



SIDEA – Società Italiana di Economia Agraria
LIX Convegno annuale

Agricoltura, alimentazione e mondo rurale di fronte ai cambiamenti dello scenario globale: politiche e strategie per la sostenibilità e la resilienza

Marina di Orosei (NU), 21– 22 settembre 2023

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S.P.6. ROLE AND OBJECTIVES OF AGRICULTURAL POLICY

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Millennial consumer analysis of novel food purchasing attitudes: an application of the Means-End Chain (MEC)

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Keyword: Food consumption analysis, novel food, millennials, means ends-chain (MEC), food globalization

INTRODUCTION TO THE TOPIC

The phenomenon of globalization has transformed the eating habits of consumers together with their greater awareness and attention to food safety, quality, sustainability of supply chains etc. This event process marks a starting point for a real change in consumer choices that seeks the quality of the experience. It affirms a supranational model of food in which tradition and innovation are founded; those expectations mature for an exploratory search for goods and services preferably exclusive, non-standard, recognizable. [Branzato A., 2020]

This consumption model has led agri-food companies to direct production according to the needs expressed by groups of consumers, developing products with heterogeneous and detailed attributes: not only in function of sensory and nutritional aspects but also with respect to the so-called "*credence*" attributes, in an attempt to address an increasingly informed, trained, aware and demanding consumer profile; For this reason, companies tend in their strategies to focus not only on the product as it is, but to favour the criteria that guide consumer choices from time to time.

Studies on the increase in the consumption of organic food and the willingness of consumers to pay are numerous [Gracia et De Magistris, 2008; Pellegrini et Farinello, 2009, Bellini, 2011, Ceccacci, 2013]. As the literature confirms, novel food products respond on the one hand to the needs of modern consumers who are increasingly attentive to food with a high content of services and sustainable lifestyles, and on the other hand to the UN Sustainable Development Goals, referring to the ability that innovative production processes, the use of renewable and less impactful energy and protein sources, are more sustainable and enable, to those who choose them, greater participation in reducing the effects of food choices on the environment.

In the light of the changes that the food market is going through, the research object aims to identify what is, today, the need for "food innovation" and which can be considered new foods by the Millennials.

To identify this need, the logical chains, the criteria, which determine the purchasing behavior of a

particular group of consumers, the Millennials, with regard to new innovative food products have been highlighted.

The choice of this group comes from the great interest that the research has towards future consumers whose food demand shows evident differences with respect to the accumulated demand especially because they see in food not only a means of functional satisfaction, but a direct expression of innovative lifestyles characterized by hedonism, sociality, heterogeneity, respect for the environment, economic sustainability.

The attitude analysis of this group of consumers is based on the methodology of the means-ends chains (MEC) applied to the responses to a structured questionnaire administered to a convenience sample of Millennials. The respondents, after having chosen in the questionnaire a certain category of new food from:

- organic products, light, gluten-free, wholemeal,
- laboratory products (in vitro meat),
- products not available in Italy but only abroad,
- IV and V range products,
- any food not consumed in Europe before 1997 (e.g. insects).

As shown from the list suggested by the Milan Map, a new food product can be both a food not consumed in Europe before 1997 and a food characterized by a process or product innovation (organic food, gluten-free, IV and V range products ecc.)

The surveyed people choose the attributes, consequences and values among those proposed and built logical decision chains that determine the purchase. From the data processing of the questionnaire, using the Excel spreadsheet, we traced the profile of the collected sample, identified the categories of novel foods most chosen by Millennials and critically analyzed the most frequent logical-decision chains.

DATA DESCRIPTION AND RESEARCH METHODOLOGY

The MEC is a theoretical model aimed at understanding the decision-making processes that lead the consumer to the choice of a given product. Market researchers use this approach to understand consumers' choices and design advertising and communication messages to induce them to choose their product or brand. A recent study [Barrena R. et Sanchez M., 2013,], applied MEC to analyse consumer Neophobia towards novel foods. It demonstrates that the variation in complexity and associated benefits and values in the novel food choice structure can be linked to the degree of consumer phobia towards novel foods.

The first versions of MEC were introduced by advertising professionals who developed guidelines for the creative process and took as their starting point to investigate what degree of involvement and what type of information processing are typical for marketed products. The first application of the MEC on food consumption dates back to Gutman (1982) who developed this concept, suggesting that consumers use benefits, which in turn contribute to satisfying personal values.

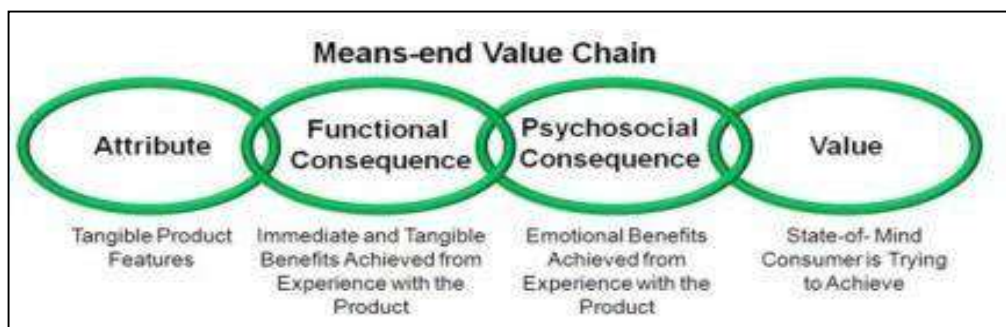
The MEC methodology is a qualitative model which can be conducted with two different

approaches. In the first (hard laddering interview) the interviewee can choose some characteristics or attributes and values to connect according to his own logic. The second approach (soft laddering interview) favors free discussion in an unstructured way in order to deepen the choices made. We used hard laddering interview. In order to define a list of attributes, consequences and values to be presented to the respondents in the questionnaire, a focus group with stakeholder's experts in the agri-food sector (researchers, entrepreneurs, traders, social media managers) has been conducted.

The consumer, therefore, will start from the choice of a *concrete* or *abstract attribute*. He will link the first choice with one or more *personal consequences* and with one or more *personal values*. After this first round the interviewee can choose another attribute and build other chains in the same way (figure n.1). The product is therefore not chosen and purchased for itself, but rather for the meaning that it assumes for the consumer. The main output of the MEC analysis is a Hierarchy-Value-Map (HVM) revealing the most common decision paths that explain consumer behavior.

HVM is a tree diagram in which the frequency of linkage is represented by the dimension of the arrows that connect attributes, consequences and values.

Fig.1: Means-end chain (MEC) from Rockbridge Associates



The questionnaire was administered via social networks (due to Covid-19 restrictions).

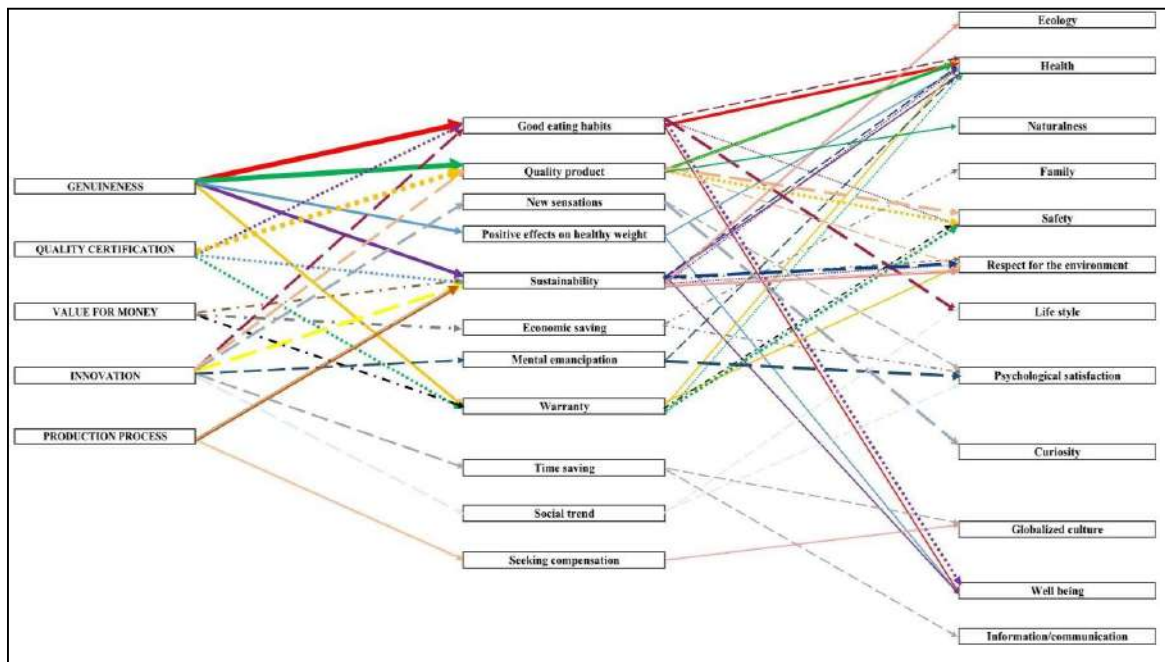
RESULTS AND DISCUSSION

The questionnaire was submitted from 26/10/2020 to 02/11/2020 and we obtained 267 responses. The descriptive analysis drew a socio-demographic profile of Millennial consumers based on their level of knowledge and sensitivity towards sustainable innovation in the food supply chain.

The results showed that, a new food product is an organic, light, gluten-free or technologically innovative product for 78.7% of interviewees.

Each arrow is characterized by a thickness, a typology and a colour: the thickness indicates the frequency of choice, the typology indicates the starting attribute and the color helps the reading of the chains that connect the attributes to the consequences and these to the values.

Fig.2: Hierarchical map of values (HVM)



As the HVM diagram shows (fig.2), the most chosen attributes for novel food in general are genuinity, quality certification, value for money, innovation and the production process.

It emerges that the genuineness of a product (16.5%) is appreciated by Millennials, as a feature "threatened" by the spread of intensive production models and the massive use of chemistry in agriculture. Improving the quality of life is an important objective of the modern consumer, whose consumption patterns have become the expression of their own life style.

The main consequences of those who have chosen genuineness are "good eating habits" (15.9%), "quality products" (18.8%); the values are, "health" (21%) and "safety" (8.7%). In fact, a sort of psychological "palliative" to a more sedentary lifestyle than in the past, caused mainly by the study and the office work that today, also because of the pandemic, is always more "smart", and therefore substantially static.

Another appreciated attribute that drives millennials to buy new food is the certification of quality (11.8%).

The modern consumer has broader parameters than the only typical characteristics of food. This attitude is caused by a greater awareness of the indispensable relationship between health and food, reinforced by the many food scandals of recent years (the Bse case, the dioxin crisis, avian influenza, etc.). The main consequences of those who have chosen certification quality are "quality product" (18.8%) and sustainability (17,6%); the values are, "health" (21%) and "safety" (8.7%). A certified product results in the mind of the consumer in safe, traceable product.

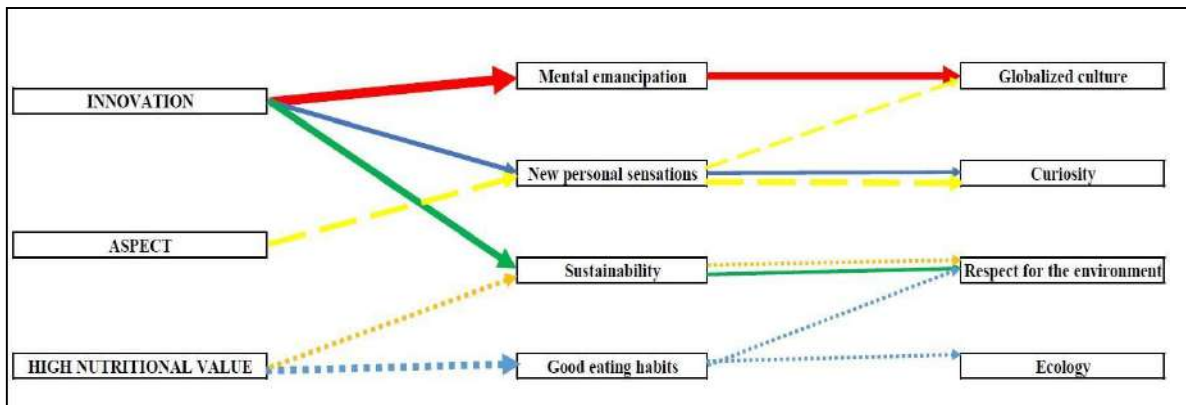
Then we observed the chains of two innovative products: novel food based on insects and burgers invitro

As for insect-based foods, an appreciated attribute was the high nutritional value (12%): in fact,

they represent a good source of energy, amino acids and fatty acids essential for health. Eating insects is a good food habit, as well as an ecological and environmentally friendly choice [Caporale A., 2022,]

Many millennials have appreciated entomophagy by associating it with an innovative food (16.1%) that leads to a status of mental emancipation (13.5%) and globalized culture (17.6%)

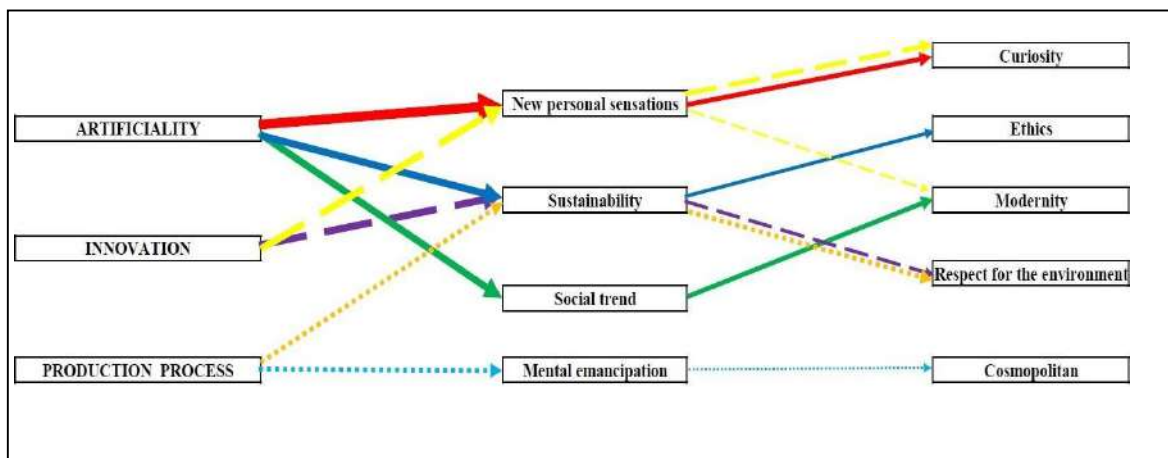
Fig.3: HVM insect food products



Also in vitro meat is considered a novel food whose production technique is based on the ability of stem cells to differentiate and give life to different organic tissues.

The attribute "high nutritional value" in this case is only about 1%, being the nutritional values still little known. Artificiality (28.8%) and innovation (27%) are the most frequent attributes, chosen in order to achieve new personal sensations (21.7%) and high levels of environmental sustainability (17.2%). The artificiality is linked to values such as curiosity (13.5%), ethics (7%) and modernity (13.1%).

Fig.4: HVM synthetic meat



CONCLUSIONS

The results obtained from the HMV hierarchical map of values allow us to highlight how novel food (insects and synthetic meat), are still seen by the Millennials as distant and dystopian realities. Furthermore, these are considered only as elements of curiosity, source of new sensations and emotions.

As emerged from the chains related to "foods of the future", our sample appreciate the attribute "innovation", coherent with their "emancipated" and "globalized" lifestyle.

Policy commitment should be the reduction of the information asymmetry between producers and consumers with the aim of avoiding misunderstandings. Moreover, innovation should be introduced by government tools, respecting the uniqueness and centrality of the agrifood system, in the protection of the multifunctionality of agriculture.

This qualitative study conducted through the Means-End Chain could be useful both as a guide for carrying out quantitative studies aimed at assessing the propensity and interest of Millennials towards novel foods and as a guide for designing ad hoc advertising marketing campaigns.

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