Naturalness

On the Aesthetics of Ecological Food Cultures

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Abstract *Ecologically oriented food cultures – understood as the entire process from cultivation, to processing, to trade, to places and ways of consumption – have increased greatly over the last two decades. This development suggests that within these food cultures, not only have procedures and technologies been changed to improve de facto ecological compatibility, but certain forms of aesthetics have developed as well. Using selected examples, two aesthetic principles are presented from a philosophical point of view that seem to be characteristic for ecological food cultures as a whole: 1. working with contingencies, as the provocation of processes that cannot be controlled in their entirety, which are decisively responsible for the impression of 'naturalness' and 2. working with traces, which have through their indexical character the potential to transfer ecological conditions of origin and processing into the present of perception. These aesthetic principles are analyzed both in relation to different artefacts, such as the food itself, the utensils of the meal and accompanying media, and in relation to different senses, such as the senses of sight and taste.*

1. Introduction

Since around the turn of the millennium, there has been a boom in ecologically oriented food cultures and their associated industries within Western markets. This is evident not only in the drastic increase in the number of organic farms,[1] the establishment and expansion of various organic supermarkets and the entry of dedicated organic ranges into conventional supermarkets and discount food stores, but also in the increase in restaurants or canteens specializing in organic ingredients and the numerous organic cookbooks as well as food blogs that promise a healthier diet in harmony with the ecological conditions of the planet. In connection with ecological nutrition, from cultivation to trade to the places and types of their processing and

1 In Germany, the number of organic farms almost tripled from 2000 to 2020 (from 12.740 to 35.396 farms), as did the share of agricultural land managed by them (from 3.2 per cent to 10.3 per cent) (Federal Ministry of Food and Agriculture 2022: 14).

consumption, these cultures are characterized not only by factual consideration of ecological criteria, but also – at least within Western markets – by a peculiar aesthetic. This aesthetic, which begins with the appearance of the individual organic foods and is then continued in the design of their packaging, the places where they are staged, the ways in which they are prepared both in terms of taste and visually, and the ambience in which they are consumed, is probably also intuitively conscious to most people in its peculiar specificity. We experience that there is an aesthetic difference between an organic shop or organic supermarket and conventional supermarkets, the 'organic corner' and the other offers of a conventional supermarket, the packaging design, and the ambience of restaurants presenting themselves as organic, as well as the flavourful and multi-sensory creation of organic dishes. But how can this peculiar aesthetic be described and analyzed?

In view of this organic trend, which is widely acknowledged, it is astonishing that apart from marketing-oriented surveys or communication-scientific identifications of individual design features that function as symbols of 'ecological' or 'organic' (especially the color green, ecological labels and pictorial motifs that evoke an association with nature), there has still been rather little dedicated examination of the aesthetic principles of ecological food cultures.[2] This is not least because on the one hand the ecological movement itself was particularly focused on the factual change and consideration of ecological contexts. On the other hand, the aesthetic – at least in the early days of the ecological movement – was under a general suspicion of merely serving economic interests, of concealing the actual ecological contexts and of merely pretending to consumers, of seducing them.

Thus, arguably the most influential pioneer of ecological and social design, Victor Papanek criticized aesthetic aspirations of design as a mere marketing tool and called for problem-oriented design instead:

> I am questioning, then, the entire currently popular direction of design. To 'sex-up' objects (designers' jargon for making things more attractive to mythical consumers) makes no sense in a world in which basic need for design is very real. In an age that seems to be mastering aspects of form, a return to content is long overdue. (1984 [1971]: 185)

2 For example, in their evaluation of 2531 print advertisements for organic and conventional food, Beate Gebhardt and Lara Heinz only come to the following distinction: "Organic advertises differently, this silent expectation of customers and companies in the organic sector can be confirmed for print advertisements: Organic advertising is greener, shows more landscape images and, above all, many more labels than advertising for conventional food. Ecological aspects and ethics are unique topics in organic advertising." (2019: 4 [translated by J.L.])

Equally paradigmatic for this view of the aesthetics of consumer goods is a statement by Wolfgang Fritz Haug, author of the influential *Critique of Commodity Aesthetics* (1986 [1971]), in the context of a survey by the International Design Centre Berlin:

> In a capitalist environment, design has a function that can be compared to the function of the Red Cross in war. It nurses a few – never the worst – wounds that capitalism inflicts. It performs cosmetic care and thus, by beautifying in some places and keeping morale high, prolongs capitalism like the Red Cross prolongs war. The design thus maintains the general disfigurement through a special design. It is responsible for matters of presentation, environmental presentation. (IDZ Berlin 1970: 55 [translated by J.L.])

Thus, the aesthetic, afflicted with the character of appearance, had to become the problematic antithesis of the authenticity and naturalness now demanded. A product had to be ecological, it was not just to look ecological – whatever was to be understood by this ecological appearance.

This tendency towards the anti-aesthetic in the early days of the ecological movement is also reflected in the widespread view that in ecological food cultures the taste qualities are neglected or not specifically designed, since it is merely a matter of being factually healthy or ecological. However, it is precisely against the background of this anti-aesthetic attitude that essential aesthetic principles of revealing, disclosing and documenting the ecological conditions of food have developed. Even if a specific aesthetic is not consciously striven for, characteristic forms of aesthetics can still develop. In the following, I would like to focus on two aesthetic principles that seem to me to be particularly characteristic of ecological aesthetics and explain them in the context of ecological food cultures.

2. Provoking Natural Perceptions

The theme of naturalness, or nature in general, obviously plays an essential role in ecological cultures. Especially given the traditional understanding of 'nature' as opposed to 'culture', as that which exists by itself and through itself, as possibly untouched by the formative interventions of humans, the design of artefacts with an ecological claim faces a fundamental problem. Because even organic food is ultimately always influenced and modified nature through breeding and various cultivation methods – i.e. biofacts – even if they are wild varieties (Kleinert/Braun 2018). How can artefacts be used to express that they are as little as possible an artefact and as much as possible nature, in other words: that the artefact itself is nature? How do you create the impression and sensation of naturalness?

Certainly, the most common way of creating a reference to nature is to make associations with nature by means of symbolic and pictorial features in the settings of organic food, for example through vegetal motifs or the depiction of landscapes, but also through textual messages that refer to ecological or rural aspects. This kind of media representation of nature, however, has the fundamental problem that 'nature' is always found only on the side of the represented and not on the side of the representing media. By merely representing 'nature' on food packaging, with the displays of its presentation or the media of its advertising, a gap is drawn between the food and 'nature' as it is usually true of symbols and images that their bearers are not themselves what they mean or represent, otherwise they would not be symbols or images.

This applies not only to the accompanying media, but also to the food itself, both visually and in terms of taste. For example, fruit gums visually representing fruit communicate different types of fruit through their pictorial character, but at the same time generate the awareness that the fruit gums themselves cannot be fruit. Even if the fruit gums are made with fruit juices, they will not eliminate this gap between what they represent and what they are themselves, because processed fruit juices are something different than the unprocessed fruit that is represented. Artificial flavours also appear to follow this logic of images, with the difference that this is an image phenomenon in the realm of the sense of taste – taste images, so to speak. Just as with visual images, we perceive something other than what the image itself is in an ontological sense. So, for example, with artificial strawberry flavouring we taste strawberries, although the substance of the flavouring was neither extracted from strawberries nor has anything in common with them chemically. Thus, even in the case of artificial flavours, certain natural phenomena are merely represented (Lang 2019: 240–248).

Through this kind of thematization of nature, 'nature' wanders structurally into a realm that lies beyond the context for which it is actually supposed to be thematically claimed. 'Nature' is then somewhere out there, in the countryside, with the farmers, but not in the food, in the dish, in the organic food shop or in the restaurant. This gap between medium and message becomes a problem for ecological consciousness because it is interested in the ecological conditions of the medium itself and not merely in the message. For this reason, the marketing of ecological products is also characterized by various credentialling strategies or as Moritz Gekeler describes it, factionalization (2012: 165–206). So how would the perceived have to be composed so that it itself takes on the character of the natural and does not merely symbolize or represent 'nature'?

Gernot Böhme calls this perceptible impression of naturalness sometimes the ephemeral (1989: 166) and sometimes the gesture of naturalness (1992: 141) and, following Ludwig Klages, formulates the criterion of vivid unpredictability (1992: 154) as a kind of sensual uncertainty of expectation in which the expectation is always

disappointed by the concrete manifestations in perception. However, he refers in particular to fleeting atmospheric phenomena such as light reflections, the flickering of the air, or sounds that surround things and in which they are embedded. Martin Seel, in his aesthetics of nature, focuses on very similar phenomena, which he calls the play of appearances and which would be noticeable through disinterested attention (1996: 38).

Figs. 1 and 2: Conventional and organic mixed rye bread.

Source: my-bakery.de

Jens Soentgen goes one step further by examining the natural appearance of things themselves. This natural appearance, which he also calls a fractal structure (1997b: 256), is based on the fact that the causes of this appearance lie in the object itself, in contrast to an artificial appearance, where the causes of this appearance lie outside the object (1997a: 197). The natural appearance is therefore the self-expression of substances (1997b: 267). An example of an artificial appearance is fish fingers, as the appearance is determined by external agents, whereas an example of a natural appearance is the irregularly cracked crust of organic bread, as here the dough can largely give itself its shape and thus express itself in this (figs. 1 and 2) (1997a: 196–201).

The art psychologist Rudolf Arnheim determines the difference between natural and artificial things in the same way:

> [N]atural objects are created by the very forces that constitute them. The shape of the ocean wave results directly from the action of propelled water. The flower is grown rather than made, and therefore its external appearance consists of the perceivable effects of the process of growth. (1964: 30)

And referring to artificial things, he writes: "Man-made objects are produced by external forces." (Arnheim 1964: 30) Both authors thus justify the natural appearance

of something by the fact that it carries its cause in itself, whereas that which is perceived as artificial is seen as caused by external causes. Rudolf Arnheim calls these inner causes forces whereas Jens Soentgen understands them as material self-activity (1997a: 196). This concordance is no coincidence, because this distinction between natural and artificial things goes back to Aristotle: "Some things exist, or come into existence, by nature; and some otherwise." (1957: 107 [192b]) "By nature" means for Aristotle "that they have within themselves a principle of movement (or change) and rest" (1957: 107 [192b]). For manufactured things applies instead: "none of them has within itself the principle of its own making. Generally this principle resides in some external agent, as in the case of the house and its builder, and so with all hand-made things." (Aristotle 1957: 109 [192b])

However, I consider the criterion of 'inner causes' and the subsequent conclusion that appearance expresses these inner causes to be epistemologically untenable. Firstly, these natural-looking fractal formations, such as the cracked crust of bread, always arise in interaction with other substances and other processes, such as heat or humidity, so they always have 'external causes'. Second, no expressive relationship can be derived from a causal connection: To perceive something as the effect of something else does not mean that this other thing is expressed in this effect, otherwise everything perceived would always express at the same time what caused it. One could, so to speak, see the causes of things by merely looking at them. On the contrary, the perception of such seemingly arbitrary, chaotic and contingent[3] fractal formations is distinguished precisely by the fact that we cannot say exactly what caused them in detail.

Why is the bread crust puffed up like this and not like that, why do two fish of the same species look different, and why does one strawberry taste slightly sweeter than the other, even though they come from the same bush? The sensory impression of naturalness seems to be caused by the fact that we do not know and do not understand the reasons why something is sensory in a certain way, or that we have difficulties in identifying what we perceive in detail with something that is already known. When we claim about something that it looks natural or smells natural or tastes natural, we mean precisely that contingent abundance of perception and perceptual variations that our comprehension cannot grasp. The same mental perplexity that we know from many perceptions of nature also takes place here. With regard to the perception of nature we are used to not understanding them in detail, and if this impression of incomprehensibility also occurs with artefacts, they seem natural (Lang 2019: 53–57). That could be the reason why "a lack of standardisation with 'less regular appearance' and 'less perfect shapes' are criteria for organic quality which to some extent are expected by consumers and emerge as a guarantee for superior

3 The term 'contingency' is meant to express that these perceptions occur but do not appear to be explainable to the perceiver neither by natural law nor as a product of human intention.

taste", according to a Europe-wide marketing study on the sensory experiences and expectations of organic food (Stolz/Jahrl/Baumgart/Schneider 2010: 10).

These sensory perceptions, which are incomprehensible in detail, are not merely found in natural objects, but can be provoked, i.e. consciously initiated, by allowing processes that are not entirely controllable: for example, as in the case of the bread crust, or through the use of heterogeneous, trace-rich material surfaces, the exposure of fruits and vegetables to complex individualizing environmental factors, lack of cleaning, seemingly random arrangements, or simply the use of colors and shapes that are difficult to conceptualize, such as broken, earthy hues, broken lines or hatchings. The undefinable smell (Biedermann 2018) so characteristic of some organic food shops, which is also described as "musty", "strange" or "weird" in various internet forums speculating on the causes of this smell, may evoke the impression of naturalness precisely because it is of a complexity that no longer allows the individual odour notes to be identified and thus understood. The impression of naturalness thus arises neither primarily through certain symbols of naturalness or nature, nor through a resemblance to nature, but through the systematic production of perceptions that cannot be grasped in their entirety and only through this incomprehensibility come into affinity with our other experiences of nature. Thus, a rich natural taste is not characterized by the fact that it tastes like nature – whatever that would be – or that certain tastes have become a symbol of nature, but that they contain flavour notes that we cannot identify in tasting, thereby giving the taste an infinite depth.

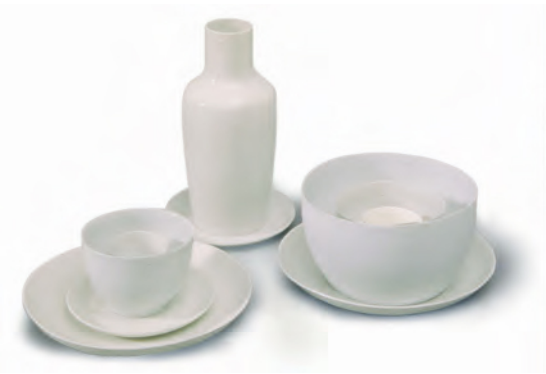
3. Provoking Natural-Historical Perceptions

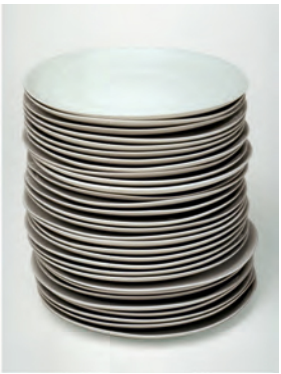
Such contingent sensualities, which we perceive as natural, do not necessarily remain in the mode of incomprehensibility. On the contrary, due to their ambiguity, they challenge a desire to interpret and understand. This interpretation, however, differs from the interpretation of symbols or representations; instead, it is comparable to the reading of traces. Precisely because these natural perceptions seem to make so little sense, we try to reconstruct their genesis in our imagination, through which processes – mostly in the past – they became the way they are now. In this way, the singular production history of these sensualities, with their ecologically relevant processes, can become thematic in perception. Accompanying media in the form of food packaging, advertisements or even menu cards, which point to certain conditions of origin and production processes, play a decisive role here, since they can steer the tracking in a certain direction. Certain sensory features thus become indicative of various processes involved in production and seem to authenticate them,

since they are interpreted as causal effects of what they refer to.[4] I would like to explain this interpretation of contingencies as traces of ecologically relevant processes briefly with a few examples, one in relation to two sets of tableware and another on the basis of the aroma design of sustainable roasted coffee.

Waste in ceramics production due to faulty production poses a certain ecological problem, as ceramics are difficult to recycle. However, what is perceived as defective and thus given the status of so-called seconds or B-goods is usually not based on functional defects but on aesthetic preferences. In the field of serially produced ceramics, an aesthetic expectation of flawlessness and purity dominates, which is disappointed by even the slightest production-related deviations and thus downgrades the object to seconds.

Figs. 3 and 4: The B-Set *porcelain service for Makkum, 1997.*





Source: jongeriuslab.

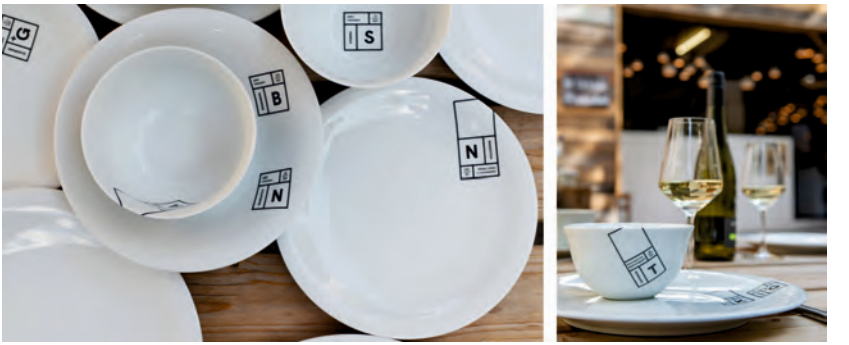
In order to break with and change this aesthetic convention, Hella Jongerius designed the *B-Set* porcelain service for Makkum in 1997 (figs. 3 and 4). In this, all the conventional conditions of serial ceramic production are maintained and only one, namely the firing temperature, is changed by raising it to the point where the porcelain begins to deform slightly (Hinte 2006: 159). The simple shapes of the service and the monochrome glaze draw attention to the slight irregularities that stand out in contrast with them, which we are usually accustomed to reading as the result of a handcrafted production process. The serial number embossed on the top and the product name, on the other hand, refer to the serial production process and thus give direction to the interpretation of the natural-looking irregularities. They are

4 I have presented in detail the role traces play in the aesthetics of ecological design in the publication *Prozessästhetik* (2015).

now understood not as the result of a handcrafted process, but as traces of the firing process.

Accordingly, Hella Jongerius's endeavors not only to keep manual influences out of the production process, but also to draw the viewer's attention to the serial production. In this way, product perception is determined by the apparent paradox that individual forms can emerge under identical production conditions. These individualized forms are no longer experienced as designed, that is, artificial; instead, they must be understood as the independent result of material processes and their interactions. In conventional ceramics firing is instead understood as a pure act of fixation, which is not intended to change the form but to preserve it, and thus the form passes through the firing process unaffected, as if it did not exist. In the *B-Set* tableware, however, the product form is visibly co-determined by the firing process. While we experience the basic geometric forms of the tableware as artificial, we understand its irregularities as traces of the processes involved in its production. What previously would have been perceived as a flaw now becomes an aesthetic feature capable of saying something about an ecologically relevant process, namely the burning energy involved in its creation (Lang 2013: 70).

Figs. 5 and 6: The tableware line Lücke.

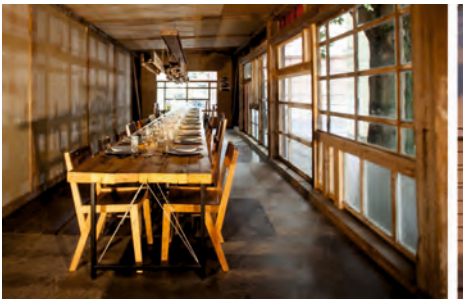


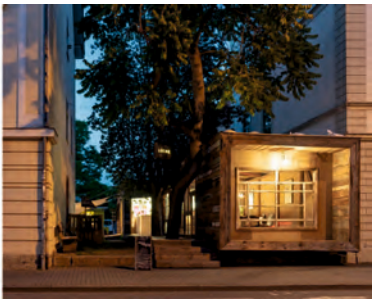
Source: studio booom.

Susann Paduch pursues a similar idea with her tableware titled *Lücke* (the German word for "gap"), which was awarded the German Federal Ecodesign Prize in 2020; but *Lücke* goes a step further (figs. 5 and 6). The tableware was developed in small series for the eponymous temporary organic restaurant Lücke in Weimar (figs. 7 and 8). The restaurant was built in a gap between buildings as the final project of the architect Hannes Schmidt at the Bauhaus University in Weimar, using locally available second-hand resources such as reclaimed timber from fences and roof trusses, old truck floors and windows (Euen 2014). Each element told its own backstory and

thus made it possible to experience that it had come together temporarily to form a restaurant, only to go different ways again afterwards.

Figs. 7 and 8: The restaurant Lücke *in Weimar.*





Source: studio booom.

The eponymous tableware by Susann Paduch also used an already existing resource, namely graded B-goods of the *Update* tableware of the porcelain manufactory Kahla. She categorized the defects of this downgraded tableware and coded them with abbreviations. Each defect was framed by a print with a kind of information box and highlighted as an individual attraction. Whereas previously these traces of production were merely contingent, incomprehensible deviations from the ideal that led to an aesthetic devaluation, the creative intervention has now turned them into interpretable traces that tell of very specific production processes. These range from foreign substances in the kiln atmosphere, the accumulation of small porcelain particles, iron stains, unglazed edges and glaze stains to deformations caused by the pressing tool. In this way, not only is waste reduced, thus conserving resources, but the utensils of dining initiate an awareness that is characteristic of ecological interests as a whole, namely reflecting on the processes involved in the production contexts and what ecological relevance they might have.

In relation to food, this ecological interest in its origins and the conditions under which it was produced, traded, and prepared becomes even more salient. This is not only reflected pragmatically in the countless organic product labels, which are supposed to ensure the credibility of their statements about the conditions of origin through certification procedures, but also in the tendency to depict conditions of origin in the presentation of organic food and organic dishes and to keep the ingredients distinguishable in such a way that they reveal something of their condition before processing. This tendency is particularly noticeable in the photographic representations of organic cookbooks, recipes, and the food packaging of organic brands. It is not essential whether the food actually claims or even certifies the use of

ecological technologies and processes, in the sense of cultivation, processing, transport and preparation methods, but whether ecological conditions are reflected in the aesthetics. Therefore, similar aesthetics can certainly be found in high cuisine, for example, by Alain Ducasse with his concept of *naturalité* developed at the *Plaza Athénée*, which focuses on seasonal, regional and low-meat cuisine, where the flavors of the individual ingredients and their individual natural histories are central (Ducasse 2020). This interest in the ecological prehistory of the food thus also leads to a different shaping of the sensual. The sensual is supposed to open up, so to speak, to its own conditions of emergence, to say something of these conditions. The question arises, however, whether this tendency towards, so to speak, historical perceptions is primarily to be found in the design of the visual aspect of ecological food cultures or whether it also continues into the gustatory and olfactory levels.

Figs. 9 and 10: The coffee roasting company Röstbrüder *in Weimar.*

Source: Johannes Lang.

To investigate this question, I interviewed Vincent and Collin Höckendorf, the owners and operators of the coffee roasting company Röstbrüder in Weimar (figs. 9 and 10), about how they arrive at their aroma creations and whether the origin and, in the broadest sense, the genesis of the coffee plays a role. Röstbrüder is a small and young roasting company whose coffee is neither fair trade nor ecologically certified, but who strive for the greatest possible complete transparency about the origin, cultivation and trade of the coffee through direct imports from small planta-

tions and coffee farmers as well as personal relationships with the suppliers. With their range changing according to availability and season, they serve the trend of single origin coffee, i.e. a single coffee variety originating from a specific growing area or even from a single plantation and not blended with other varieties. They also offer espresso blends of two to three varieties.

According to Vincent Höckendorf, naturalness played a role in flavor design insofar as the "whole trend of single origin coffees is to somehow find a pure taste of a pure variety of coffee. In that sense, it is already the stated goal to emphasize the natural aromas of the coffee instead of simply covering them up with roasted aromas."[5] These natural aromas are the "potential" that a coffee brings with it. Then, when roasting and creating the right roasting profile, they would focus on "sharpening" and "teasing out" this potential:

> Every raw coffee you buy has a different potential. So you're never going to get the kind of fruity notes out of a Brazilian, and you're not going to get the kind of fruity berry notes out of a coffee from Ethiopia. You can think of it like wine. That's why the coffee arrives with, I'll say, a certain potential, which is inherent in it. We simply try to sharpen that. We try to pick out what we like about it and try to tease that out. But it arrives within a certain framework." (ibid)

Collin Höckendorf sees a clear difference in this approach to the classic coffee products of the big brands such as Lavazza or Dallmayr:

> I believe that the big brands all have a very clear idea of taste and also implement it through the various blends of raw coffees and through the various adjustments to the roasting so that they always taste exactly the same: a Dallmayr always tastes like a Dallmayr, a Lavazza always tastes like a Lavazza. The big difference is basically: we have a small assortment, some of which also change. We have seasonal coffees. Our products come from much smaller farms, where again very small dependencies change the taste. If it rains more or less, that changes the product. You taste it in the cup at the end. The big companies try to prevent exactly that. These want, no matter what the year was, no matter where the coffee comes from, no matter what ends up being roasted: it is roasted and mixed in such a way that it tastes exactly the same in the end as it does every time. They practically always create the same product. And we have individual exciting things that are also influenced by fluctuations every now and then." (ibid)

This description makes relatively clear what could distinguish taste design against the background of an awareness of the respective individual geographical and cli-

5 Quoted from an one-hour-long interview I conducted with Vincent and Collin Höckendorf on 17.05.2021 in Weimar. The quotes were translated from German.

matic conditions of the cultivation of basic food stuffs. The diversity of taste and its individuality conditioned by the local ecological contexts becomes the starting point, the source of inspiration for the final product in terms of taste, instead of, conversely, starting from a specific ideal of taste – such as a typical Italian coffee taste – selecting the ingredients and preparing them in such a way that the taste emancipates itself from the concrete spatial and temporal ecological conditions, as if they did not exist at all. The individual basic taste given by the ecological conditions is potentiated and intensified, so that the tastes are first and foremost related to ecological diversity. Through accompanying media that provide information about the most diverse conditions of origin, from the variety to the place, the altitude of cultivation, the means of cultivation and the local climate, the taste becomes a trace of these conditions, a taste that seems to say something about its own conditions of origin. The aesthetics of ecological food cultures appear as a sensual articulation of the ecological prehistory exhibited not only by the prepared but also the artefacts interacting with it.

4. Conclusion

At the outset, the question was raised whether ecological food cultures have produced not only technological and procedural innovations – in terms of environmentally friendly cultivation methods, low-material, low-energy and low-emission transport, processing, and packaging methods – but also a specific aesthetic. The purpose of the heterogeneity of examples was to find general principles that work across artefacts and senses, thus accounting for the encompassing nature of ecological cultures that tend to permeate every sphere of life. The examples are not so much to be understood as sufficient evidence for the theses put forward, but rather as points of reference and suggestions for further aesthetic considerations and design approaches. Likewise, they are certainly not representative of ecological food cultures in a quantitative sense. Conventional strategies of symbolizing and visualizing idealized notions of nature are far more common. Rather, they seem to be representative in a qualitative sense, i.e. aesthetic strategies that represent a certain unique proposition compared to conventional food cultures.

The principles formulated are, first, the provocation of contingent perceptions that create the impression of 'naturalness' due to the incomprehensibility present in the details, and second, the provocation of trace reading up to the interpretation of traces of taste, as an aesthetic possibility to let causal conditions of ecological prehistory become a moment of present perception. This perceptual psychological interpretation also makes it clear that the perceptual impression of naturalness is not to be confused with factual naturality or untreatedness. In principle, artificial flavours are conceivable which, due to their complexity, appear more natural than their nat-

ural counterpart and, conversely, natural flavours which, due to their distinct taste, are experienced as highly artificial. The impression of naturalness can therefore be designed.

These aesthetic principles correspond to two needs by which ecological food cultures are characterized. On the one hand, the need that not every factor of food production is under human control, but that the individual ecological conditions of geography, climate, and biosphere have had their independent part in its creation. This need is expressed in the provocation of natural perceptions, since these are involuntarily perceived as something that cannot be manmade, that is, the result of self-acting processes. On the other hand, the need for ecological transparency, that is, the possibility of having an awareness of the ecological conditions under which the food was created. This need is expressed in what I call the provocation of natural-historical perceptions, since these seem to credibly convey some conditions of origin.

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