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Psychological Richness and the Willingness to Try Cultured Meat

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Abstract

In light of the environmental impact of the traditional meat industry on climate change, the emergence of cultured meat offers a promising solution to mitigate the effects. However, due to limited experience with this new food product and the potential for risks or negative consequences associated with trying cultured meat, consumer attitudes remain ambivalent and consumption willingness is often low. Since the personality traits openness to experience and psychological richness are associated with an increased desire to encounter novel situations, the study aimed to investigate whether individuals who consciously seek out new experiences and accept risks in life are thus also more inclined to consume cultured meat. Previous research has already linked openness to experience with a higher acceptance of cultured meat; however, limited understanding exists about the concept of psychological richness. Alongside collecting data on these two personality traits, participants ($N = 267$) were presented with positive and ambivalent reviews of cultured meat products and their consumption willingness was examined. However, the findings of the correlation analysis and Linear Mixed Model revealed a non-significant and even slightly negative relationship between psychological richness and the willingness to try cultured meat, even when individual differences in openness to experience were taken into account. Contrary to predictions that the effect of psychological richness on the willingness to try cultured meat would amplify with regards to the ambivalent reviews, the analysis furthermore revealed no significant interaction between the personality trait and review type. However, an unexpected significant interaction between psychological richness and openness to experience was found, involving a diminishing impact of openness to experience on the willingness to try cultured meat as psychological richness increases. These results underline the fact that the two traits are indeed distinct constructs with differentiated effects on individuals' food choices.

Keywords: psychological richness, openness to experience, cultured meat, food preference, consumer acceptance

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Introduction

Climate change and global warming are critical issues of our time, presenting considerable challenges to our society (Abbass et al., 2022; Al-Ghussain, 2018). As awareness of environmental issues grows, there is increasing interest in solutions that can mitigate the impact of human activities on the planet. One proposed solution is the reduction of meat consumption, given the significant environmental footprint associated with its production processes (Kumar et al., 2022; de Oliveira Padilha et al., 2022). In response to this, a variety of meat alternatives have emerged on the market, offering consumers more sustainable choices of food. One such alternative is cultured meat, which is produced in a laboratory to mimic the taste and properties of conventional meat. Cultured meat has the potential to provide a more sustainable method of meat consumption, addressing both environmental concerns and the rising demand for meat due to population growth (Heijnk et al., 2023; United Nations [UN], 2019). However, despite its potential benefits, cultured meat remains a novel and somewhat controversial product, with many consumers expressing scepticism about its safety, taste, and ethical implications (Bryant & Barnett, 2019; Siddiqui et al., 2022; Weinrich et al., 2019). Therefore, understanding the factors that influence consumer willingness to adopt new food products like cultured meat is crucial (Onwezen et al., 2020).

Given the lack of prior experiential knowledge about cultured meat and the fact that it is a novelty to most of the population, trying this alternative food product could result in unexpected and negative consequences, or potentially even pose risks. Hence, the question arises whether individuals who consciously seek out novel experiences and accept risks to enrich their lives are more inclined to try cultured meat. Two factors associated with these tendencies are openness to experience and psychological richness. Both personality traits focus on the desire to undergo new experiences and encounter novel situations, representing related yet distinct constructs. While openness to experience has already been thoroughly

examined across different dimensions, however, little is known about psychological richness as it is a relatively new construct in research. For instance, it remains unclear whether psychological richness solely pertains to general life strategies or also to more specific decisions such as individuals' eating habits and food choices. In fact, the close relationship between psychological richness and the inclination to seek transformative experiences, along with the willingness to embrace not only positive but also negative experiences (Oishi et al., 2020) could play a crucial role in explaining consumers' food choices and their decisions regarding whether to try cultured meat. However, the relationship between psychological richness and eating behaviour has not been investigated yet and represents a gap in research.

Hence, this study aims to explore whether psychological richness is associated with an increased willingness to consume cultured meat, and whether its influence on individuals' dietary behaviour exceeds that of openness to experience. Such findings would have far-reaching implications, both for the research in the field of nutrition and for understanding psychological richness itself, enhancing not only the understanding of this emerging concept but also shedding light on the psychological factors that drive consumer behaviour and individuals' food choices.

Climate Change and Meat Consumption

Climate change poses a profound and urgent challenge to the global community, representing one of the most critical issues of our time. Primarily driven by human activities releasing greenhouse gases into the atmosphere, climate change has far-reaching consequences that extend beyond rising temperatures (Abbass et al., 2022; Al-Ghussain, 2018). Besides environmental impacts such as more frequent extreme events (Zittis et al., 2022) and rising sea levels (Shukla et al., 2017), the ever-increasing global warming is also affecting human health (Cromar et al., 2022; Rocque et al., 2021), disrupting economic stability (Diffenbaugh & Burke, 2019), and leading to less liveable conditions for future generations (Sanson et al., 2019), among others. Thus, mitigating climate change has become

one of the most important objectives of humankind within the last few years. One way of curbing the rate of global warming is to reduce meat consumption, since industrial livestock production is a significant contributor to these greenhouse gas emissions and requires extensive resources (Crippa et al., 2021; González et al., 2020; Kumar et al., 2022).

Nonetheless, the demand for meat is intensifying as the world's population continues to grow and, according to predictions of the United Nations (2019), will increase by around 30% until the year 2050. This escalating demand places additional stress on ecosystems, prompting concerns about the sustainability of current agricultural practices. Additionally, meat consumption is linked to adverse health effects, including cardiovascular diseases and cancer (Godfray et al., 2018; Micha et al., 2010), and it is viewed adversely in terms of animal welfare and ethical considerations (Pfeiler & Egloff, 2018).

In response to these challenges, new protein sources such as plant-based meat alternatives, insects and cultured meat have emerged as possible substitutes of conventional meat (He et al., 2020; Onwezen et al., 2021). Initially marketed as niche products appealing to vegans and vegetarians, these non-animal-based alternatives are becoming more and more appealing to the broader population as the food demand is worldwide on the rise and the necessity of reducing conventional meat consumption is acknowledged (Curtain & Grafenauer, 2019; Slade, 2018).

Cultured Meat

One possible alternative to conventional meat is the so-called cultured meat. Cultured meat, also referred to as clean, synthetic, in-vitro or lab-grown meat, is produced by cultivating muscle cells in a laboratory setting. Stem cells extracted from a living animal are stimulated with a nutrient serum, resulting in the growth of muscle cells, which are then developed into tissue (Heijnk et al., 2023; Post et al., 2020). Whereas traditional alternatives strive to approximate the taste and texture of real meat, cultured meat aims to create an identical substitute by fully replicating its characteristics in terms of colour, nutrition, flavour,

aroma, texture, and palatability (Weinrich et al., 2019). Although concerns have been voiced about the potential impacts of cultured meat on established farming traditions and societal acceptance (Bryant & Barnett, 2019), it offers multiple benefits for the environment, animal welfare, global food security, and public health compared to conventional meat.

Sustainability

Given that its production processes are still in the developmental stage, uncertainty exists surrounding the overall sustainability of cultured meat. However, preliminary assessments suggest that it requires less land area, utilises less water, contributes to less deforestation, and emits fewer greenhouse gases than conventional meat production (Böhm et al., 2017; Tuomisto & de Mattos, 2011). Although the energy consumption in the production of cultured meat is higher than in the traditional meat industry, the use of decarbonized energy generation and renewable energy sources would nevertheless allow for cultured meat having a smaller environmental impact and higher sustainability factor than the traditional meat production processes (Dupont & Fiebelkorn, 2020).

Health

Cultured meat furthermore has the potential to offer advantages in terms of human health. These include a reduced fat content of the product, providing a healthier dietary option; the capacity to tailor nutrient profiles to meet specific needs; and the absence of antibiotics, making it a wholesome alternative to traditional meat. By minimising the risks associated with diseases related to meat consumption, cultured meat therefore aligns with the growing awareness of the importance of diet in preventing various health issues and contributes to public health (Böhm et al., 2017; Dupont et al., 2022; Siddiqui et al., 2022).

Animal Welfare

In terms of ethical considerations, cultured meat stands out as a more animal-friendly option than conventional meat. While the beginnings of cultured meat production were characterised by the use of foetal bovine serum for the expansion of cells, new serum-free

alternatives significantly reduce animal suffering and the number of animals slaughtered. Since cultured cells lack a nervous system, they are incapable of experiencing any kind of pain, which could furthermore broaden cultured meat's appeal amongst vegetarians and vegans as it preserves their values regarding animal welfare and ethical standards (Chriki & Hocquette, 2020; Stout et al., 2022).

Technological Challenges

Notwithstanding the potential benefits of cultured meat, technological challenges still hinder its large-scale production. Presently, the production processes are not advanced enough to facilitate the widespread availability of cultured meat in supermarkets at a reasonable price. Further research is needed to enhance technological efficiency, reduce resource inputs, and fortify the robustness of the production processes (Dupont & Fiebelkorn, 2020; Heijnk et al., 2023). However, its launch in the EU is expected within the next five years since numerous companies around the globe are currently producing cultured meat and preparing themselves to enter the market (Beef and Lamb New Zealand, 2018; Weinrich et al., 2019).

Next to technological advancements and corporate investments, however, consumer acceptance is predicted to be a major challenge in developing a market for cultured meat.

Consumer Acceptance

In general, consumer acceptance is a significant factor for the success and adoption of new technologies in agriculture and food production. Whereas in most domains advances in technology are generally perceived positively, the food sector presents a unique challenge since numerous consumers view the adoption of food technologies as conflicting with the production of healthy, nutritious, and flavourful food. Moreover, in contrast to other fields, newer technologies in the food sector simply expand existing production processes instead of supplanting older systems, obviating the necessity for consumers to adopt innovations (Siegrist & Hartmann, 2020). Considering the influence of meat consumption on the

environment, human health, and animal welfare, it is thus crucial to understand consumers' willingness to adopt alternative proteins in their diet.

Indeed, when it comes to cultured meat, consumer attitudes are often ambivalent. While several studies suggest a positive inclination of consumers toward cultured meat, alternative substitutes, in general, are less accepted than traditional meat. Regarding various meat-free options, prior findings show that plant-based substitutes are most favoured, cultured meat comes second and insect protein is least preferred (Onwezen et al., 2020). In general, cultured meat is typically perceived as less healthy, safe, nutritious, and affordable compared to real meat and most meat-free alternatives (de Oliveira Padilha et al., 2022). Accordingly, data from a variety of surveys indicate a willingness to purchase and try cultured meat among a broad range of 11-66% of respondents, although these attitudes remain malleable, influenced by both positive and negative information (Bekker et al., 2017). Discrepancies in these results may be explained by differences in how cultured meat was described in the undertaken studies or in the sample compositions. For example, Bryant and Barnett (2019) have shown that less technical names used for describing cultured meat, such as clean meat or animal free meat, result in significantly more positive attitudes toward the product than terms such as lab-grown meat.

Apart from that, socio-cultural, socio-demographic and psychological factors have been found to significantly determine consumer acceptance (Siddiqui et al., 2022; Wilks & Phillips, 2017).

Socio-Cultural and Socio-Demographic Factors

Cultural differences and varying worldviews are key determinants for consumer acceptance, shaping how individuals perceive the concept of cultured meat. For example, the willingness to consume cultured meat is not uniform globally as a higher acceptance has been observed in the United States and China compared to Europe; within Europe a higher

acceptance has been examined in Germany compared to Italy, Spain or the United Kingdom; and the lowest acceptance has been monitored in South America (Siddiqui et al., 2022).

In terms of dietary restrictions, some argue that cultured meat could be a product free from any religious affiliations while others still question whether it meets the conditions of being halal or kosher (Bryant, 2020). Political affiliations contribute to the divide in acceptance, with socially conservative individuals often exhibiting a more negative attitude towards cultured meat, and those leaning liberal or left generally viewing it as a suitable alternative (Wilks & Phillips, 2017). Furthermore, individuals with higher income levels tend to exhibit more unfavourable attitudes toward cultured meat, whilst findings regarding gender are inconclusive. Although several studies have shown that males generally display a greater openness to the idea of cultured meat, others have not found a difference between the sexes (Dupont & Fiebelkorn, 2020; Heijnk et al., 2023; Slade, 2018; Weinrich et al., 2019; Wilks & Phillips, 2017; Wilks et al., 2019). Nevertheless, a younger age, good education and a residence in an urban area are strong predictors of showing greater acceptance towards the novel food product (Heijnk et al., 2023; de Oliveira Padilha et al., 2022; Slade, 2018; Wilks & Phillips, 2017). Also, studies have shown that dietary habits influence acceptance, with omnivores and those with increased meat consumption displaying greater receptivity to the concept of cultured meat (Circus & Robison, 2019; de Oliveira Padilha et al., 2022; Wilks & Phillips, 2017). In contrast, vegans and vegetarians generally express a lower willingness to try cultured meat but are nonetheless more likely to recognize it as an acceptable substitute for conventional meat than omnivores (Heijnk et al., 2023; Wilks & Phillips, 2017).

Psychological Factors

Consumer acceptance of cultured meat is furthermore affected by psychological variables such as individual attitudes and preferences. For example, consumers with more environmental consciousness and climate concerns have been found to show greater

acceptance of cultured meat, as well as individuals with heightened concerns for animal welfare (Heijnk et al., 2023; Slade, 2018; Wilks & Phillips, 2017).

In terms of the Big Five personality traits (Costa & McCrae, 1992), especially openness to experience, which is typically associated with a greater willingness to stand out from the crowd, a stronger preference for novelty seeking and higher levels of curiosity and interest (Christensen et al., 2018; Gocłowska et al., 2019; McCrae & Costa, 1997), has been found to be associated with an increased willingness to try cultured meat (Bates et al., 2023). In fact, studies have shown that openness to experience not only correlates with an increased receptivity to new or controversial food products in general, but that it also goes hand in hand with a greater inclination to reduce one's meat consumption (Bates et al., 2023; Lin et al., 2019; Reist et al., 2023; Pfeiler & Egloff, 2018, 2020). Additionally, it has been found to be negatively related to food neophobia (Knaapila et al., 2011; Nezlek & Forestell, 2018), the "reluctance to eat, or the avoidance of, new or unknown foods" (Faccio & Guiotto Nai Fovino, 2019, p. 3).

Given that cultured meat represents a novelty in the food industry and numerous consumers are still ambivalent about this product, openness to experience has thus emerged as a key factor in terms of the willingness to try the new meat alternative and explaining individuals' consumption decisions (de Oliveira Padilha et al., 2022; Onwezen et al., 2020). This becomes even more pronounced when considering the inconclusive results regarding associations between meat consumption and other personality traits such as extraversion, conscientiousness, or agreeableness, as openness to experience has been the only factor to produce consistent findings across all studies so far (Bates et al., 2023; Keller & Siegrist, 2015; Pfeiler & Egloff, 2018, 2020; Reist et al., 2023; Tan et al., 2021). Nonetheless, a relatively novel concept in research may offer promising new insights into which personality traits influence consumer decisions, namely the characteristic psychological richness.

Similarly to openness to experience, psychological richness is characterised by a strong willingness to engage in a diverse range of experiences, as well as an increased intention to explore and risk-seeking behaviour. Although psychological richness has primarily been studied in the context of travel (Oishi et al., 2021) and the humanities (Oishi et al., 2019; Westgate & Oishi, 2021), it can thus be assumed that it is related to eating habits as well. Whereas numerous studies have already explored the connection between openness to experience and dietary choices, however, psychological richness has not been investigated in the context of food consumption yet. Thus, exploring this personality trait in more detail might provide further insight whether individuals who accept risks and potentially negative feelings to broaden their experiences are also more willing to try unfamiliar foods such as cultured meat.

Psychological Richness

Traditionally, science has defined a good life as being composed of two components, namely eudaimonic and hedonic well-being. Whereas eudaimonic well-being is often associated with meaning and emphasises a life of purpose, engagement, and fulfilment of one's true potential (Ryan & Deci, 2001; Vittersø, 2016), hedonic well-being, in contrast, centres on the pursuit of pleasure, positive emotions and life satisfaction, and is often compared with the concept of happiness (Diener et al., 2018). However, more recent research has provided evidence that psychological richness goes beyond the dichotomy of eudaimonia and hedonism and introduces a third dimension to the understanding of a good life.

The theory of psychological richness suggests that individuals who engage in a diverse range of captivating experiences tend to have a more fulfilling and enriched psychological well-being. Psychologically rich individuals actively seek out new and varied experiences, allowing them to broaden their perspectives, challenge their beliefs and change their values (Oishi et al., 2021; Oishi & Westgate, 2022). While both happy and meaningful lives centre around positive key features, they can still give rise to feelings of monotony and repetition

when individuals experience a lack of new and varying activities. Psychological richness, however, actively combats this monotony by focusing on a wide array of diverse and challenging experiences (Oishi et al., 2020). Due to the broad range of situations they encounter, individuals high in psychological richness thus usually do not live a boring life but, quite the contrary, are able to narrate inspiring and entertaining stories (Oishi et al., 2019). Hence, a psychologically rich life is preferred by those individuals who want their beliefs to be challenged and their worldview to be broadened (Oishi and Westgate, 2022).

Psychologically Rich Experiences

Psychologically rich experiences can both be made direct and first-hand, or through secondary media such as literature, movies, arts and other aesthetic experiences (Besser & Oishi, 2020; Oishi et al., 2019). For example, Westgate and Oishi (2021) have shown that reading literary novels or reflecting about paintings that contain more information than initially expected generate greater psychological richness than simpler tasks. Furthermore, travel adventures such as short journeys or studies abroad, both being connected to novel and challenging situations, significantly enhance psychological richness (Oishi et al., 2021).

While some of these experiences might not always provide pleasure or purpose per se, they often provide an opportunity to question one's beliefs, resulting in a shift in values and forming the basis for a psychologically rich life. Hence, it is emphasized that while the three concepts of psychological richness, eudaimonia and hedonism are interconnected facets of a good life, psychological richness involves more than just striving for happiness and meaning. Opting for a psychologically rich life means engaging in a wide array of activities to experience a change in perspective, even if they result in an unfavourable outcome, risk, or danger. Individuals high in psychological richness are perfectly willing to have negative experiences or encounter risky situations as long as they result in the desired level of arousal and lead to a reassessment of their values (Sunstein, 2023). The difference between psychological richness, happiness and meaning thus becomes evident when considering the

intensity of emotional experiences associated with these concepts. Whereas happiness and meaning tend to amplify positive emotions but mitigate the intensity of negative emotions, individuals with higher scores in psychological richness tend to feel both positive and negative emotions more intensely (Oishi et al., 2020). Despite entailing experiences that might not be entirely pleasant or meaningful, however, a psychologically rich life is nevertheless commonly considered as objectively good (Sunstein, 2023).

Outcomes of Psychological Richness

On a very general level, engaging in various activities that alter one's views and highlight the world's diversity often leads to cognitive restructuring, whereby thought patterns, beliefs, and perspectives are transformed, as well as to taking up more holistic thinking styles. Individuals embracing a life high in psychological richness thus tend to use better problem-solving methods, have a deeper understanding regarding the causes of human behaviour, achieve higher levels of empathy and are more creative. Besides preventing boredom, psychological richness therefore also contributes to one's wisdom and leads to a more profound understanding of oneself and the world (Bae, 2020; Oishi & Westgate, 2022; Wei et al., 2023).

More specifically, however, psychological richness also facilitates dealing with tragic events or serious crises, offering a reservoir of resilience and adaptability. Individuals with high levels in this trait are generally better able to identify positive aspects even in experiences that are neither pleasurable nor purposeful, but still contribute to the richness of life (Oishi & Westgate, 2022). Additionally, psychological richness fulfils the desire for self-expansion by promoting continual personal development. These benefits extend beyond the individual, as the skills developed through psychological richness confer indirect social benefits, for example by contributing to group dynamics, enhancing collective well-being, fostering social change, and embracing transformation (Oishi & Westgate, 2022; Wei et al., 2023; Westgate, 2020). For example, it has been examined that individuals high in

psychological richness are more willing to change their lifestyles and to adopt more sustainable behaviours to cause less environmental damage. Accordingly, psychological richness goes hand in hand with a higher intention to engage in pro-environmental behaviour (Wei et al., 2023).

With regards to personality traits, openness to experience has been found to be strongly correlated with psychological richness, whereby Oishi et al. (2019) argue that this characteristic not only fosters psychological richness but might also be a potential outcome of it. For instance, individuals who perceive themselves as living a psychologically rich life might, as a result, also come to see themselves as more receptive to novel experiences related to openness to experience.

The Study

Since findings have shown that consumers remain sceptical of cultured meat due to limited experience with this product and the possibility of negative consequences or even risks associated with its consumption (Siddiqui et al., 2022), all these factors, behaviours and outcomes associated with psychological richness could be relevant regarding the acceptance of this novel food. Accordingly, the question arises whether individuals who consciously desire interesting and transformative experiences, are willing to take certain risks and accept negative outcomes to enrich their lives also demonstrate an increased willingness to try cultured meat.

As it has been outlined, psychological richness is similar to the personality trait openness to experience since both concepts are associated with a willingness to explore and experience new things (Christensen et al., 2018; Gocłowska et al., 2019; Oishi & Westgate, 2022). However, while a relationship between openness to experience and an increased acceptance of cultured meat and other new food products has already been demonstrated (Bates et al., 2023; Knaapila et al., 2011; Lin et al., 2019; Nezlek & Forestell, 2018), the association between psychological richness and eating behaviour has yet to be investigated,

representing a gap in research. It remains unclear whether psychological richness only pertains to general life strategies or also to more specific decisions such as food product selection. In my study, I thus aimed to examine whether psychological richness influences the consumption willingness of the new and unfamiliar food cultured meat. Due to the aforementioned conditions, I expected an overall positive relation between psychological richness and the willingness to try cultured meat, and thus proposed the following:

H1_a: Individuals with higher levels of psychological richness will exhibit greater willingness to try cultured meat.

Furthermore, I predicted that psychological richness is an even more effective predictor regarding consumers' food choices than openness to experience. I thus expected the following:

H1_b: Individuals with higher levels of psychological richness will exhibit greater willingness to try cultured meat even when individual differences in openness to experience are taken into account.

To test my hypotheses H1_a and H1_b, participants completed a questionnaire designed to measure the extent of their psychological richness, openness to experience and general attitude towards cultured meat. Afterwards, they were presented with both positive and ambivalent reviews of two distinct cultured meat products, followed by an assessment of their willingness to try these foods.

As it has been furthermore demonstrated that individuals high in psychological richness are willing to have negative experiences or encounter unpleasant situations (Sunstein, 2023), it could be assumed that the effect of this personality trait on the willingness to try

cultured meat becomes even more pronounced when participants are confronted with mixed opinions about such food products. I thus expected the following:

H2: The effect formulated in H1_a is stronger when participants read ambivalent reviews of cultured meat products compared to when they read positive reviews of cultured meat products.

Moreover, I conducted additional analyses with regards to the potential influence of the reviews themselves on participants' attitudes. By assessing their scepticism towards online reviews, I aimed to estimate the extent to which participants approached the content with an open-minded attitude or a biased opinion towards online recensions.

Method

Participants and Design

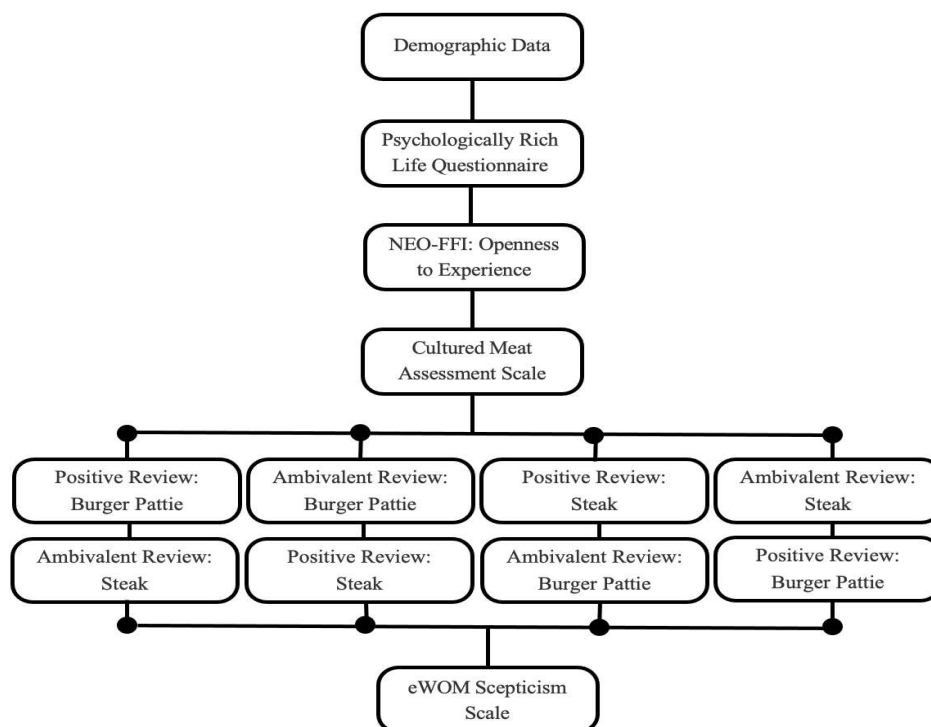
Given the complexity of sample size calculations for Linear Mixed Models (LMMs) and the absence of direct support for them in the programme G*Power, I adopted a simplified approach to estimate the minimum sample size for my study. Since I expected a significant interaction effect between psychological richness and the review type, as well as a significant main effect of psychological richness on the willingness to consume cultured meat, I employed G*Power for a correlation analysis. To detect a small to medium sized effect ($\rho = 0.2$) with $\alpha = 0.05$ and 80% power, the analysis resulted in a minimum sample size of 193.

A total of 270 participants completed the questionnaire, whereby subjects were recruited via social media, snowball sampling and through personal networks. Participants were between 18 and 84 years old ($M_{age} = 39,97$, $SD_{age} = 17,25$) and mainly female (68,91%). The majority of the sample was Austrian (81,27%) and German (15,73%), with most participants categorising themselves as omnivore (39,33%), flexitarian (26,22%) or vegetarian (14,23%). The study was conducted via the online survey tool Unipark (Tivian XI GmbH,

2024), and the questionnaire took 28 minutes on average to fill it out. Both a between and within subject design (illustrated in Figure 1) were implemented in the study, where each participant was randomly assigned to one of four conditions: In conditions one and two, participants first read a positive review about one of two different cultured meat products followed by an ambivalent review of the other product, whereas in conditions three and four the reviews were presented in reverse order. 69 (25,84%) participants were randomly assigned to condition one, 64 (23,97%) participants to condition two, and 67 (25,09%) participants to conditions three and four, respectively.

Figure 1

Overview of the Procedure



To maintain data integrity, incomplete questionnaires and participants who provided answers that were in any way unrelated to the topic were systematically excluded from the analysis. After exclusion, a sample of 267 participants was left.

Materials and Procedure

Form of Consent

Prior to the beginning of the questionnaire, each participant received information about the procedure and aims of the study. It was highlighted that one had to be aged 18 or above to take part in the survey, that participation was voluntary and that termination without giving reasons was possible at any time. Furthermore, participants were made aware that their participation was anonymous and that the acquired data would be used exclusively for the purpose of the study. Each participant signed the informed consent before proceeding with the questionnaire.

Collection of Demographic Data

At the beginning of the study, demographic data concerning participants' age, level of education and nationality was collected. Furthermore, participants were asked to categorise themselves into dietary types, whereas they were given the option to choose between vegan, vegetarian, pescetarian, flexitarian, omnivore or otherwise.

Assessment of Psychological Richness

After demographic data had been acquired, participants completed the Psychologically Rich Life Questionnaire (Oishi et al., 2019; see Appendix B). The scale had a Cronbach's alpha of .9, consisted of 17 items and required participants to indicate, on a 5-point Likert-scale ranging from 1 (*I do not agree at all*) to 5 (*I fully agree*), the degree to which they had enjoyed psychologically rich experiences in their lives up to this moment. For example, participants were asked to express their agreement with statements such as *My life has been full of unique, unusual experiences*.

Assessment of Openness to Experience

Participants then completed the 12 openness to experience items from the NEO Five-Factor Inventory (NEO-FFI), a shortened version of the Revised NEO personality inventory

(NEO PI-R; Costa & McCrae, 1992; see Appendix B) to assess their attitude towards new and unfamiliar experiences. Reliability analyses of the scale yielded a Cronbach's alpha coefficient of .71. Again, a Likert-scale ranging from 1 (*I do not agree at all*) to 5 (*I fully agree*) was used and participants had to rate statements such as *Once I find the right way to do something, I stick to it*. However, I replaced the item *I often try new and foreign foods* with the item *I find it interesting to try new kinds of recreational activities and pastimes* to avoid unintended overlaps with the subsequent Cultured Meat Assessment Scale.

Cultured Meat Introductory Text and Comprehension Check

After completing the aforementioned scales, participants read a short explanatory text about cultured meat, its production processes, taste and texture. To guarantee that they had understood its concept, participants then completed a comprehension check consisting of a multiple-choice question, where they had to indicate what cultured meat is made of. If the question was answered incorrectly, the introductory text was shown once more so that participants could reread the explanation of cultured meat and try again to complete the comprehension check.

Assessment of Attitude towards Cultured Meat

When the comprehension check was answered correctly, participants were administered the 26 items long Cultured Meat Assessment Scale (Bryant & Barnett, 2019; see Appendix B) aimed at evaluating their attitude toward cultured meat. Again, using a Likert-scale ranging from 1 (*I do not agree at all*) to 5 (*I fully agree*), participants indicated their level of agreement with statements such as *Cultured meat is likely to look, taste, smell, and feel the same as conventional meat*. The reliability of the scale was assessed using Cronbach's alpha coefficient, yielding a value of .92.

Reviews and Comprehension Check

Participants were then consecutively presented with one positive and one ambivalent review about two different cultured meat products, a burger patty and a beef fillet steak (see

Appendix C). The wording of the respective positive and ambivalent reviews remained consistent and only the product name was altered accordingly. Participants were explicitly informed that these reviews were hypothetical in nature and supposedly originated from testers participating in market research. To ensure that participants had read the reviews mindfully, they completed a short comprehension check by listing three aspects that were mentioned in the texts. The comprehension check was positioned directly after the reviews on the same page of the survey so that it did not serve the purpose of a memory test and participants were free to check their answers for accuracy.

Manipulation Check and Assessment of Willingness to Consume Cultured Meat

In the next step, participants were asked to indicate on a 5-point Likert-scale ranging from *very negative* to *very positive* how they had perceived the valence of the product reviews. This served as a manipulation check to check whether participants had received the positive and ambivalent as such, respectively. Furthermore, they answered three questions regarding their willingness to consume the cultured meat products they had read about, namely *How curious would you be to try this product?*; *To what extent would you be willing to test this product?*; and *To what extent would you prefer this product over a conventional meat product?* Again, a Likert-scale ranging from 1 (*applies not at all*) to 5 (*applies fully*) was used.

Open-ended Question

Afterwards, participants were asked to indicate what had gone through their head when they had read the reviews. An open-ended question provided participants with the opportunity to articulate their thoughts, with a clear directive that their responses could encompass all aspects of the subject matter.

Assessment of Scepticism towards Online Reviews

At last, participants' attitudes and perceptions regarding online reviews were assessed via the electronic word-of-mouth (eWOM) scepticism scale developed by Zhang et al. (2016;

see Appendix B). The scale comprised nine items designed to capture various dimensions of scepticism, such as the truthfulness of online reviews or their intention. Participants were asked to indicate their agreement with statements such as *Most online reviews are intended to mislead* on a Likert-scale, with response options ranging from 1 (*I do not agree at all*) to 5 (*I fully agree*). The reliability of the eWOM scale was assessed using Cronbach's alpha coefficient, yielding a value of .84.

Data Analysis

For the data analysis I used the software JASP. Although I observed slight violations of normality and skewed distributions in my data, I considered these ignorable given the substantial size of the sample. For all analyses, I set a significance level of $\alpha = .05$.

Results

Preliminary Analyses

The initial step in my study involved conducting a correlation analysis (see Table 1) to assess the relationship between the variables psychological richness, openness to experience, willingness to try cultured meat and scepticism towards online reviews.

Table 1

Correlation Analysis

	Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1.	Psychological Richness	3.93	0.58	—						
2.	Openness to Experience	3.71	0.55	.26***	—					
3.	Cultured Meat Assessment Scale	3.21	0.77	-.05	.27***	—				
4.	Willingness to Try: Positive Reviews	3.41	1.32	-.09	.19**	.83***	—			
5.	Willingness to Try: Ambivalent Reviews	3.27	1.25	-.07	.24***	.81***	.9**	—		
6.	Willingness to Try: Both Reviews	3.34	1.25	-.09	.22***	.84***	.97**	.97***	—	
7.	e-WOM Scepticism Scale	2.94	0.65	.03	-.09	-.37**	-.33**	-.31***	-.33***	—

* = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Consistent with expectations, my findings revealed a significant positive correlation between psychological richness and openness to experience ($r(265) = .26, p = < .001$), as well as openness to experience and the attitude towards cultured meat ($r(265) = .27, p = < .001$). Furthermore, the analysis yielded significant positive correlations between the willingness to try cultured meat and openness to experience in all review conditions ($r(265) = .19, p = .001$; $r(265) = .24, p = < .001$; $r(265) = .22, p = < .001$), as well as the willingness to try cultured meat and the attitude toward this food product ($r(265) = .83, p = < .001$; $r(265) = .81, p = < .001$; $r(265) = .84, p = < .001$). Against expectations, however, non-significant and even slightly negative correlations between psychological richness and the willingness to try cultured meat were shown regarding all review conditions ($r(265) = -.09, p = .111$; $r(265) = -.07, p = .203$; $r(265) = -.09, p = .141$), as well as between psychological richness and the attitude toward cultured meat ($r(265) = -.05, p = .397$). Additionally, significant negative correlations were found between scepticism towards online reviews and the willingness to try cultured meat regarding all review conditions ($r(265) = -.33, p = < .001$; $r(265) = -.31, p = < .001$; $r(265) = -.33, p = < .001$).

Furthermore, I analysed the results of my manipulation check regarding the perceived valence of the cultured meat product reviews. To ensure that the positive reviews were indeed considered as positive and the ambivalent reviews as ambivalent, I compared participants' evaluation of these two review types. I employed a Linear Mixed Model (LMM) where I set the review type as a predictor, the valuation of the reviews as the dependent variable and the subject-ID as random effect. As intended, the analysis revealed a significant main effect of the review type on the perceived valence ($F(1,266.00) = 597.78, p = < .001$), indicating that participants had indeed perceived the positive and ambivalent reviews as such.

Hypothesis Testing

To test my hypothesis H1_a, which posited that individuals with higher levels of psychological richness exhibit greater willingness to try cultured meat, I used the results from

my preliminary analyses. As it has been shown, the correlation analysis (see Table 1) between psychological richness and the willingness to try cultured meat demonstrated non-significant and even slightly negative relationships regarding all review conditions ($r(265) = -.09, p = .111$; $r(265) = -0.07, p = .203$; $r(265) = -.09, p = .141$). Similarly, a non-significant and slightly negative correlation was found between psychological richness and participants' general attitude towards cultured meat ($r(265) = -.05, p = .397$). Therefore, my hypothesis H1_a predicting a connection between higher levels of psychological richness and an increased willingness to consume cultured meat is not supported by the results.

To test my remaining hypotheses, I employed a LMM (see Table 2) where I set the centred variable of psychological richness, openness to experience and review type as predictors, the willingness to try cultured meat as the dependent variable and the subject-ID as random effect.

Table 2

Linear Mixed Model

Effect	Estimate	$F(1,263)$
Fixed effects		
Intercept	3.39	—
Review Type	.06	12.3***
Psychological Richness	-.37	8.29**
Openness to Experience	.65	21.78***
Psychological Richness x Openness to Experience	-.57	5.75*
Review Type x Psychological Richness	-.01	0.17
Review Type x Openness to Experience	-.04	1.73
Review Type x Psychological Richness x Openness to Experience	.08	2.52

* = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Because I hypothesised that individuals with higher levels of psychological richness exhibit greater willingness to try cultured meat even when individual differences in openness

to experience are taken into account, I expected a main effect of psychological richness on the consumption willingness of the new food product. In fact, the LMM did yield a significant main effect, but in the opposite direction ($F(1,263.00) = 8.29$, Estimate = $-.37$, $p = .004$). Psychological richness was negatively related to the willingness to try cultured meat, indicating that individuals with greater levels in this personality trait do not exhibit an increased willingness to try the alternative meat product. In contrast to my expectations, my hypothesis H1_b is thus also not supported by the results.

In terms of my Hypothesis 2, which posited that the effect formulated in H1_a is stronger when participants read ambivalent reviews of cultured meat products compared to when they read positive reviews, the analysis revealed no significant interaction of the two predictors psychological richness and review type ($F(1,263.00) = 0.17$, $p = .679$). This indicates that the review type did not moderate the effect of participants' psychological richness on their willingness to try cultured meat. Therefore, my Hypothesis 2 is also not supported by the findings.

However, my analysis revealed an unexpected significant interaction between psychological richness and openness to experience ($F(1,263.00) = 5.75$, Estimate = $-.57$, $p = .017$). These findings are further specified in Table 3, suggesting that both personality traits exhibit divergent trends on participants' willingness to consume cultured meat and that the effect of openness to experience on the willingness to try cultured meat does not increase but, quite the contrary, rather decreases with higher levels of psychological richness.

Apart from these findings, the interactions between the other predictors did not yield significant results.

Table 3*Estimated Trends*

Psychological Richness	Openness to Experience (Slope)	SE	95% CI	
			LL	UL
-0.58	0.99	.2	0.58	1.4
-9.38×10^{-5}	0.65	.14	0.38	0.93
0.58	0.32	.18	-0.04	0.68

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Additional Analyses

Furthermore, I examined whether participants' scepticism towards online reviews extends an influence on their willingness to try cultured meat. I employed a LMM where I set participants' willingness to try the new food product as the dependent variable, the review type and centred variable of scepticism towards online reviews as predictors, and the subject-ID as random effect. While a significant main effect of scepticism towards online reviews was demonstrated ($F(1,265.00) = 32.66, p < .001$), however, no significant interaction of the review type and participants' scepticism was found ($F(1,265.00) = 1.74, p = .188$). This indicates that the effect of the review type on the outcome was not moderated by participants' sceptical position towards online reviews.

Discussion

The negative environmental and ethical impacts associated with conventional meat production are prompting more and more consumers to cut down on their meat consumption (Abbass et al., 2022; Kumar et al., 2022). Juxtaposed against this trend, however, is the unstoppable growth of the world population, amplifying the demand for meat and challenging sustainability efforts (UN, 2019). Hence, a wide array of non-animal-based protein alternatives has emerged, reflecting shifting consumer preferences towards more sustainable and ethical food choices (de Oliveira Padilha et al., 2022, Siddiqui et al., 2022). One possible

alternative to traditional meat is cultured meat, a product that is grown from cells in a laboratory setting, rather than being sourced directly from animals raised and slaughtered for consumption (Post et al., 2020). Offering potential solutions to the concerns associated with conventional meat production, however, the widespread adoption of cultured meat in the future might encounter significant obstacles regarding consumer acceptance, including hurdles related to perceptions of naturalness and apprehension stemming from the unfamiliarity of the product (Siddiqui et al., 2022).

Due to the limited experiential knowledge about this new product and the potential drawbacks or risks associated with trying cultured meat, consumers remain sceptical about embracing this alternative protein (de Oliveira Padilha et al., 2022; Onwezen et al., 2020). Hence, the question arises whether individuals who actively seek new experiences in life and consciously accept potentially associated risks are more inclined to consume novel foods like cultured meat. In this context, personality traits such as openness to experience and psychological richness have become particularly relevant, as these factors are associated with a heightened propensity for exploration, a desire to experience new things and risk-seeking behaviour (Christensen et al., 2018; Gocłowska et al., 2019; Oishi & Westgate, 2022). While openness to experience has already been extensively researched and linked to greater acceptance of cultured meat as well as other meat alternatives (Bates et al., 2023), however, there is yet limited research on psychological richness. For example, it remains unclear whether psychological richness only pertains to general life strategies or also to more specific situations and decisions, such as individuals' food choices. The absence of exploration into the relationship between psychological richness and dietary behaviour thus represents a gap in current research. Accordingly, the aim of this study was to investigate whether psychological richness, like openness to experience, is associated with an increased willingness to consume new foods such as cultured meat, and whether its effect might even surpass that of openness to experience.

As such, the present study makes significant contributions to two key domains of research: firstly, it adds to the body of literature exploring psychological richness, delving into its implications across various contexts and domains of human behaviour and cognition; secondly, it enhances understanding within the realm of dietary behaviour research by investigating the influence of personality traits on individuals' dietary choices and preferences.

To explore my hypotheses, I conducted an online survey to measure participants' level of psychological richness, their openness to experience, attitude towards cultured meat and scepticism towards online reviews. They were presented with both positive and ambivalent reviews of two cultured meat products, followed by an assessment of their willingness to try these foods. I expected a positive relationship between psychological richness and the willingness to try cultured meat, not only because individuals high in this personality trait like to explore, experience new things, take risks and want to change their way of thinking, (Oishi et al., 2020; Oishi & Westgate, 2022), but also because psychological richness has been linked to the inclination of adopting a pro-environmental lifestyle and to an embracement of alternative ways of living (Wei et al., 2023).

Contrary to my hypothesis, however, the willingness to try cultured meat does not increase with rising levels of psychological richness. Although psychological richness has been found to be associated with a desire to experience both positive and negative situations in domains such as travel (Oishi et al., 2020), music and literature (Westgate & Oishi, 2021), or sports (Oishi et al., 2019), there appears to be no link to eating behaviour. Potential reasons for the absence of a significant correlation between psychological richness and the willingness to try cultured meat could include the unique nature of food in general, compared to broader subjects such as culture or the humanities, or the specificity of cultured meat itself.

For example, concerns regarding the societal implications of cultured meat could have overshadowed individual preferences regarding the desire to live a psychologically rich life.

In fact, the analysis of the responses from the open questions in my survey has revealed that several participants raised questions concerning the necessity of cultured meat and its potential impacts on the future of farmers and agriculture. Hence, participants might not have primarily based their answers regarding their willingness to consume cultured meat on their taste preferences or desire for novel and enriching experiences. Instead, negative concerns regarding monopolies in the meat industry and the relevance of the new food product on the market could have been of paramount importance. Since these aspects pertain to broader societal problems rather than to individual interests of undergoing new experiences, however, participants' answers regarding their willingness to consume cultured meat might not have reflected their level of psychological richness but rather their concerns in terms of the society's future. The overshadowing impact of participants' worries with regards to changes in current agricultural practices and on the economy thus might have led to a distortion in the results and could explain the lack of a significant correlation in my findings.

This assumption would be consistent with further insights that have emerged from analysing the written statements participants were asked to give after the reviews since several individuals addressed the unclear sustainability aspect of cultured meat. Although it has been shown that cultured meat demands smaller land area and releases fewer greenhouse gases than the traditional meat industry, it has also been found to have a higher energy consumption (Dupont & Fiebelkorn, 2020). As the production processes of cultured meat are still not widely applicable, the ambiguity in the sustainability profile of this new food product therefore could have deterred participants who value a sustainable lifestyle. Accordingly, concerns regarding the societal and global impacts could have outweighed individual interests to undergo new experiences and would thus also not necessarily contradict prior research findings that psychological richness is linked to higher pro-environmental behaviour (Wei et al., 2023).

Since psychological richness is strongly associated with both positive and negative emotions (Oishi et al., 2020), I furthermore expected that the effect of psychological richness on the willingness to try cultured meat becomes even more pronounced after participants read ambivalent instead of favourable reviews of respective food products. I chose to include only positive and ambivalent reviews in my study for reasons of cost-effectiveness. Introducing a negative review option would not only have increased the workload for participants in completing the questionnaire but also presented economic disadvantages in terms of data analysis. Although the results of my analysis have shown that participants perceived the two reviews differently in terms of valence, however, the review type had no influence on their willingness to try cultured meat. Indicating that the intended manipulation did not succeed, it thus did not make a difference whether the cultured meat products were promoted in a positive or ambivalent manner since participants' willingness to consume the novel protein alternatives did not significantly differ. One possible explanation for this arose from analysing the open statements following the reviews, since participants frequently indicated that the favourable reviews appeared unnaturally positive and resembled more of an advertisement than an authentic critique by a market tester. Despite being explicitly informed before the study that the reviews presented to them were hypothetical in nature, the wording of these texts therefore may have influenced participants' responses. However, since I had assumed beforehand that participants may have a certain level of scepticism towards online reviews, I conducted additional analyses to investigate whether this attitude could have biased the results. Nevertheless, the findings of my study revealed that the general scepticism towards online reviews did not influence participants' willingness to consume cultured meat. Therefore, it is possible that participants held a general sceptical attitude towards the food product rather than specifically towards the reviews presented to them.

In contrast, my results do support prior findings that higher levels of openness to experience go hand in hand with an increased willingness to try cultured meat, indicating that

this personality trait is indeed associated with a propensity to embrace unconventional or innovative food options such as cultured meat (Bates et al., 2023; Lin et al., 2019). However, it is precisely for this reason that it is interesting to explore why psychological richness does not predict the willingness to consume cultured meat. In fact, my analysis even revealed that the two personality traits openness to experience and psychological richness exhibit divergent trends on participants' willingness to consume cultured meat. In other words, my results have shown that the influence of openness to experience on the willingness to try cultured meat does not increase but rather decreases with higher levels of psychological richness, suggesting that individuals with high levels of both traits still show lower willingness to try cultured meat than those with high openness to experience but low psychological richness. The causes for these unexpected effects on the willingness to try cultured meat are not clearly discernible.

One possible explanation for the diverging influences of psychological richness and openness to experience on the willingness to try the new meat alternative could be that these two personality traits are associated with opposite lifestyles. In fact, while psychological richness could predominantly be related to a general attitude towards life, openness to experience may also manifest in more specific decisions and immediate choices related to daily activities. For example, individuals high in psychological richness may seek out diverse and complex experiences in various aspects of their lives, such as traveling to different countries, engaging in numerous hobbies, or valuing the aesthetics of art and nature (Besser & Oishi, 2020; Oishi et al., 2021). Their desire for novelty and complexity as well as their willingness to embrace change and uncertainty could thus be reflected in an overall approach to life. On the contrary, openness to experience may not only be associated with a general curiosity, but also with more momentary decisions and sensations such as listening to a new song, choosing a different outfit, or trying a novel recipe. If both personality traits are strongly pronounced, however, the overall effects of psychological richness might counteract the more immediate impacts of openness to experience. Since individuals high in psychological

richness already experience a wide range of situations in their daily life, for example, the mere consumption of a new food product such as cultured meat might not represent a particularly novel incentive for them anymore.

Accordingly, my findings suggest that, despite sharing several similarities, psychological richness and openness to experience nevertheless represent distinct concepts. However, it remains challenging to draw a clear distinction between these two personality traits. In fact, it is possible that psychological richness is something individuals only experience rather than actively engage in, whereas openness to experience could be associated with both factors. In other words, while psychological richness levels might increase with a greater variety of experiences, this trait, unlike openness to experience, may not influence how one lives their life but rather represents a construct embedded in one's personality that can only be reflected upon. Nevertheless, these are mere speculations and would need to be investigated in further studies.

Apart from that, further research areas for future studies would include investigating whether psychological richness is generally not associated with eating behaviour and the willingness to consume new foods, or whether correlations can be found with other, perhaps less controversially discussed products. Additionally, it would be intriguing to explore the connection between psychological richness and the inclination to adopt a sustainable lifestyle more deeply, as Wei et al. (2023) have demonstrated that the personality trait is strongly linked to pro-environmental behaviour. For instance, it would be interesting to examine whether psychological richness influences the willingness to try new food products that are more strongly associated with sustainability than cultured meat. As the consumption of a new food product usually begins within a certain consumer group, exercising an increasing influence on other consumers over time (Higgs & Thomas, 2016), it would furthermore be fascinating to determine whether there are additional or stronger predictors than openness to experience that impact the willingness to consume cultured meat. Hence, it would be

intriguing to explore which personality traits serve as decisive factors regarding the willingness to try new food products, aiming not only to enhance our understanding of consumer behaviour but also to identify strategies for effectively marketing these products to appeal to the general public.

Limitations

It is important to recognize some of the limitations of the current research. One major limitation concerns the generalizability of the results as the finding that psychological richness is not associated with an increased willingness to consume cultured meat cannot be indiscriminately extended to all new food products. Several additional factors would need to be considered in this context, such as the specific characteristics and perceptions of each new food product, cultural differences in food preferences, individual dietary habits, and societal attitudes towards novel food technologies.

Another limitation pertains to the hypothetical setting of the study, since the reviews presented to the participants solely included verbal descriptions of the cultured meat products. As a result, only participants' intention to consume the new food product was assessed, with their actual behavioural decision not being measurable due to the non-existent market availability of cultured meat. Additionally, it is important to note in this context that assessing participants' willingness to consume cultured meat through self-reports, while offering a straightforward method to collect data from a large number of individuals and thus presenting economic advantages, may also have led to biases and yielded invalid responses.

Furthermore, the study design must be addressed. As Bryant and Barnett (2019) have already demonstrated, a different terminology for cultured meat has a significant impact on the perception of this product. Hence, it cannot be ruled out that my choice of wording for this novel food in the general description at the beginning of the questionnaire and in the reviews influenced participants' attitudes. Since psychological richness is strongly associated with a desire for novel experiences and risk-seeking behaviour, the chosen terminology should not

have impacted the effect of the personality trait on the willingness to try cultured meat; nevertheless, it is possible that the phrasing inadvertently changed participants' position on the novel product. With regards to the study design, it is also important to note that I opted to utilize the abbreviated version of the NEO PI-R (Costa & McCrae, 1992) to assess participants' levels of openness to experience rather than the original scale due to reasons of economy. Consequently, nuances within this personality dimension might have been overlooked, potentially impacting the accuracy of the results and the depth of understanding regarding its relationship with psychological richness and food exploration behaviours.

Lastly, the representativeness of the participants must be addressed. While the study encompassed a diverse age range and effectively represented various dietary types, a gender imbalance was observed. Since the sample comprised a notably higher number of women than men, it is important to mention that the generalizability of the findings might be compromised.

Conclusion

In summary, cultured meat can be regarded as a prospective product that, with its mimetic authenticity of real meat, could stand out among numerous protein alternatives and contribute to more sustainable food consumption. Regarding consumer acceptance of new food products, however, it has been demonstrated that psychological richness, which is characterised by an increased intention to seek out new and diverse experiences, is not associated with an increased willingness to try cultured meat, even when individual differences in the similar personality trait openness to experience are taken into account. It remains uncertain whether psychological richness cannot generally be linked to eating behaviour and the willingness to try new foods, or if this relationship is specific to cultured meat products. In line with previous research findings, however, openness to experience was found to be strongly correlated with the tendency to try cultured meat. Furthermore, a significant interaction emerged between psychological richness and openness to experience,

revealing a decrease in the influence of openness to experience on the willingness to try cultured meat as psychological richness increases. These findings emphasize the distinct nature of these two traits, indicating that each exerts unique effects on individuals' food preferences.

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Appendix A: Items

Psychologically Rich Life Questionnaire (Oishi et al., 2019)

1. My life has been psychologically rich.
Mein bisheriges Leben war auf einer psychologischen Ebene reichhaltig.
2. My life has been experientially rich.
Mein bisheriges Leben war erlebnisreich.
3. My life has been emotionally rich.
Mein bisheriges Leben war emotional reichhaltig.
4. I have had a lot of interesting experiences.
Ich habe bisher viele interessante Erfahrungen gemacht.
5. I have had a lot of novel experiences.
Ich habe bisher viele neue Erfahrungen gemacht.
6. My life has been full of unique, unusual experiences.
Mein bisheriges Leben war voller einzigartiger, ungewöhnlicher Erlebnisse.
7. My life consists of rich, intense moments.
Mein Leben besteht aus reichen, intensiven Momenten.
8. My life has been dramatic.
Mein Leben war bisher dramatisch.
9. I experience a full range of emotions via first-hand experiences such as travel and attending concerts.
Ich erlebe eine breite Palette von Emotionen durch direkte Erfahrungen, wie zum Beispiel durch Reisen und den Besuch von Konzerten.
10. I have a lot of personal stories to tell others.
Ich habe viele persönliche Geschichten, die ich anderen erzählen kann.
11. On my deathbed, I am likely to say “I had an interesting life”.
Auf meinem Sterbebett werde ich wahrscheinlich sagen: "Ich hatte ein interessantes Leben."
12. On my deathbed, I am likely to say “I have seen and learned a lot”.
Auf meinem Sterbebett werde ich wahrscheinlich sagen: "Ich habe viel gesehen und gelernt."
13. My life would make a good novel or movie.
Mein Leben würde einen guten Roman oder Film abgeben.
14. My life has been monotonous. (r)
Mein Leben war monoton. (r)
15. I often feel bored with my life. (r)

Ich empfinde oft Langeweile in meinem Leben. (r)

16. My life has been uneventful. (r)

Mein Leben war ereignislos. (r)

17. I can't remember the last time I've done or experienced something new. (r)

Ich kann mich nicht daran erinnern, wann ich das letzte Mal etwas Neues erlebt oder getan habe. (r)

NEO-FFI: Openness to Experience (NEO PI-R; Costa & McCrae, 1992)

1. I often enjoy playing with theories or abstract ideas.

Ich habe Spaß daran, mit Theorien oder abstrakten Ideen zu spielen.

2. I believe letting students hear controversial speakers can only confuse and mislead them.

Ich glaube, dass es Schüler oft nur verwirrt und irreführt, wenn man sie Rednern zuhören lässt, die kontroverse Standpunkte vertreten.

3. I find it interesting to try new kinds of recreational activities and pastimes.

Ich finde es interessant, ganz neue Freizeitbeschäftigungen zu erlernen und zu entwickeln.

4. Once I find the right way to do something, I stick to it.

Wenn ich einmal irgendeinen Weg gefunden habe, etwas zu tun, dann bleibe ich auch dabei.

5. I believe we should look to our religious authorities for decisions on moral issues.

Ich glaube, dass wir bei ethischen Entscheidungen auf die Ansichten unserer religiösen Autoritäten achten sollten.

6. I don't like to waste my time daydreaming.

Ich mag es, meine Zeit nicht mit Tagträumereien zu verschwenden.

7. I am intrigued by the patterns I find in art and nature.

Mich begeistern die Motive, die ich in der Kunst und in der Natur finde.

8. Poetry has little or no effect on me.

Poesie beeindruckt mich wenig oder gar nicht.

9. I seldom notice the moods or feelings that different environments produce.

Ich nehme nur selten Notiz von den Stimmungen und Gefühlen, die verschiedene Umgebungen hervorrufen.

10. I have little interest in speculating on the nature of the universe or the human condition.

Ich habe wenig Interesse daran, über das Universum oder die Lage der Menschheit zu spekulieren.

11. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.

Wenn ich Literatur lese oder ein Kunstwerk betrachte, empfinde ich manchmal ein Frösteln oder eine Welle der Begeisterung.

12. I have a lot of intellectual curiosity.
Ich bin sehr wissbegierig.

Cultured Meat Assessment Scale (Bryant & Barnett, 2019)

1. Eating cultured meat is likely to be healthy.
Das Essen von kultiviertem Fleisch ist wahrscheinlich gesund.
2. Cultured meat is likely to look, taste, smell, and feel the same as conventional meat.
Kultiviertes Fleisch wird wahrscheinlich genauso aussehen, schmecken, riechen und sich anfühlen wie konventionelles Fleisch.
3. I think I could tell the difference between cultured meat and conventional meat.
Ich denke, ich könnte einen Unterschied zwischen kultiviertem Fleisch und konventionellem Fleisch feststellen.
4. Cultured meat is likely to contain chemicals or ingredients which should be avoided.
Kultiviertes Fleisch wird wahrscheinlich Chemikalien oder Zutaten enthalten, die vermieden werden sollten.
5. Cultured meat is likely to be safe for human consumption.
Kultiviertes Fleisch wird wahrscheinlich sicher für den menschlichen Verzehr sein.
6. I would trust cultured meat.
Ich würde kultiviertem Fleisch vertrauen.
7. Cultured meat is unnatural.
Kultiviertes Fleisch ist unnatürlich.
8. Cultured meat is appealing to me.
Kultiviertes Fleisch spricht mich an.
9. I feel positive about the development of cultured meat.
Ich stehe der Entwicklung von kultiviertem Fleisch positiv gegenüber.
10. The idea of cultured meat is disgusting.
Die Idee von kultiviertem Fleisch ist abstoßend.
11. I feel comfortable about the idea of eating cultured meat.
Ich fühle mich wohl mit dem Gedanken daran, kultiviertes Fleisch zu essen.
12. I would be anxious about eating cultured meat.
Ich hätte Bedenken, kultiviertes Fleisch zu essen.
13. Eating cultured meat would conflict with my values.
Das Essen von kultiviertem Fleisch würde im Widerspruch zu meinen Werten stehen.
14. I feel that I would have control over my decision to eat cultured meat or not.

Ich habe das Gefühl, dass ich die Kontrolle über die Entscheidung habe, ob ich kultiviertes Fleisch esse oder nicht.

15. The production of cultured meat is a necessary scientific development.
Die Produktion von kultiviertem Fleisch ist eine notwendige wissenschaftliche Entwicklung.
16. Others would disapprove of me eating cultured meat.
Andere würden es missbilligen, wenn ich kultiviertes Fleisch esse.
17. Cultured meat will have benefits for our society.
Kultiviertes Fleisch wird Vorteile für unsere Gesellschaft haben.
18. Production of cultured meat is wise.
Die Produktion von kultiviertem Fleisch ist vernünftig.
19. Production of cultured meat is necessary.
Die Produktion von kultiviertem Fleisch ist notwendig.
20. Cultured meat is more environmentally friendly than conventional meat.
Kultiviertes Fleisch ist umweltfreundlicher als konventionelles Fleisch.
21. Producing cultured meat poses a risk to society.
Die Produktion von kultiviertem Fleisch birgt Risiken für die Gesellschaft.
22. I would be willing to try cultured meat.
Ich wäre bereit, kultiviertes Fleisch auszuprobieren.
23. I would buy cultured meat regularly.
Ich würde kultiviertes Fleisch regelmäßig kaufen.
24. I would eat cultured meat instead of conventional meat.
Ich würde kultiviertes Fleisch anstelle von konventionellem Fleisch essen.
25. I would rather eat cultured meat than soy-based meat substitutes or Quorn.
Ich würde eher kultiviertes Fleisch essen als andere Fleischersatzprodukte.
26. I would pay more for cultured meat than for conventional meat.
Ich wäre bereit, mehr für kultiviertes Fleisch zu zahlen als für konventionelles Fleisch.

Electronic Word-of-Mouth (eWOM) Scepticism Scale (Zhang et al., 2016)

1. We can hardly depend on getting the truth from most online reviews.
Wir können uns kaum darauf verlassen, die Wahrheit aus den meisten Online-Bewertungen zu erfahren.
2. Online reviews are not generally truthful.
Online-Bewertungen sind im Allgemeinen nicht wahrheitsgemäß.
3. In general, online reviews don't reflect the true picture of a subject.

Online-Bewertungen spiegeln im Allgemeinen nicht das wahre Bild eines Themas wider.

4. Online reviewers care more about getting you to buy things.
Personen, die Online-Bewertungen schreiben, wollen uns dazu bringen, Dinge zu kaufen.
5. Most online reviews are intended to mislead.
Die meisten Online-Bewertungen sind dazu bestimmt, zu täuschen.
6. People writing online reviews are always up to something.
Personen, die Online-Bewertungen schreiben, führen immer etwas im Schilde.
7. People writing online product reviews are not necessarily the real customers.
Personen, die Online- Produktbewertungen schreiben, sind nicht unbedingt echte Kunden.
8. People write online reviews pretending they are someone else.
Personen, die Online-Bewertungen schreiben, geben vor, jemand anderes zu sein.
9. Different reviews are often posted by the same person under different names.
Unterschiedliche Bewertungen werden oft von derselben Person unter verschiedenen Namen veröffentlicht.

Assessment of Consumption Willingness

1. How curious would you be to try this product?
Wie neugierig wären Sie, dieses Produkt zu probieren?
2. To what extent would you be willing to test this product?
Inwieweit wären Sie dazu bereit, dieses Produkt zu testen?
3. To what extent would you prefer this product over a conventional meat product?
Inwieweit würden Sie dieses Produkt einem konventionellen Fleischprodukt vorziehen?

Appendix B: Reviews

Positive Review: Burger Patty

Nachdem ich die Möglichkeit hatte, das neue Burger Pattie aus kultiviertem Fleisch zu probieren, bin ich von dieser bahnbrechenden Innovation begeistert. Dieses Produkt trägt das Potenzial in sich, die Art und Weise, wie wir Fleisch konsumieren, deutlich nachhaltiger und ethischer zu gestalten, und zeigt, wie weit die Fleischalternativ-Technologie in den letzten Jahren gekommen ist.

Der Geschmack des kultivierten Burger Patties war erstaunlich authentisch, denn die saftige Fleischnote und die zarte Textur konnten problemlos mit herkömmlichem Rindfleisch mithalten.

Ein besonders erfreulicher Aspekt ist auch die nachhaltige Komponente dieses Produkts. Die Herstellung von Laborfleisch verbraucht weniger Ressourcen, produziert weniger Treibhausgase und benötigt weniger Land, was in der heutigen Zeit von großer Bedeutung ist. Auch die Tatsache, dass keine Tiere geschlachtet werden müssen, ist ein ethischer Fortschritt.

Alles in allem ist das Burger Pattie aus kultiviertem Fleisch ein spannendes Produkt, das einen positiven Beitrag zur nachhaltigen Lebensmittelproduktion leisten kann. Es kombiniert hervorragenden Geschmack und ethische Verantwortung und stellt eine vielversprechende Option für alle dar, die bewusster und nachhaltiger Fleisch konsumieren möchten.

Positive Review: Beef Fillet Steak

Nachdem ich die Möglichkeit hatte, das neue Rinderfiletsteak aus kultiviertem Fleisch zu probieren, bin ich von dieser bahnbrechenden Innovation begeistert. Dieses Produkt trägt das Potenzial in sich, die Art und Weise, wie wir Fleisch konsumieren, deutlich nachhaltiger und ethischer zu gestalten, und zeigt, wie weit die Fleischalternativ-Technologie in den letzten Jahren gekommen ist.

Der Geschmack des kultivierten Rinderfiletsteaks war erstaunlich authentisch, denn die saftige Fleischnote und die zarte Textur konnten problemlos mit herkömmlichem Rindfleisch mithalten.

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Ambivalent Review: Burger Patty

Als Teilnehmer in der Marktforschung hatte ich die Gelegenheit, das neue Burger Pattie aus kultiviertem Fleisch zu probieren, doch meine Eindrücke sind zwiespältig. Dieses Produkt ist

zweifelloso ein Schritt in Richtung nachhaltigerem Fleischkonsum, aber es gibt noch einige Aspekte, die genauer betrachtet werden müssen.

Geschmacklich betrachtet, ist das Burger Pattie durchaus in Ordnung und zeigt Ähnlichkeiten zu einem traditionellen Laibchen, doch es erreicht nicht ganz die reichhaltige Fleischnote, die man von konventionellem Rindfleisch erwarten würde. Auch die Textur ist nicht schlecht, aber auch hier gibt es durchaus noch Potential nach oben, vor allem bezüglich der Zartheit und Saftigkeit des Burger Patties.

Neben den geschmacklichen Aspekten sind leider derzeit noch die Preise für das kultivierte Pattie recht hoch, was für einige Verbraucher abschreckend sein könnte.

Als eindeutig positiven Aspekt und eine bemerkenswerte Entwicklung sehe ich dennoch die Idee, Fleisch zu produzieren, ohne dass dafür Tiere gezüchtet, verletzt oder geschlachtet werden müssen. Außerdem ist die nachhaltige Komponente hervorzuheben, da kultiviertes Fleisch in ökologischer Hinsicht eine vielversprechende Option für einen bewussteren Konsum darstellt.

Insgesamt betrachtet, stellt das Burger Pattie aus kultiviertem Fleisch eine erfolgversprechende Alternative für umweltbewusste und ethisch orientierte Verbraucher dar. Obwohl es noch Raum für Verbesserungen gibt, könnte es in der Zukunft eine wichtige Rolle im Bestreben spielen, den Fleischkonsum nachhaltiger zu gestalten. Dennoch ist es vor allem bezüglich geschmacklicher Aspekte noch nicht eindeutig vergleichbar mit traditionellen Rindfleischpatties, weshalb hier noch an der Technologie gearbeitet werden muss, um die Authentizität des Produkts zu verbessern.

Ambivalent Review: Beef Fillet Steak

Als Teilnehmer in der Marktforschung hatte ich die Gelegenheit, das neue Rinderfiletsteak aus kultiviertem Fleisch zu probieren, doch meine Eindrücke sind zwiespältig. Dieses Produkt ist zweifelloso ein Schritt in Richtung nachhaltigerem Fleischkonsum, aber es gibt noch einige Aspekte, die genauer betrachtet werden müssen.

Geschmacklich betrachtet, ist das Rinderfiletsteak durchaus in Ordnung und zeigt Ähnlichkeiten zu einem traditionellen Steak, doch es erreicht nicht ganz die reichhaltige Fleischnote, die man von konventionellem Rindfleisch erwarten würde. Auch die Textur ist nicht schlecht, aber auch hier gibt es durchaus noch Potential nach oben, vor allem bezüglich der Zartheit und Saftigkeit des Rinderfiletsteaks.

Neben den geschmacklichen Aspekten sind leider derzeit noch die Preise für das kultivierte Steak recht hoch, was für einige Verbraucher abschreckend sein könnte.

Als eindeutig positiven Aspekt und eine bemerkenswerte Entwicklung sehe ich dennoch die Idee, Fleisch zu produzieren, ohne dass dafür Tiere gezüchtet, verletzt oder geschlachtet werden müssen. Außerdem ist die nachhaltige Komponente hervorzuheben, da kultiviertes Fleisch in ökologischer Hinsicht eine vielversprechende Option für einen bewussteren Konsum darstellt.

Insgesamt betrachtet, stellt das Rinderfiletsteak aus kultiviertem Fleisch eine erfolgversprechende Alternative für umweltbewusste und ethisch orientierte Verbraucher dar.

Obwohl es noch Raum für Verbesserungen gibt, könnte es in der Zukunft eine wichtige Rolle im Bestreben spielen, den Fleischkonsum nachhaltiger zu gestalten. Dennoch ist es vor allem bezüglich geschmacklicher Aspekte noch nicht eindeutig vergleichbar mit traditionellen Rinderfiletsteaks, weshalb hier noch an der Technologie gearbeitet werden muss, um die Authentizität des Produkts zu verbessern.

Appendix C: Zusammenfassung

Angesichts der Umweltauswirkungen der traditionellen Fleischindustrie auf den Klimawandel bietet das Aufkommen von kultiviertem Fleisch eine vielversprechende Lösung zur Minderung der Auswirkungen. Aufgrund der begrenzten Erfahrung mit diesem neuen Lebensmittel und der potenziellen Risiken bzw. negativen Folgen, die im Zusammenhang mit dem Probieren von kultiviertem Fleisch stehen, ist die Einstellungen der Verbraucher gegenüber diesem Produkt jedoch oftmals ambivalent und die Bereitschaft zum Verzehr ist gering. Da die Persönlichkeitsmerkmale Offenheit für Erfahrungen und psychologische Reichhaltigkeit jedoch mit einem erhöhten Wunsch verbunden sind, neue Situationen zu erleben, zielte die Studie darauf ab, zu untersuchen, ob Personen, die bewusst neue Erfahrungen suchen und Risiken im Leben akzeptieren, eher dazu geneigt sind, kultiviertes Fleisch zu konsumieren. Während frühere Forschungsergebnisse Offenheit für Erfahrungen bereits mit einer höheren Akzeptanz von kultiviertem Fleisch in Verbindung gebracht haben, gibt es bislang jedoch nur wenige Erkenntnisse zum Konzepts der psychologischen Reichhaltigkeit. Neben der Datenerhebung zu diesen beiden Persönlichkeitsmerkmalen wurden den TeilnehmerInnen (N = 267) daher positive und ambivalente Bewertungen von kultivierten Fleischprodukten vorgelegt und ihre Konsumbereitschaft wurde untersucht. Die Ergebnisse der Korrelationsanalyse und des gemischten linearen Modells zeigten keine signifikante Beziehung zwischen psychologischer Reichhaltigkeit und der Bereitschaft, kultiviertes Fleisch zu probieren, auch wenn individuelle Unterschiede in der Offenheit für Erfahrungen berücksichtigt wurden. Im Gegensatz zu der Erwartung, dass sich der Effekt der psychologischen Reichhaltigkeit auf die Konsumbereitschaft von kultiviertem Fleisch im Zusammenhang mit den ambivalenten Bewertungen verstärkt zeigen würde, ergab die Analyse darüber hinaus keine signifikante Interaktion zwischen dem Persönlichkeitsmerkmal und dem Bewertungstyp. Eine unerwartete signifikante Interaktion wurde jedoch zwischen

psychologischer Reichhaltigkeit und Offenheit für Erfahrungen gefunden, die eine abnehmende Auswirkung der Offenheit für Erfahrungen auf die Bereitschaft zum Verzehr von kultiviertem Fleisch bei zunehmender psychologischer Reichhaltigkeit beinhaltete. Diese Ergebnisse unterstreichen die Tatsache, dass die beiden Merkmale tatsächlich unterschiedliche Konstrukte mit differenzierten Auswirkungen auf die Ernährungsentscheidungen von Individuen sind.

Keywords: psychologische Reichhaltigkeit, Offenheit für neue Erfahrungen, kultiviertes Fleisch, Lebensmittelpräferenz, Verbraucherakzeptanz