as perceived by cultures centred around slaughter-based meat, is the potential erosion of its dominance as the sole acceptable food apt at occupying the centre of our plates.<sup>9</sup> Yet, even if the

cally ameliorated concepts such as “family” or “marriage” in which the distinction between novel and traditional types is not reinforced (or, at least, it should not be reinforced for social and political reasons), in the case of meat, the division into types is essential insofar it allows the consumer to choose the type of meat he or she wants. Moreover, the unspecified use of ‘meat’ does not necessarily become vaguer than it already is: “meat”, as a category, already includes a variety of objects (beef, pork, chicken, sausages, steaks, and so on) which often require to be referred to by their particular names.

<sup>9</sup> On the other side, those actors who condemn the consumption of meat might advocate the

adoption of a semantically ameliorated concept of “meat” will move towards this end, it does not mean that this operation endangers or diminishes the traditional value of slaughter-based meat, but rather that it allows other possibilities and practices to emerge.

#### 4. *Conclusion*

Novel food technologies disrupt the boundaries of the concept of “meat” by giving rise to new objects that urge us to revise the way we trace the line between what is meat and what isn’t. Stakeholders engaged in this negotiation lack the authority to definitively establish these boundaries (§1), and each proposed definition of meat in the philosophical debate carries its own set of advantages and drawbacks (§2). What becomes evident from the debate is the need to deal with the historical defects of this concept: a troubled association with animal flesh that seems to need either to be broken once and for all or to be reaffirmed with greater transparency. However, a functional concept of “meat”, based on the artefactual ontological status of this food, seems to make it possible to overcome this blind alley. On the one hand, it severs the link between meat and animal flesh at the level of the superordinate category; on the other hand, the link is reinstated within the subtype “slaughter-based meat”. This approach allows each subtype of meat to retain its unique identity without disadvantaging any stakeholders while remaining receptive to emerging novel instances (§3). From this perspective, a functional understanding appears to represent an amelioration, either semantic or epistemic, of the concept of “meat”.

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opposite approach: instead of broadening the scope of the concept of “meat” to include PBM, they might seek to narrow it down to traditional meat and CM, in order to highlight the function of these foods as an affirmation of the symbolic dominance of humans over non-human animals. However, the model we have proposed recognises that the superordinate concept of “meat” serves a variety of functions that are not limited to domination over non-human animals: from this perspective, reducing the scope of the superordinate concept to include only those foods that fulfil this specific function would risk serving the interests of only one party to the negotiation. Conversely, recognising that there are different kinds of meat, each with its own specific characteristics, allows each voice to be represented in the division of the concept.

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