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Food Marketing: The Front-of-Pack Label case and the holistic approach to food Wellbeing

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INTRODUCTION

Since I was a child, I always had a strong passion for food. I always think about it as a form of art and an expression of human creativity. At the restaurant, when I see the waiter arriving with a very beautiful plate in his hand, I start imaging the chef like a painter, who tries to find the perfect balance of taste and colours to create his best artwork.

This passion walks with me also when I travel, and I visit new places. I believe that one of the best ways to discover a culture of a country is to immerge ourselves in the local *cuisine* and take the opportunity to taste different savours and ingredients.

Probably this love for food is also the result of my culinary background and the country I come from: Italy. If you ask any foreign person about our country, he always starts smiling and, with his nice accent, saying: "Pasta, pizza, lasagne!" These are the things that all people around the world associate to Italy and this is our cultural heritage, in addition to our unique artworks.

Last September I left Italy to live in Paris. This experience far from home has increased in my person the commitment to Italian food. It has become the connection to my country when I felt nostalgic about my family, friends and the beautiful landscape of the peninsula. At the same time, Italian restaurants were always there also to celebrate important moment in my Parisian life with my international friends. Indeed, the wonderful dinners we had were not only related to the quality of ingredients and the traditional recipes that make me feel like home, but I always appreciate the experience related to the food. The atmosphere, the way to present food, the authenticity of passion for work that was evident in the attitude of the waiters and in the preparation of the plates, make me think about how food is for Italy an intrinsic part in its DNA. At the same time, I have also realized how food is not only the perfect mix of nutrients and ingredients, but it is a mixture of many correlated elements, like emotions, conviviality, souvenirs, sensations, five senses etc. In effect, I can say that food has always played an important, if not essential, role in my wellbeing and in many occasions, it has improved the quality of moments spent with people.

All these aspects are intrinsic to food and have to be considered in finding the balance to reach our wellbeing.

However, during last years a current of thought has started acquiring importance worldwide: the Front-of-pack (FOP) labelling schemes.

This concept relies on the importance of food nutrients as fundamental elements in evaluating the healthiness or not of a food product. Basing on this idea, many Institutions worldwide have started applying Front-of-pack labels on the packaging of products to encourage people make healthier choices and reduce diseases like overeating or obesity. By the way, the application of these FOPL has generated a negative perception of many categories of food and specifically, of many Italian food products, that have always been considered as high-quality food and now harmful for our health.

This new conception risks to menace not only Italian traditional food, but also the idea to consider food as an experience and not only a box of nutrients. Therefore, here the interest in developing this thesis.

The present work is articulated in 4 chapters, that want to accompany the reader in a journey around food experience and the debate around FOPL. He will discover more about how many different types of FOPL are present today worldwide, which are their limits and he will see how a more holistic approach can become an alternative way to analyse food, instead of the mainstream conception of nutrients, currently adopted by many countries.

More specifically, the first chapter wants to give to the reader an overview regarding latest trends of obesity and overeating, to introduce the reasons why Institutions have decided to develop FOPL. He will then discover the currently debate regarding the Codex Alimentarius and the opposite positions of Italy and supporters of this method. In this chapter he will have also an introduction of a new stream of thought that conceive food more as an experience and as a wellbeing source.

In the second chapter, he will navigate among the history of FOPL to know deeper the differences among these labels and see which their pros and cons are. This recap will also explain what the gap around the labels is, and questions how to overcome it.

The third chapter is the marketing analysis realized with 232 respondents. It will show how pleasure, as the emblem of taste and holistic approach, can enter in the universe of FOPL.

Last chapter is dedicated to the conclusion of the work and the results obtained.

CHAPTER ONE

The objective of this chapter is to introduce the topic of Front-of-pack label and to give to stakeholders an overview regarding the ongoing debate, that involves Italy on one side and Institution like World Health Organization (WHO) and Food and Agriculture Organization (FAO) on the other side. Countries like United Kingdom and France are also involved as active part of the debate and main supporters of these labelling system. At the same time, the other important objective is to give an overview regarding the relationship between food pleasure and wellbeing through a broad lens, especially focusing on experiential and hedonic food consumption.

The stakeholders involved in the discussion and that could be affected by the consequences of the disputation are several:

- Consumers, as first direct category involved. Indeed, the application of FOP labels on food products have the principal aim to influence people in making healthier choices when they are in front of the shelves of the supermarket. We will see therefore which is the impact of these new labelling systems over the perception of healthiness of food, and if the use of these labels is effectively beneficial in educating people towards healthy nutrition;
- Policy makers and Institutions, as the protagonists in determining the rules and the criteria over which the FOP labels are applied. We will analyse the point of view of the two sides of the debate and which are the yardstick that each part considers essential in order to propose the best solution to be applied;
- Scientists and doctors, as professionals involved in the construction of FOP labels. They are the experts implicated in the topic to reinforce with scientific point of view the choices taken by policy makers and Institutions. They are also present in the discussion as opinion formers to strengthen one perspective instead of another;
- Food industry and producers, as the entities that put in practice the FOP labels on the packaging of food products. They can be strongly influenced by this application, as it direct impacts as a judgment over their products. We will see specifically how Italian producers are negatively affected by them in terms of reputation and economic loss. However, we will also discover how they can change this negative perception created

by the “nutrients approach”, showing the points of strengths of their products and their business model;

- Retailers of food products, as distributors of them, that can be influenced positively or negatively by the presence of FOP labelled food on the shelves.

The reader will therefore be conducted among a path that firstly presents some data about the increasing trend of obesity and overeating disorders, to understand why Institution are so alarmed and have put in practice several actions and policies. Then, he will have a recap of the measures adopted by Institutions to reduce the problem and he will be introduced to the ongoing discussion around the Codex Alimentarius, which involves Italy on one side and WHO, FAO and supporters of FOP on the other side. There will be an analysis of both point of view, and more specifically he can see how the focus on two different stream of idea regarding food can lead to two different approach: one focusing exclusively on nutrients and healthiness and one focusing on a more holistic vision, that englobes many other aspects, as the importance of pleasure. This second stream will be therefore presented as an alternative to the “health” vision supported by FOP labels. Then the reader will also have an excursus on how Italians embrace the idea of pleasure food, to see how their approach can be put in practice as a way to promote enduring wellbeing, in contrast with FOP attitude.

1.1 Nutrition and obesity problem: an overview on global trends

Last statistical data of “Food and Agriculture Organization” (FAO) regarding overweight and obesity are alarming: over two billion people are overweight and a third of them (more than 670 million) are obese. According to forecasts, this trend will soon increase and the number of people suffering from obesity will exceed the one that face hunger problems, which in 2017 amounted to 821 million people.[1] Specifically, by 2025, obesity is supposed to increase in 44 countries and if the actual trends doesn’t slow down, 33 of the 53 countries will have an obesity prevalence of 20%[2].

[1] “The head of FAO warns about the "globalization of obesity", calls on the G20 to ensure healthy nutrition” article, FAO www.fao.org/news/story/ru/item/1193886/icode/

[2] Pineda E.a, Sanchez-Romero L.M.a, Brown M.b, Jaccard A.b, Jewell Jc, Galea G.c, Webber L.b, Breda Jc, (2018) Forecasting Future Trends in Obesity across Europe: The Value of Improving Surveillance, Obesity Facts, *The European Journal of Obesity,* 11: 360–371

The problem of obesity affects all range of ages. The institute of World Health Organization (WHO) reports that in 2016: 41 million children under the age of 5, over 340 million children and adolescents aged 5-19 and more than 1.9 billion adults (18 years and older) were obese.[3]

If we reduce our field of interest and we look at European data published in "Health at a Glance: Europe" report, written by the Organisation for Economic Co-operation and Development (OECD) in cooperation with the Commission[4], we discover that increase in obesity has represented a general growing trend in almost all European countries since 2000. Specifically, obesity rate had strongly grew in France, Finland, Ireland, the Netherlands and Sweden, countries where problems of overeating used to be much lower in the past.

Therefore, obesity is a problem affecting people worldwide and of all range of ages, raising concerns of the majority of Health and food institutions in the world.

The General FAO Director Jose Graziano da Silva, during the G20 Agriculture Ministers Meeting in Niigata, Japan on May 11th 2019, commented: "Hunger is the worst form of malnutrition and must be addressed, but we must remember that other forms of malnutrition, such as obesity, also cause great damage to humanity". Specifically, this problem is connected worldwide with loss of productivity and a health care costs of $ 2 trillion each year, that is equivalents to the effects of armed conflicts and smoking.

As reported in the same WHO factsheet, obesity is caused by an energy asymmetry between the number of calories consumed and the ones expended. This disproportion is mainly due by a strong increase of consumption of energy-dense food, high in fat and insufficient physical activity, due to the higher presence of sedentary works, change in the modes of transportation and increasing in urbanization trend. It is interesting to see therefore how lifestyle in developed Countries as changed during last year to have a more comprehensive overview of the problem.

1.2. A new lifestyle that impact on Food consumption

This new lifestyle regarding nutrition and loss of physical activity is analysed also in the publication "Feed in 2030: trends and perspectives" realised by Barilla Center for Food and Nutrition[5]. In the paper the theme of feed is analysed in a more extended socio-economical global context, including aspects that directly or indirectly influence nutritional disorders and

[3] "Obesity and overweight" article, WHO www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight

[4] OECD/European Union (2018), Health at a glance: Europe, 126

[5] Barilla Center for Food and Nutrition, "L'alimentazione nel 2030: tendenze e prospettive"

have to be taken into consideration by Institutions when developing measures aimed at improving the wellbeing of citizens. Indeed, if we consider the post-industrial countries as our target, we are assisting to a general incertitude and anxiety status of people that negatively impact our nutritional behaviour. Due to a general hectic lifestyle and a growing individualisation attitude, that has as a consequence an increasing number of people leaving alone in a single studio, the demand of take-away food or prepared food is significantly rising, causing a deterioration not only in the healthiness of the diet, but also in the conviviality and commensality attitudes, that have always played an essential role in everyday life of people. Therefore, is not only the type of food consumption that has changed, but it is also the way through which food is consumed, which is disrupting the traditional vision of food as connective element among people.

It derives that in order to have a complete overview of the obesity problem and put in practice some effective measures, it is essential to analyse the issue considering the more extended context, that includes thirteen paradigms that influence the actual and the near future nutritional behaviour, as stated in the Barilla publication. These tendencies are interconnected among them and are:

1. "Taste" as pleasure, aimed at reaching a sense of fulfilment and gratification through a culinary experience
2. "Attention to health", in terms of improving the overall well-being of people
3. "Orientation to the past", as the interest in preserving food tradition
4. "Orientation to the future", that emphasises the importance of progress
5. "Technology", as a tool applied to face the needs of a consumer, who is always more exigent in requests
6. "Naturalness", as simplicity and capacity to reduce at the minimum the artificial manipulation of food
7. "Flavours' globalisation", as the influence among different food cultures
8. "Local and regional food", that emphasize the relationship between territory and food
9. "Luxury food", as best quality product and rare food
10. "Low cost food", as fast and available food in big quantities
11. "Speediness", as the need to have easy-to-prepare food due to a shortage in time
12. "Individualisation", in a relationship context

13. "Sustainability", as a conscious consumer, who is caring about the environment and food quality products[6]

All these aspects are of particular interests as they are influencing, and they will influence the future trend of nutrition, raising some fundamental questions that Public Institutions should consider when developing nutrition policies. For example, how it will be possible to reconcile the frenetic lifestyle, typical of our era, with the need of rediscover the importance of conviviality? How research of pleasure, intended as taste, will coexist and could be integrated with the increasing attention for wellbeing? Will anxiety or awareness prevail in food choices? In this complex framework, what will be the role of Institutions and to what extent their involvement will positively impact on people wellbeing?

1.3 The role of Institutions in encouraging Healthy lifestyle and reduce Obesity

As introduced in the paragraph above, obesity is actually alarming as malnutrition. The report of Barilla, mentioned before, states that nowadays for each person that suffers from malnutrition, there are two that are obese or overweight. Death per year due to food shortage are 36milions, while for food excess are 29milions. Considering the fact that this trend has increased three times since 1975[7] and latest data are not reversing the dramatic numbers, governmental and non-governmental institutions have started since the new millennial to adopt various policies that have the objective to reduce overeating and promote a healthier lifestyle.

Specifically, these organizations began to implement different front-of-package (FOP) nutrition labelling systems.[8] The term "Front-of-package" labels (FoPLs) designates efficient tools for increasing consumer's awareness of foods' nutritional quality and encouraging healthier choices.[9] The second policy objective is to encourage the industry to put on the shelfs of the supermarkets products that present healthier options.

These types of labels have been implemented by different stakeholders during the last two decades, but there has been a specific increase in both government and private-sector FOP

[6] Barilla Center for Food and Nutrition, "L'alimentazione nel 2030: tendenze e prospettive"
[7] "Obesity and overweight" article, WHO www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight
[8] "Front-of-package nutrition labelling policy: global progress and future directions", 2018 Public Health Nutrition: 21(8), 1399–1408
[9] Manon Egnell, Zenobia Talati, Serge Hercberg, Simone Pettigrew and Chantal Julia, (2018) Objective Understanding of Front-of-Package Nutrition Labels: An International Comparative Experimental Study across 12 Countries

nutrition labelling policy, that has started with Sweden in 1989. Then, due to a loss of common international agreement regarding national FOP nutrition labelling, many countries have developed their own FOP label, working in collaboration with various multi-stakeholders' groups, including experts, scientists and exponents of the industry. Therefore, even if the principal aim for each type of these labels is to simplify nutritional information presented on-pack to help consumers choose the healthier food and stimulate healthy product reformulation by industries[10], there is a world ongoing debate focusing on what label is the most effective in reporting complex nutritional information.

An important role in this fragmented scenario is played by WHO. In 2004, the WHO first presented the FOP nutrition labelling as a policy measure to improve diet and health.[11] After that, the WHO continued promote the labelling system as essential part of the plan they pursue to face the epidemic of obesity, which includes the Global Action Plan for the Prevention and Control of Non-communicable Diseases[12] developed in 2013 and the Commission on Ending Childhood Obesity [13].

WHO has six regional offices around the world and the WHO Regional Office for Europe (WHO/Europe)[14], specifically, has the aim to improve health conditions in Europe, basing on the WHO European Food and Nutrition Action Plan 2015-2020 and the Rome Declaration on Nutrition. Among the different measures implemented to reach this aim, nutritional and consumer-friendly front-of-pack labelling plays a major role as priority policy issue, highlighted also in Health Evidence Network (HEN) synthesis report of 2018.[15] The report shows the necessity to adopt a single FOPL system to help consumer use and understand the label. Indeed, only in Europe there are 9 different type of FOPL, that vary in terms of type, interpretative elements and assessment of content used to calculate the healthiness of products. This generates a general confusion that WHO/Europe wants to address through a government-

[10] Daphne L. M. van der Bend and Lauren Lissner, 2019 Differences and Similarities between Front-of-Pack Nutrition Labels in Europe: A Comparison of Functional and Visual Aspects

[11] World Health Organization, (2004) Global Strategy on Diet, Physical Activity and Health. Geneva: WHO

[12] World Health Organization (2013) Global Action Plan for the Prevention and Control of Noncommunicable Diseases, 2013–2020.

[13] World Health Organization (2016) Report of the Commission on Ending Childhood Obesity. Geneva: WHO.

[14] It serves the WHO European Region, which comprises 53 countries, covering a vast geographical region from the Atlantic to the Pacific oceans. WHO/Europe staff are public health, scientific and technical experts, based in the main office in Copenhagen, Denmark, in 3 technical centres and in country offices in 29 Member States, http://www.euro.who.int/en/about-us

[15] This report has synthesized information on the development and implementation of interpretive FOPL policies across the WHO European Region in order to support policy-makers in navigating these processes. It was guided by the synthesis question: "What is the evidence on the policy specifications, development processes and effectiveness of existing front-of-pack food labelling policies in the WHO European Region?"

led policy development plan rather than a commercially based system, as consumer perceived them less credible. Moreover, they would like to develop stakeholder engagement and research studies to choose the best policy for the population and exploring solutions to overcome issues with implementation through guidance documents and public education.[16]

This need for a unique nutrition labelling system is also reinforced by the confusion derived by the implementation of Regulation (EU) no 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers. Many legal experts criticize the way through which the topic is analysed, as it amplifies and degrade the already excessive medicalization of food consumption.[17]

Therefore, nutritional labelling is an emotive subject in Europe, with countries that strongly promote FOP labels, as France with Nutri Score or United Kingdom with Multiple Traffic Light system, and countries that openly and vigorously object to this application, with Italy as principal opponent. The debate is still ongoing and now is mainly focused on "The Codex Alimentarius", the "Food Code" adopted by the Codex Alimentarius Commission.

1.4 The Codex Alimentarius: an ongoing debate

The Codex Alimentarius is the most important food standard program promoted by the WHO in collaboration with the FAO. The collaboration between these two organizations dates back to 1950 when FAO/WHO experts started collaborating on areas like nutrition, food additives and related topics . Then, in 1958, with the approval of the European states, the European Council of the Codex Alimentarius Europaeus was founded, and in 1961, during the 11th FAO Conference, the Codex Alimentarius Commission was created with the aim to realize Codex Alimentarius standards to be adopted by countries, where possible.[18]

The principal aim of Codex is to guarantee international food standards, protect consumer health and remove barriers to trade. Among these topics, an important role is played by labelling systems. Specifically, as mentioned in its website, "the Codex Committee on Food Labelling (CCFL) sets standards and guidelines for nutrition information on food packages enabling consumers to make informed food choices".[19]

[16] WHO/Europe, Bridget Kelly, Jo Jewell 2018, Health evidence network synthesis report 61
[17] Luis Gonzales Vaqué, 2016, "Quando la legislazione può essere un ostacolo alla libera circolazione di prodotti alimentari: Il caso del "Semaforo nutrizionale"
[18] Codex Alimentarius timeline, http://www.fao.org/fao-who-codexalimentarius/about-codex/history/en/
[19] http://www.fao.org/fao-who-codexalimentarius/thematic-areas/nutrition-labelling/en/

Although not legally binding, the quality standards adopted by the Codex Alimentarius are recognized as based on solid scientific documentation and have relevant weight for taking decisions. Where appropriate, the World Trade Organization refers to Codex standards in the solution of commercial disputes involving food or food products. These standards are the first element to work on national and regional laws and regulations.

Therefore, Codex represents the principle organization at world level for common guidelines to be applied for FOP labels. Actually, the global growing interest of FOP labels has influenced the creation of many different types of labels that are different in terms of nutrients criteria, colors and format. As mentioned before, each country is trying to create, in collaboration with scientists' team and the feed industry, a FOP label to be implemented at national and global level. However, for the moment there is little evidence to indicate which one is the most effective. Moreover, it is of extremely importance to analyze the pillars under which the idea of FOP label is carrying on, which are the concept of healthiness, balanced diet and consumers' awareness of food. Indeed, the absence of a common view about these fundamental aspects is causing contrasting opinions and debates, that rely also on the cultural differences among countries.

1.4.1 The Italian critics to FOP label and the focus on "quality products"

Last recent discussion has been raised in occasion of the 45th Session of the Codex Committee on Food Labelling, held in Ottawa last May, from 13th to 17th 2019. The discussion already started few days before, when the Permanent Mission of Italy to the International Organization in Geneva raises questions regarding the draft document "WHO guiding principles and framework manual for front-of-pack labelling for promoting healthy diets", that was first written in December 2018 by the Department of Nutrition for Health and Development, and had to be discussed during the meeting in Ottawa.

However, this document has risked being published and spread without the approval of Member State's health officers and experts. Thus, Italy denounced poor transparency, highlighting that the possible publication of it could interfere with the Committee's work[20].

To avoid this risk, the Permanent Representative of Italy to the International Organization in Geneva, Ambassador Gian Lorenzo Cornado wrote a letter to the WHO Director-General to

[20] https://italiarappginevra.esteri.it/rappginevra/en/ambasciata/news/dall-ambasciata/2019/05/oms-comunicato-stampa-sul-documento.html

express his opposition and highlight the lack of transparency and unanimity of the term "nutrient profiles", which is considered by Italy as a political concept without scientific foundation.[21] The Italian ambassador asked to eliminate this definition, as the term is defined both in the draft and in the WHO website as "the science of classifying or ranking foods according to their nutritional composition[22]". Cornado explained that we cannot define " a science" something which is absolutely without foundation, since also the European Food Safety Authority (EFSA), which is a scientific body, stressed the "inherent difficulty in seeking to apply to individual food products nutrient intake recommendations that are established for the overall diet"[23]. Italy supports entirely this vision as it considers the war against single food something that openly attacks the Italian gastronomic tradition without solving obesity and overeating.

Moreover, Cornado called attention to the fact that the criteria under which each front-of-pack label is built are different among them and no country has already published reports regarding the improvements achieved through these policies in terms of obesity rates or healthy trends, demonstrating that there are not based on scientific results. In this letter, he recalled the motion voted last December in Italian Parliament, which states: "It is necessary to avoid the spread of evaluation systems for food products based solely on nutrient profiles or on graphic representations that place unjustified emphasis on the composition of the single product, regardless of the mode and frequency of consumption." Indeed, the theme of "moderation of consumption" is not included in the algorithm of nutrients. This means that there is no specification about the effect of frequency of consumption of food. Therefore, consumers can think, for example, that chocolate is always bad for healthiness, even if they eat two blocks, and fruits are always good and they can eat it without moderation. The system, eliminating the idea of balance and moderation can risk to create an opposite effect: people can start abusing of those food considered "healthy", consuming them without being mindful.

Therefore the position moved by Italy emphasized the necessity to review the entire system, as it does not show improvements in terms of health, but for the moment it has only increased the war against some specific foods and in particular the most typical Italian quality foods, as

[21] WHO - Press release on the draft document "WHO guiding principles and framework manual for front-of-pack labelling for promoting healthy diets" article, https://italiarappginevra.esteri.it/rappginevra/en/ambasciata/news/dall-ambasciata/2019/05/oms-comunicato-stampa-sul-documento.html

[22] https://www.who.int/nutrition/topics/profiling/en/

[23] EFSA, 2008 "The setting of nutrient profiles for foods bearing nutrition and health claims pursuant to article 4 of the regulation (ec) ° no 1924/2006"

gorgonzola, prosciutto di Parma, parmesan and extra-virgin oil that have the red or black label. Furthermore, nutritional experts usually specify that the question is not about healthy or unhealthy food, but it is about healthy or unhealthy diet, as a balance of different type of food.

The strong position taken by Italy in May is the final result of many protests developed during these years by Coldiretti, which stressed the fact that colored front-of-pack nutrition labels reject 85% of Made in Italy products, specifically those with DOP origin, the same products that the Italian institutions has already pushed to promote as symbol of authenticity and high quality food[24].

Fig.1: web article of Italian position against WHO document on FOP labelling

SOURCE: ONUITALIA

1.4.2. The reply of France and United Kingdom, promoters of FOP label and the focus on "nutrients"

However, the reply to the strong opposition of Italy came straight away, especially from France and United Kingdom, as first promoter of FOP labelling system. After the publication of Cornado letter, a group of scientists and professors coming from France, Australia, United Kingdom and Canada published an article against the position taken by the Italian government, declaring that this decision is undermining the WHO report for economic reasons. (fig. 2)

In their view, the report attacked by Italy is in reality a useful way to provide advices regarding how to improve FOP labelling systems in order to spread healthy diets. Moreover, if Italy has

[24] "Ue: Coldiretti, etichetta semaforo boccia 85% made in Italy" article, 2018 www.ansa.it/canale_terraegusto/notizie/istituzioni/2018/05/08/ue-coldiretti-etichetta-semaforo-boccia-85-made-in-italy_632750a8-1971-4256-8d86-8296f5a982b7.html

criticized the definition of "nutrient profile" and has emphasized the importance of food "quality", from the other hand they consider the "quality" aspect not adapt for FOP label, as it can include many dimensions, from the quality of individual ingredients, their cultural roots, their sensory properties, or their nutritional value.[25]

Fig. 2: web article of Italian position against WHO document on FOP labelling

SOURCE: TheLocal.it

To defend the definition of "nutrient profile", they explained that it is more precise than the overall concept of "quality", as the first only focuses on the dimension of nutrition, which is built through decades of scientific studies that connect food, health and nutrients. Furthermore, they point out that these measures of nutrition have the objective to show which foods contain some nutrients that have to be consumed with moderation, so they can be included in the overall diet but with a limit on consumption in terms of frequency and amount. In their opinion, the strength point of FOP labelling system is that it can reduce the gap deriving by the difficulties of consumers to put in practice the food-based dietary guideline on a daily basis and also their challenge in choosing the healthiest product when they are in front of the shelves.

Therefore, the FOP labelling is presented by them as a tool that consumers can use in order to think about the amount of consumption of some specific foods, without undermining the use of it in some cultures.

[25] The Italian government is trying to undermine a WHO report on FOP Nutrition labelling for obvious reasons: typical Italian products don't come out well!, 2019 https://nutriscore.blog/2019/05/12/the-italian-government-is-trying-to-undermine-a-who-report-on-fop-nutrition-labelling-for-obvious-reasons-typical-italian-products-dont-come-out-well/

However, the impact of the colour labelled front of pack has that much of power that consumers, especially in United Kingdom where Traffic light is present, have drastically reduced the purchase of "red food", as parmesan, virgin olive oil and prosciutto di Parma, as considered harmful for health.

In reality, the "Bloomberg Global Health Index" published in 2017 showed that Italy is the healthiest country, as Italian are better in shape than Americans, Canadians and Brits, who all suffer from higher blood pressure and cholesterol and poorer mental health[26]. The reason of their healthiness is the Mediterranean diet, which includes the consumption of a large quantity of vegetables and virgin olive oil, the same oil judged red by Traffic light and orange by Nutri Score[27].

The Mediterranean diet, consisting on balanced and varied food products, has been also indicated by a recent study as a way to reduce depression and improve the wellbeing of a person.

Moreover, if we compare the virgin olive oil's with the Coca Cola's Nutri Score label (fig.3), we see that the virgin olive oil is "orange" for Nutri Score, while Coca Cola is a "green" product[28], raising question about the reliability of the method used.

Fig. 3: Nutri Score label comparison: Virgin Olive Oil and Coca Cola, SOURCE: Open Food Facts

[26] https://www.bloomberg.com/news/articles/2017-03-20/italy-s-struggling-economy-has-world-s-healthiest-people
[27] https://fr.openfoodfacts.org/produit/3178050000725/huile-d-olive-vierge-extra-puget
[28] https://fr.openfoodfacts.org/produit/3348630001101/coca-zero-coca-cola

This example shows that the Italian diplomacy has reliable reasons to oppose itself to the application of Nutri Score and to FOP labels in general. Its capacity to show the limits connected to this labelling system has allowed to stop the approval of the document, as the majority of delegates have agreed on the necessity to have a solid scientific basement, as established by Codex regulation. The decision is thus postponed to next year.

What we can say is that in this debating context it is necessary to analyze the case considering: on one hand, the necessity to develop a common FOP labelling system that gives clear indications to reduce incertitude among what is good and what is not good to include in FOP label, and on the other hand the need to consider the differences among countries and food culture, that cannot be embedded in an unique label.

Another aspect to be taken in mind is the concept of wellbeing, rather than healthiness, in analyzing food consumption and balanced diet. Indeed, this distinction allows to understand better why FOP label, and more specifically Nutri Score and Traffic light, are not the good solutions to reduce obesity and overweight, as they are built on a more limited and restricted view, the one of healthiness, which exclude important aspects as portion size and moderation of consumption.

1.5 The importance of Food-Wellbeing

As seen in the latter paragraph, supporters of FOP label systems rely the question of food all on nutrients, considering them as essential element to judge a food as healthy or not. However, when people sit down around a table to have lunch or dinner, they are not looking for a plate of nutrients, but they are attracted by a bigger concept of food, that connects several aspects as taste, emotions, type of *cuisine*, origin of food, pleasure and community.

Actually, all front-of-pack labels are based on the concept of healthiness, following the scheme "food= nutrients = health", thus eliminating other important aspects as emotions that strongly influence the final perception of food and how the food impact on our wellbeing. For example, if a person follows a strict diet, focused only on nutrients and he suffers from it, he will not have a good relationship with food, and this will influence his wellbeing in a negative way. Furthermore, our body is not only the reflection of what we eat, but it is strongly influenced also by our emotions and how we feel while we consume food.

To be able to take in mind all these important elements, we should pass from the idea of "food as health" to the one of "food as wellbeing" (fig.4), which includes a vision based more on the

positive effect of food, rather than the negative ones that cause restrictions and constraints. This means considering a more holistic view of food as emblematic element in the person's overall wellbeing.

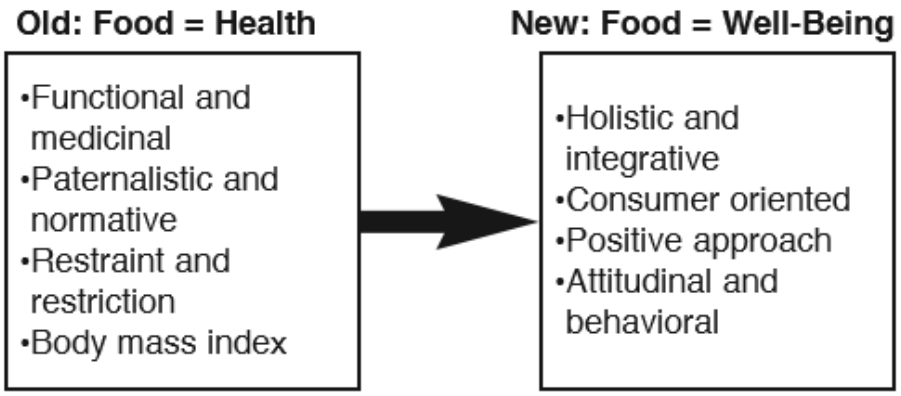


Fig. 4: The Paradigm Shift to Food Wellbeing, SOURCE: From Nutrients to Nurturance: A Conceptual Introduction to Food Well-Being, 2011 Journal of Public Policy & Marketing Vol. 30 (1) Spring 2011, 5–13

This new vision takes into consideration several aspects that allow to change the idea from nutrients to nurturance. "Food wellbeing means a positive psychological, physical, emotional, and social relationship with food at both the individual and societal levels"[29]. This concept allows to understand how food is one of the most important cultural aspects of our life and it is the results of many different aspects that are all linked among them and which contribute to the satisfaction of the human being.

Trying to apply a coloured front-of-pack label on one single food with the claim to summarize its identity through the analysis of the nutrients is something restricting, which ignores important aspects linked to the product itself.

Thereby, there is a need to enlarge the vision considering also the positive connotation that the food consumption has and the impact of emotions. This has been studied by several groups of researches that have introduced the idea of "hedonic consumption", as the mix of multisensory, fantasy and emotive aspects of one's experience with products[30].

[29] Lauren G. Block, Sonya A. Grier, Terry L. Childers, Brennan Davis, Jane E.J. Ebert, Shiriki Kumanyika, Russell N. Laczniak, Jane E. Machin, Carol M. Motley, Laura Peracchio, Simone Pettigrew, Maura Scott, and Mirjam N.G. van Ginkel Bieshaar, 2011 From Nutrients to Nurturance: A Conceptual Introduction to Food Well-Being

[30] Elizabeth C. Hirschman & Morris B. Holbrook, 1982 Hedonic Consumption: emerging concepts, methods and propositions

This definition englobes a series of elements that enrich the simple act of eating. For example, when people are eating, they not only activate the taste, but they involve all the senses in a way that the product is not perceived as an objective entity, but it is more a subjective symbol. It derives that each type of food has a specific meaning for each person and a different impact on his wellbeing. This is due as food wellbeing is the results of the intersections of different dimensions that are described by the FWB (Food Well-Being) Pinwheel (fig. 5), which connects the concept of food to other branch of studies, as anthropology or societal trends, as the growing interest for culinary arts. This system combines these elements on an individual and social level: food availability, food policy, food socialization, food literacy and food marketing.

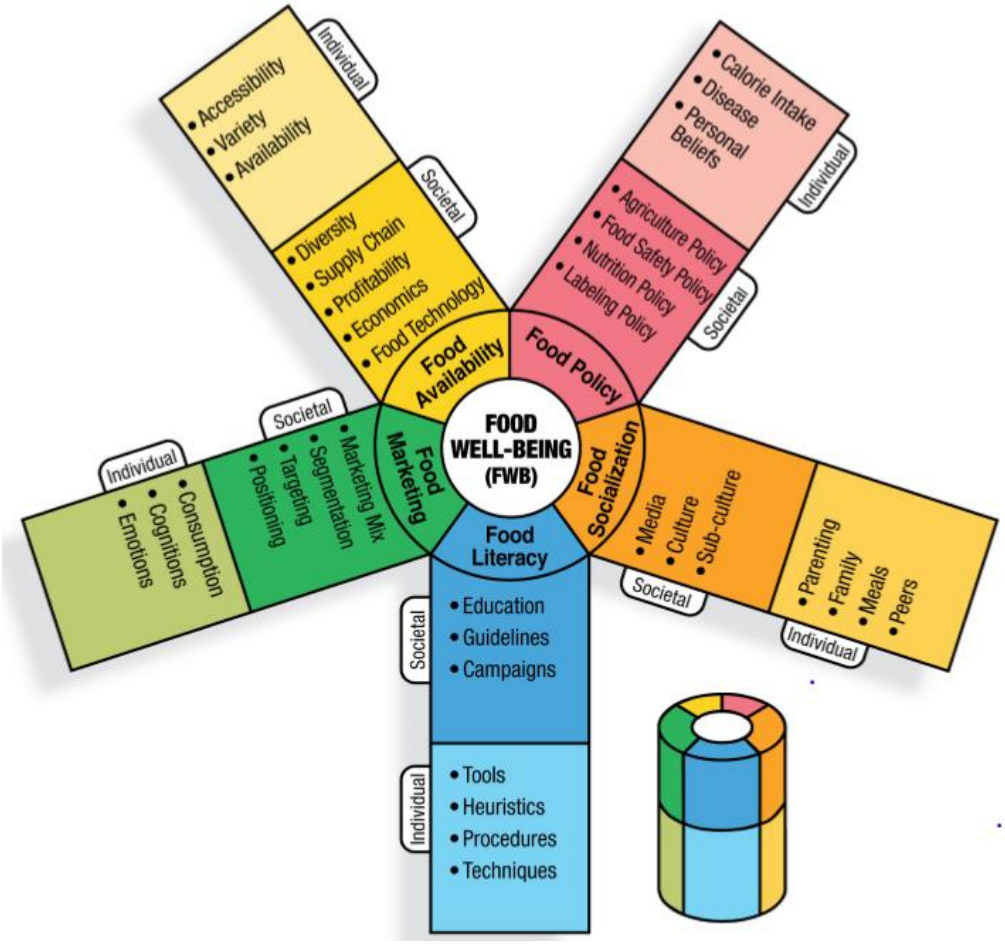


Fig. 5: FWB Pinwheel, SOURCE: Nutrients to Nurturance: A Conceptual Introduction to Food Well-Being, 2011 Journal of Public Policy & Marketing Vol. 30 (1) Spring 2011, 5–13

Specifically, "Food marketing" plays an essential function in the pinwheel, as it can influence the choice of consumers and so the wellbeing, using the marketing mix of 4 Ps: product,

promotion, place and price. For example, packaging is one of the main driver in consumers' choice: it can influence the consumer through verbal description that stimulate food perceptions and choices, also provoking emotions and acting on the senses; it can leverage the amount of food consumed through portion size and images represented on the package, since the more products units are, the more people eat[31].

If we focus our attention on how emotions, and more specifically on how pleasure, impact on food consumption, we can see how it can have a pivotal role in the vision of food as wellbeing.

1.5.1 The Epicurean Pleasure of Food

In particular, there has always been a contrasting vision regarding "pleasure". Especially in the past, food pleasure has been considered as one of the key factors that influences more the visceral impulses which conduct to overeating. This is because pleasure has always been related to a way that people can use to reduce their sadness or momentary pains through food: for example, I was said for my exam, I ate a big slice of cake to reduce my negative feeling. Furthermore, our today society in developed countries is assisting to a shift in eating behaviour, as it is not more related to hunger and satiation, but it can be influenced by external food sensory cues and internal emotions.

Despite this view, a new positive concept regarding "pleasure" has been developed through the idea of "Epicurean" aspects of eating, as "the enduring pleasure derived from the aesthetic appreciation of the sensory and symbolic value of the food"[32].

This type of pleasure is disconnected to the visceral impulse of eating, as it is related, instead, to sensory, symbolic, aesthetic eating moments that accompany the wellbeing through a moderate consumption. Therefore, if visceral attitude is seen as the perfect antagonist to wellbeing and balanced diet, since this impulse causes the consumption of larger quantity of food and overeating problems, the Epicurean pleasure embraces the beauty of eating, without renouncing to pleasure, but conceptualizing it into smaller portions and higher wellbeing.

To resume, visceral eating is something that eaters cannot control as it replies to an urge, so it is not an end in itself, but it is defined as "bodily", "animal", lower-order" pleasure, to distinguish it from the aesthetic and civilized pleasure typical of Epicurean concept.

[31] Madzharov, Adriana V. and Lauren G. Block (2010), "Effects of Product Unit Image on Consumption of Snack Foods," Journal of Consumer Psychology, 20 (4), 398–409.
[32] Yann Cornil, Pierre Chandon, Pleasure as an ally of healthy eating? Contrasting visceral and Epicuren eating pleasure and their association with portion size preferences and wellbeing, 2015, Appetite

Indeed, Epicurean eating pleasure is an end in itself and it is connected to a more holistic view, that englobes pleasure of gastronomy and culinary cultures[33], which are also visible in the increasing presence of food guides, television shows and blogs[34]. This concept of nutrition is consequently the result of many different intercorrelated aspects, as eating rituals (for example unwrap a chocolate bar, improving the pleasantness of the eating experience[35]), inclusion of information as country of origin or quality food level, or the capacity to be focused on the present moment of eating with all senses, which is described by the term "mindful eating".

1.5.2. The Experiential pleasure of food: a journey to develop new educational and marketing actions to promote enduring wellbeing

All these characteristics allow to move away from the restricted view of healthiness, highlighting its limits, and introduce a new way to interpret pleasure food as a key to improve our wellbeing. Specifically, the experiential pleasure of food (EPF) introduces the idea of enduring health and wellbeing, going one step further than epicurean eating pleasure. Indeed, EPF is described as "the enduring cognitive (satisfaction) and emotional (i.e. delight) value consumers gain from savouring the multisensory, communal, and cultural meaning in food experiences" [36].

EPF introduces the importance of "cultural meaning" in food experience, as every country has its peculiarities for food that derive by social norms, values, beliefs that cannot be deleted or not considered when we speak about healthiness and wellbeing, as they are intrinsic part of our life. Therefore, it has no sense to put a red or black label on parmesan or extra virgin oil, as these products are part of Italian gastronomic culture and they are much more than an analysis of nutrients: they are a form of art, as they express the identity and authenticity of Italy. This is the same for cheese and butter in France, or rice spaghetti in China. Every country has its specific and traditional products that empower the culture of the region and that generate pleasure, which is influenced by mindfulness, experiences and consciousness.

[33] Josée Johnston, Shyon Baumann, Democracy versus Distinction: A Study of Omnivorousness in Gourmet Food Writing1, 2007 American Journal of Sociology
[34] Josée Johnston, Shyon Baumann, Foodies: Democracy and distinction in the gourmet landscape, 2014
[35] Vosh, Wang, Gino & Norton 2013, Rituals enhance consumption, Psychol Sci. 24(9):1714-21
[36] Wided Batata, Paula C. Peterb, Emily M. Moscatoc, Iana A. Castrob, Steven Chand, Sunaina Chuganib, Adrienne Muldrowe, 2018 The experiential pleasure of food: A savouring journey to food well-being, Journal of Business Research

The main differences between the nutrient experience concept, supported by FOP developers and the food vision more related to art and aligned with the Italian position, are described in the image below (fig.6):

The EPF framework and well-being.

Food as nutrient experience	Food as art experience
Mundane, dull	Savor
Personally detached	Personally involved
Restrained	Expressive
Indifference to process	Appreciation of process/production
Mindless	Intentional/mindful
Private	Audiences-focused/communal
Shared description (norm)	Shared understanding (norm)
Intake	Creative performance
Disconnected attributes	Narrative values

Fig.6: The EPF framework and wellbeing, SOURCE: The experiential pleasure of food: A savoring journey to food well-being, Journal of Business Research

Being a "journey", the EPF is a trip among three spheres: "Contemplation", "Connection" and "Creation", that combines the pleasure derived by a specific food culture, with the personal food story and history of an individual.[37]

Examine these phases is important to understand which are the elements that act in the EPF as leverages to reach healthy eating and consumer wellbeing. These elements can be then used by education and marketing to create policies and promote positive change in consumers attitudes towards a vision that helps the achievement of wellbeing without renouncing to pleasure. Indeed, as already mentioned, the concept of "food restraint" and pleasure removal is no longer useful, as it puts limitations to food experience that encourages a negative relationship with food, instead of a positive and conscious behaviour.

The first stage, or "Contemplation" phase, highlights the importance of multisensory experience, as a path that involves all the different senses we apply during the act of eating. Moreover, boost creativity and mindfulness at this stage is fundamental to enrich the perception of savour, which is influenced to various expectations we develop in our mind through visual, scent, sound and tactile signs. In terms of marketing, this important aspect can be developed

[37] Wided Batata, Paula C. Peterb, Emily M. Moscatoc, Iana A. Castrob, Steven Chand, Sunaina Chuganib, Adrienne Muldrowe, 2018 The experiential pleasure of food: A savoring journey to food well-being, Journal of Business Research

through the tool of labelling. Indeed, a study of O'Dougherty et al. shows that 96% of consumers interviewed considered taste as very important, if compared to 58% that define rate nutrition as very important[38]. These results highlight that aspects related to multisensory, rather than only nutrients, can be added to have a greater impact on labelling to spread a broader vision, not only based on nutrients.

The second phase is the "Connection" one, which refers to the social sphere and the beauty of sharing food, as a conviviality moment, a relationship ritual. Therefore, especially for policy makers and educationalist is essential to deeply understand the dynamics beyond the sociocultural food to act on it to improve taste education and augmenting enduring positive association with food wellbeing. To give an example, Americans use to eat more fast food products, in bigger plates that enhance greater consumption attitudes, which reflects the intrinsic culture of America, based mainly on pushing the idea of greatness and size. We can think at New York City to easily understand how the concept of making everything big is also reported in the table and meals. This is totally different if we think at French *cuisine*, based more on innovation, moderation of size and experiential food, which is leveraged through plate presentation and care for visual impact of meals, that reflects the French attention to aesthetic aspects. A new way to develop a balanced diet could be, therefore, acting not only on nutrients, but on cultural aspects, mixing for example American food characteristics with French one and Asian one. This mix is described as "fusion food" and it is an increasing trend, especially in Europe. It can help in achieving a balanced diet, in addition to improve pleasure experiences through new type of *cuisines*.

The last phase is the "Creation" one, which is mainly focused on food symbolism and storytelling, that are fundamental elements to enrich food culture and act over it. Moreover, considering that food symbolism is developed since we are children, it is important to create association in childhood that connects healthy food with positive social and cultural events, for example birthday party that represent a moment of joy for children and that can enhance positive food memories. As these symbolisms impact on our memories, from a point of view of policy makers, they can be used as a tool to increase long-term wellbeing. Indeed, healthy messages can lower the enjoyment and decrease the choice of healthy food[39], while share

[38] O'Dougherty, M., Harnack, L. J., French, S. A., Story, M., Oakes, J. M., & Jeffery, R. W. (2006). Nutrition labeling and value size pricing at fast-food restaurants: A consumer perspective. American Journal of Health Promotion, 20(4), 247–250.

[39] Raghunathan, R., Naylor, R. W., & Hoyer, W. D. H. (2006). The unhealthy=tasty intuition and its effects on taste inferences, enjoyment, and choice of food products. Journal of Marketing, 70(4), 170–184.

positive symbolism and act on joy and pleasure feelings can induce people to have a more proactive relationship with food.

To resume, the approach of EPF wants to act in a more holistic way that englobes all the different drivers that influence the entire experience of food, enhancing the positive concept of pleasure and highlighting the importance and the beauty of food cultural differences, as a possible path to create a balance in our daily eating. Moreover, this positive approach enables different actors to play as contributors to reach food wellbeing, connecting storytelling, symbolism, values, social norms, country identity, convivial experiences.

In Italy, all these elements have been developed during the years, through a culinary culture known worldwide, which is the results of an holistic approach that remembers the EPF idea.

1.6 The Experiential pleasure of food in Italy

In the first paragraph of this chapter we have given an overview regarding obesity and overeating trend worldwide. We have seen how the increasing rate of these two phenomena have driven Institutions to develop new strategies in order to reduce these alarming tendencies. The new policies have had as main consequence the creation of many different FOP labels worldwide that have as common denominator the focus on nutrients. Some FOP labels include both positive and negative nutrients, other exclude some nutrients in particular etc. However, for each one the idea behind it is to use the nutrients as a discriminatory element to value the healthiness of a product. As cited above, Italy expressed its strongly opposition to the application of FOP labels, as they menace the product excellence of the territory, putting an alarming label on it.

Countries like France and United Kingdom define the Italian opposition as an action driven exclusively by the interests of the lobbies, which want to protect the Italian economy. In reality the Italian position against FOP labels is based on the idea that this method is too simplistic, and it negatively judges Italian products that have always been considered as emblems of excellence around the world[40].

[40] http://www.italiafruit.net/DettaglioNews/49518/mercati-e-imprese/coldiretti-prodotti-sani-fermati-da-bollini-allarmistici

If Institutions continue basing their vision under the restricted concept of "nutrients = healthiness", all the elements that influence food experience and that we have described in the paragraph of EPF will not be taken into account.

However, the vision supported by FOP labels' advocates is not the only one that can be applied to encourage people to take better decision regarding nutrition. We have seen how a more holistic vision can provide benefits and can help in reaching an enduring wellbeing.

As Italy has the peculiarity to have a culinary culture that englobes many different aspects cited in the EPF, it can become the example of an alternative vision of nutrition, where wellbeing is the main objective to achieve.

A good way to better understand it is to have an overview regarding Italian lifestyle nowadays.

1.6.1. Italy and food: an indissoluble duo

Among European countries, Italy is the first country in terms of importance attributed to food, regarding economic and social aspects.

The OCSE study reports that Italians are the ones in Europe that spend more for food and beverages: 2500 euro each year by person, if compared with 2300 in France and 2000 in Germany. This is also visible if we compare the percentage of the total expenditure that Italians destiny to food: around 20% against 18% in France, 14% in Germany and 12% in United Kingdom. [41] (fig.7) Moreover, food incidence over total expenditure has grown during recent years in Germany and in Italy, with the peninsula at first place.

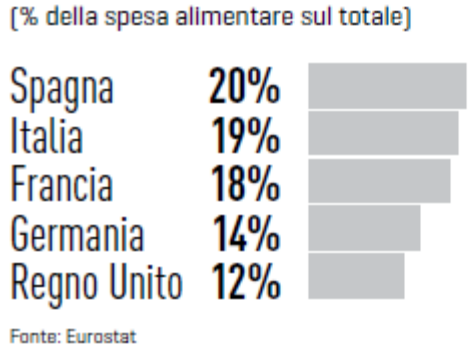


Fig.7:The percentage of grocery shopping over total expenditure, SOURCE: Rapporto Coop 2018: Economia, consumi e stili di vita degli italiani di oggi

[41] Rapporto Coop 2018: Economia, consumi e stili di vita degli italiani di oggi

As we can see from the chart, there is a clean break between the countries of the Mediterranean area, Italy and Spain, and Germany and United Kingdom, which have also a food consumption that is different in terms of products purchased. Indeed, Italians mostly prefer the purchase of vegetables and cereal products, like bread and pasta, respecting their tradition of Mediterranean diet. Consumes in Spain are similar, with the addition that Spanish are the ones who consume more milk and derivatives and fruits. Totally different is the shopping cart in France and Germany, where there is a high consumption of alcoholic beverages and oils and facts.

Basing their daily nutrition on Mediterranean diet, Italians reflect a food consumption that goes in two directions: from one hand they are interested in healthy feeding, rich in vitamins and fibres, but on the other hand they cannot renounce to their hedonistic desires. Indeed, as highlighted by the "Osservatorio Immagino", Italians consider food as a gratification and a pleasure that they cannot substitute with any other object. Therefore, pleasure and healthy food meet each other in a diet that includes vegetables and some pleasure products.[42] This is also starting to be visible in the packaging of products that try to include both aspects to leverage both interests of consumers. Indeed, if labels like "bio", "vegan", "fat free" or more general "fat free" attract people when they are in front of the shelves, playing with their logical and rational part, at the same time new types of wording are appearing in the front-of-pack to enhance the multisensorial pleasure of the food. This is reached adding some words that anticipate the feelings during the food experience. Therefore, producers play with some typical characteristics of food products that are the favourite textures of consumers. This is particularly evident in the packaging of ice-cream and confectionery. The same report illustrates the various claims that producers usually put to stimulate pleasure and the most used are "crispy", "smooth" and "creamy".

Another important aspect to highlight is the appreciation of the label "Made in Italy" on food products, which is declined through different wordings: Italian flag, "Prodotto in Italia", "100% Italiano", "DOC", "DOP", "IGP", "DOCG". All these labels testimony the high quality of the products and they are present in 25% of products on Italian supermarkets.[43] Therefore, Italians trust the local production of food, as a symbol of quality and also healthiness. Indeed, 2 Italians over 10 usually buy DOP- IGP products, especially people who live in cities and Centre Italy.[44]

[42] Nielsen, 2018 "Osservatorio Immagino: Le etichette dei prodotti raccontano i consumi degli italiani"
[43] Nielsen, 2019 "Osservatorio Immagino: Le etichette dei prodotti raccontano i consumi degli italiani"
[44] Neomisma, 2019 "Sol&Agrifood"

The DOP label is particularly used to choose Virgin olive oil, which is one of the products most consumed among Italian consumers, from the healthiest consumers to the families with young children. Indeed, 9 Italians over 10 use Virgin olive oil and 75% usually buy several bottles per month, discriminating firstly on origin criteria and then looking at brand and price.[45] Thus, Virgin olive oil represents one of the most important product in Italians table, being promoted also by nutritionists, as one of the healthiest seasoning.

All this information collected by the "Osservatorio Immagino" and the "Coop report" are the quantitative prove of the importance that Italians give to food quality and pleasure. We can talk of a reliable passion for food, that is an added value of our culture which has to be promoted around the world and not destroyed by coloured alarming labels.

1.6.2. The Italian food culture on advertising: a history of emotions and optimism

In a recent interview, Mr Barilla stated: "Food needs to be pleasure and fantasy for the spirit and not just fuel for the body"[46].

This concept has always been a fundamental paradigm in the history of Barilla, known worldwide as "The Italian Food company" for excellence. Its story is the result of fundamental values, like family, importance of sharing moment together and "feeling at home" that have been the common thread in all its advertising campaign.

Advertising is the mirror of a company's identity, as it represents an interesting lens to discover the symbolism and the anthropology of the brand. Indeed, an interesting way to discover more about Italian food culture is immerge the reader in a journey around the most important advertising campaigns realized by the two most known food Italian companies: Barilla and Ferrero.

Their storytelling is a trademark that distinguish them from all the other multinational companies abroad. Indeed, if we look at the advertisement of Oreo (Mondalez) or Fruttolo (Danone) or KitKat (Nestlé) we see that the focus for all of them is on the product itself and on its characteristics, while they not focus too much on the moment when it is consumed or the emotions linked to it. Also the wording used is more about the ingredients *"Se ti piace la frutta,*

[45] https://www.italiachiamaitalia.it/lolio-etra-vergine-e-il-re-della-tavola-degli-italiani/
[46] "Paolo Barilla: rethinking a traditional family business", Financial Times June 2, 2019 https://www.ft.com/content/100c5062-83a4-11e9-b592-5fe435b57a3b

mangiatela tutta" (if you like fruits, eat all of it) by Danone for Fruttolo or about the packaging of the product "*Spezza con KitKat*" (break with KitKat) by Nestlé for KitKat.

By contrast, Italians campaigns are not only an advertisement, but they are a story, generally a mix of short campaigns that are linked together and show how these products are part of the daily life of Italian families.

If we look at the last 40 years of Barilla campaigns, we will see that the key points of them are: family, friendship, joy of being together, feeling at home. These aspects have been developed through the years and the well-known slogan "*Dove c'è Barilla, c'è casa*" (Where Barilla is, we feel at home). This slogan has been used the first time in 1985 and it has established the equation "pasta-home-Barilla"[47] through the theme "*ritorno a casa*" (coming back home). We see in the advertising of 1988, how the fusilli pasta is a way to connect people although the distance. The spot says: "*Fusilli Barilla, fatti per legare i più bei sapori della tua cucina*" (Fusilli Barilla, made to connect the best savours of your cuisine)[48]. Through this sentence, Barilla evokes the theme of connection and the importance of relationship, adding a sense of pleasure which is spread through *"I più bei sapori"*. This advertising is a story of love between dad and daughter, and a simple thing, like a fusilli pasta becomes a souvenir for the father when is far from his child. Therefore, the food acquires a symbolic concept, it is a way to interact with emotions and sensation (fig.8)

Fig.8: Spot "Dove c'è Barilla, c'è casa" 1988, SOURCE: Barilla

[47] Barilla, "Storia della comunicazione Barilla"

[48] Spot Barilla, 1988 "Dove c'è Barilla c'è casa", https://www.youtube.com/watch?v=XZkpr09Rnrc

This is also evident in the spot spread in 2002, where the slogan is the same, but applied to a different context and vision of family. Indeed, we are 14 years after the spot of the dad and daughter, time has changed and type of relationship too. A young couple is divided between Rome and London[49], they have a long-distance relationship, but they feel themselves together eating the same "farfalle" (the choice of this specific type of pasta relies on the fact that butterflies can fly to reach new places, so they can with "farfalle" fly with the imagination to reach their love). (fig. 9)

Fig. 9: Spot "Dove c'è Barilla, c'è casa" 2002, SOURCE: Barilla

When people look at these advertising, they can empathize with the protagonists, they feel the same emotions as they act on one fundamental aspect: the human need to belong to someone/something; they highlight the food as the best way to connect people, to solve emotive problems and to give the chance to people to feel better.

The story of Barilla is a journey into the "family/home" topic, with a focus on its ability to maintain the tradition, while improving every day. The spot with the actor Pierfrancesco Favino in 2015 emphasized the new pasta recipe, made with new techniques and processing methods to balance taste with quality and healthiness. This concept is not transmitted through a focus on the product, as the above-mentioned multinationals usually do, but it is always presented through a daily lifetime frame. Pierfrancesco welcomes his daughter, who is sad because she lost the game and she believed to be the best. To help her feel better, he says: *"Anche i migliori possono migliorare"*[50] (The best ones, can always improve). This shows an attention of the

[49] Spot Barilla, 2002 "Chat Line-Dove c'è Barilla, c'è casa", https://www.youtube.com/watch?v=VoDiFxiJf7U
[50] Advertising Pasta Barilla 2016 - Nuovi Fusilli https://www.youtube.com/watch?v=MgfJ1baYu8E

company towards the consumers' taste and preferences that can change during the years and need to be faced to always be the best. (fig.10)

Fig. 10: Spot "Pasta Barilla 2016 - Nuovi Fusilli, SOURCE: Barilla

The capacity to renovate, it is also conveyed through the spots realised for "Mulino Bianco", the Barilla branch known worldwide for its biscuits: "*Mulino Innovativo*". In these 30sec. of advertising, the idea is to "*Portare a tutti quella gioia che solo il cibo ben fatto può dare*" [51] (bring to all the joy that only the well-made food can give). (fig.11)

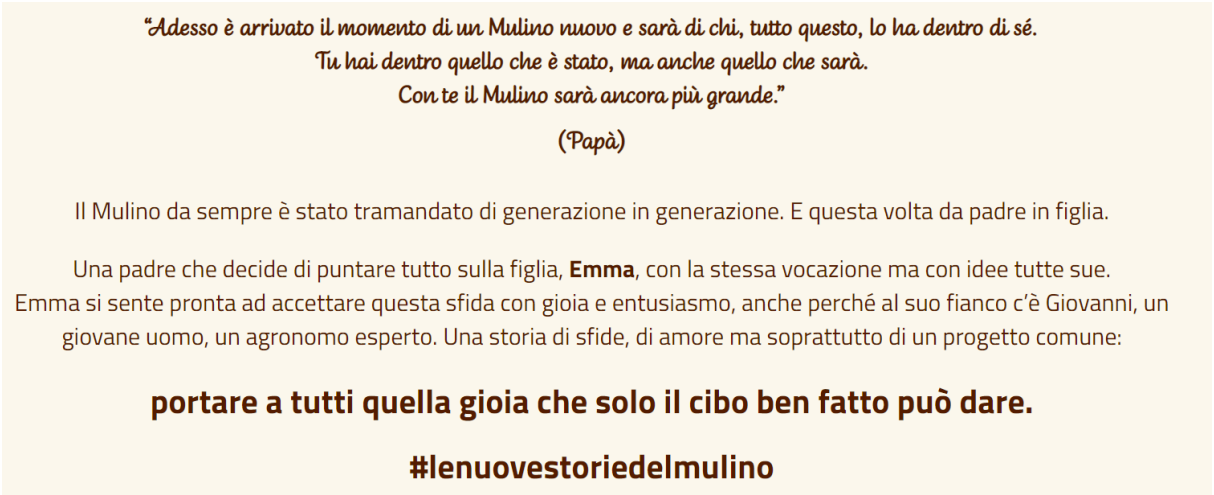


Fig. 11: "Mulino Innovativo" proposition, SOURCE: Mulino Bianco

[51] https://www.mulinobianco.it/comunicazione/emma-e-giovanni

The subjects of family and beauty of simple and genuine aspects of life are also present in Ferrero advertising, especially those of Nutella and Kinder. Here, the focus is more on children and the happiness of moments spent together. Indeed, these advertisings reflect the purpose of Ferrero: bring optimism in life. This was the first aim when the company was founded, after the second world war and it is still the main idea behind the brand. The advertisements of Ferrero explore more the pleasure dimension, which is developed through two different axes: one for children and one for adults. The one for adults is linked to Ferrero Rocher, Pocket Coffee and Mon Chéri. During the last 40 years, the idea has been to spread the vision of pleasure linked to these chocolates. Indeed, every Italian could probably remember the famous spots of "Ambrogio", the butler who became famous with the statement "*Ambrogio la mia non è proprio fame, è voglia di qualcosa di buono. Ferrero Rocher, soddisfa la voglia di buono*"[52] (Ambrogio I am not really hungry, I want something good-tasting. Ferrero Rocher satisfies your desire of taste). (fig.12)

Fig. 12: Spot Ferrero Rocher con Ambrogio, SOURCE: Ferrero

The theme of food pleasure is also spread with the Mon Chéri spot "*Lasciati stupire*"[53] (Be enthralled) in 2013, which is a hymn to all the five senses experience. (fig. 13)

[52] Advertising Ferrero Rocher Ambrogio, 1992 https://www.youtube.com/watch?v=2LWsAws78sc
[53] Advertising Mon Chèri, 2013 "Lasciati stupire" https://www.youtube.com/watch?v=1qgGAvRnEFs

Fig. 13: Spot "Mon Chéri. Lasciati stupire, 2013", SOURCE: Ferrero

On the other hand, the spots for children put the attention in mixing the pleasure of a break, with the joy of doing sports together. Therefore, here the idea is to spread a dynamic and active lifestyle, especially among children, which is synthetized through the slogan "The joy of moving". The theme of sport is key for Ferrero and it is declined through its product: Kinder for young people[54], Pocket Coffee for alpine sports, Nutella with the football national team (fig.14) and Estathé for "Giro di Italia".

Fig. 14: Spot "Tv Nutella Nazionale Italiana, 2010", SOURCE: Ferrero

Even if they are two different way to share the concept of pleasure, they are both linked to the already mentioned main topic of the company which can be summed with "enthusiasm". This

[54] https://www.ferrero.it/Kinder-piu-Sport

is also the main topic of the campaign "*La vita è bella*" (Life is beautiful) where Nutella is always present in the positive moments of our life. At the end, a message is spread: "*La vita è fatta di tanti momenti, scegli di viverla sempre con il sorriso*" (Life is full of moments, live it always smiling). (fig. 15, 16)

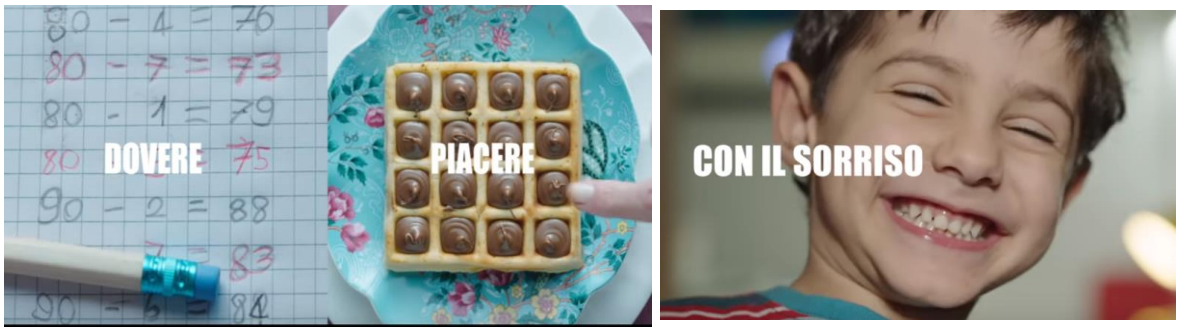


Fig. 15: Spot "La vita è bella – Nutella, 2019", SOURCE: Nutella

To sum up, Italian food advertisements are a hymn to the beauty and pleasure of life, capturing the daily frames of our life connected to food. Barilla is the answer to our emotive feelings, it is always there to remember us that we can always feel at home and never alone, it is our cocoon. Ferrero is the beauty of happiness and joy, it is more about benefit from the gifts that life gives us, it is the optimism and enthusiasm.

In both of them, therefore, pleasure and taste are seen as a positive element that cannot be detached from the single food product, but they are essential elements that enrich our lives and make us feel better.

CHAPTER 2

In this second chapter the reader will discover more deeply the evolution of FOP label during the years and in the different countries. Since there is no a unique regulation, each institution has developed its own system in terms of algorithm and final visual. Therefore, a full comprehension of them can be an interesting lecture to better understand the differences among FOP label, why some labels have prevailed instead of others and why some countries have decided to adopt a label designed by foreign institutions, instead of developing their own one.

The presentation will offer a general overview on FOP labels around the world, to see how each labelling scheme communicates information to consumers and how this impact on different target group. Then, we will focus more on FOP labels present at European level, and more specifically we will analyse the Nutri Score as the label most used in our continent and object of increasing criticism, as we have seen in the Codex Alimentarius debate.

This journey among FOP labels will consent to the reader to better navigate among the various interpretations that each Institution gives to FOP labels and to effectively see that there is no scientific basement to validate this system as efficient in improving consumer healthiness.

2.1 The history of FOP labels (fig. 17)

The roundup of FOP labels started in 1989 with the first FOP symbol introduced in Sweden by the Swedish Food Agency, which established the rules for the introduction of the Keyhole logo. In 2009, the Keyhole has been commonly adopted also by Norway and Denmark, and in 2014 Lithuania and Iceland signed the agreement to take part in the same program. One year later, all the countries involved in the Keyhole logo increased the strictness of requirements requested.

Then, in 1998 Singapore first introduced the Healthier Choice symbol and five years later it extended it to food-services operators and hawkers. In 2015 they published a revised version based on the new nutrients guidelines.

To have another logo in Europe we had to wait until 2006, when Netherlands introduced the Choices Logo, which was then applied also by Belgium (2007) and Poland (2008).

However, one important year in the history of FOP label in Europe is the 2011, when European Union introduced the EU Regulation 1169/2011 that allows to EU member states and Norway,

Liechtenstein, Iceland and Switzerland to develop voluntary FOP guidelines, to generate Guideline Daily Amount or Traffic Light system. The application of this regulation generated discussions around its applicability, in addition to confusion derived by the not transparency of the document. Indeed, the main objective of this regulation was to guarantee to the 28 EU Member States a common legislation. However, eight years later we can assist at debates around FOP labelling systems deriving by the loss of a real common guideline, showing that the road through a common system of prevention is always under construction.

The European approach to FOP systems was then characterize by the implementation of Multiple Traffic Light (MTL) in 2013 by the UK, which opened to the era of coloured FOP labels. This implementation had two consequent effects: from one hand, the opposition of Italy and the launch of a series of protests against this logo, and from the other hand, the construction of another FOP symbols, the Nutri Score in France, that readapted the concept of colours behind the MTL through a new algorithm. The Nutri Score has then been applied also by Belgium (2019), Switzerland (2018), and it is under discussion in Spain and Germany. In the same year European Union approved the application of the Choice Programme logo in all EU countries.

Another interesting case is the Chile's one. In 2012 it was approved the "Chilean Law of Food Labelling and Advertising" and in 2015 the regulatory norms for its implementation. These labels were finally applied in 2016, but in the following two and three years plans have been implemented to apply more restrictive nutrients limit.

Regarding Australia and New Zealand, they launched the voluntary Health Star Rating System in 2014 and planned to start publishing results on its impact on formal review this year.

The timeline, therefore, shows the global presence of FOP labels, but it highlights at the same time the vast heterogeneity of these symbols. Another interesting aspect to point out is the adoption of the same FOP labels by countries that are similar in terms of consumptions and cultural traditions (see Keyhole logo for the countries of North Europe or the Health Star Rating System for Australia and New Zealand).

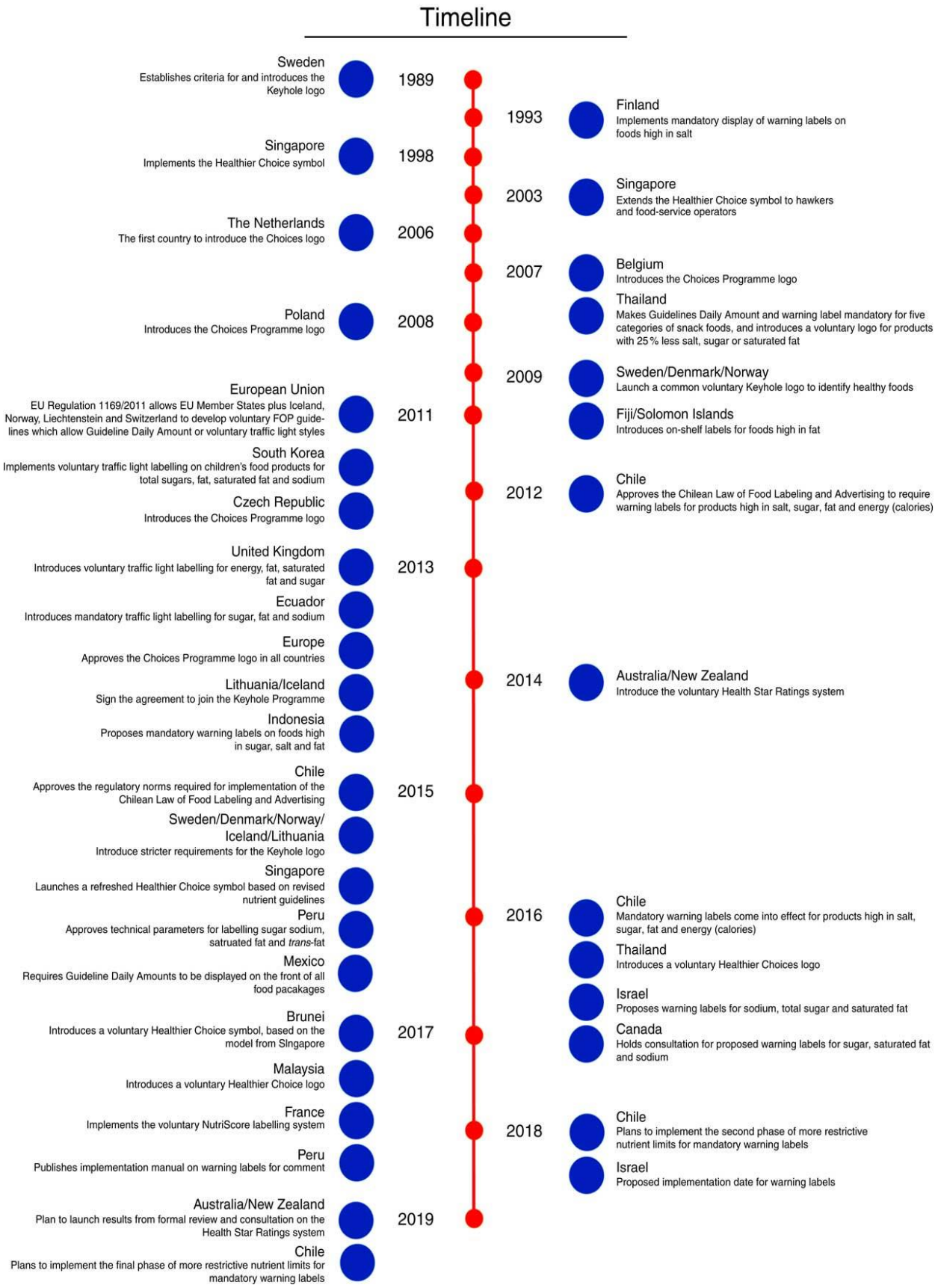


Fig. 16: Timeline of front-of-package (FOP) nutrition labelling globally (adapted from the Nourishing framework and other sources), SOURCE: "Front-of-package nutrition labelling policy: global progress and future directions", 2018 Public Health Nutrition: 21(8), 1399–1408

2.2 FOP Labels' comparison: functional and visual aspects

We have seen that FOP labels have been introduced worldwide through Institutional regulations, which being not connected to a unique policy, have generated many different terminology and symbols. To navigate better in the multitude of terms and public health nutrition messages is necessary to discover more about the various facets that these nutrition labelling can have.

To do this, we can start from the table provided by "Front-of-package nutrition labelling policy: global progress and future directions", an editorial published in March 2018 (fig. 18) which has the objective to retrace the progress of FOP labels during the years and possible directions in the future.

We can therefore group the myriad of FOP labels actually in use dividing them on the type of information they provide about nutrients. They can be directly transferred on the label, without expressing judgement, as the Guideline Daily Amount (GDA), which represented what is called as "Reductive system" or "Non directive FOP labels", or they can be used to guide consumers in choosing the healthiest choice, without exposing the nutritional specific information, as the "Interpretive nutrition rating system", called also "semi-directive FOP labels". This method consists in an algorithm that on the basis of the presence or not of some nutrients, generates a final symbol that gives an opinion regarding the healthiness of the specific food product. This means that it is a manipulation of quantitative information that is translated in a more qualitative judgement, as mix factual information with easy-to-interpret visuals (ex. colours). Examples of this methodology are Star-based system, Nutri Score, Multiple Traffic Light and Health Logos.

Another type of method that can be used is the "Evaluative/summary indicator system", which uses different criteria to have a final indication of the healthiness of a product, expressing a judgement, recommendation or opinion that has no specific information. Examples can be Star-based system or Health Logos.

Finally, the "Nutrient-specific system" gives nutrients information regarding some specific categories, that generally are considered as critical, as sodium, fats (saturated, trans) and total sugars. One of the examples most evident is the Multiple Traffic Light or the "High in" warning symbols.

We can see that some type of symbols, as the Multiple Traffic Light is present in two categories, the "Nutrient- specific system" and the "Interpretive nutrition system", as it combines the

nutrients specific information for some categories and at the same time expresses a judgement through the presence of colours. Thus, we can conclude that the system of division is complex and in some cases the boundaries are blurred.

Table 1 Terms used for various types of government-endorsed front-of-package nutrition labelling schemes

Terminology	Definition (reference)	Examples
Interpretive nutrition rating system (INRS)	Provides nutrition information as guidance rather than specific facts[16]	• Star-based systems • Nutriscore • Traffic light symbols • Health logos
Reductive system	Shows information only, with no specific judgement, opinion or recommendation[56]	• Guideline Daily Amount (GDA) system
Evaluative/ summary indicator system	Combines several criteria to establish one indication of the healthiness of a product and shows judgement, opinion or recommendation with no specific information[56]	• Star-based systems • Health logos
Nutrient-specific system	Provides nutrition information for a set of nutrients[10]	• Traffic light symbols • Warnings or 'High in' symbols

Fig. 17: Terms used for various types of government-endorsed FOP nutrition Labelling system, SOURCE: Front-of-package nutrition labelling policy: global progress and future directions, Public Health Nutrition: 21(8), 1399–1408

Faced to these differences, it is interesting to explore the different effects that distinct FOP labels have on consumers, if one type is easier to understand than others and what are the consequences.

Starting from the general condition of control, when no FOP labels is present, results show an improvement among the perception of nutrients by consumers. Especially, if we compare the presence of MTL or GDA with the control situation, in general, the product nutrient levels are perceived more favourably in presence of FOP labels.[55] Regarding the purchase intentions in

[55] J. Craig Andrews, Scot Burton, Jeremy Kees, 2011, Is Simpler Always Better? Consumer Evaluations of Front-of-Package Nutrition Symbols, Marketing Faculty Research and Publications, Markette University

the same conditions, it improves and the perceptions of risk of heart disease and weight gain are reduced.

2.2.1 Evaluative vs Reductive FOPL

The most relevant results are connected to the comparison between interpretive (evaluative) and reductive FOP labels. Here with Evaluative we will indicate both evaluative and interpretive symbols of tab. 1, so: Health Star Rating System, Nutri Score, MTL and Health Logos. Indeed, as researches demonstrate[56], differences in complexity of FOP labels can have positive effects for consumers, but these perceptions change in relation to the context of reference. This means that the presence of reductive systems, like GDA, on the packaging of products is beneficial when consumers have time, motivation and capacity to evaluate the FOP, as more complex. The comparison become more difficult when people are in a big grocery store or supermarket, they are in a hurry and they don't have time to analyse with attention multiple products on the shelves. However, if consumers are in front of similar products in terms of nutrition aspects, they probably analyse more the specific information, that they can find on reductive FOP systems. Indeed, Evaluative FOP labels are more intuitive for understanding the differences among very healthy/very unhealthy products, but when the nutritive characteristics are similar, the reductive labels can help more in the choice, as more punctual and precise in the description.

Another element that impacts on the perception and evaluation of these two types of labels, is the level of nutrition consciousness of consumers (NC). In fact, consumers with high NC can use both labels to choose among good, moderate and poor nutritive food among a set of products, as they have more favourable nutrient and overall healthfulness consideration than people with less NC[57]. At the same time, on the other hand, if people have a lower level of NC, the presence of Evaluative FOP system can be more beneficial than the one of Reductive. This because, as GDA labels are cognitively more complex than TL labels, they present information that is more difficult to process, which are in turn utilized less.[58]

[56] C. L. Newman, S. Burton, J. Craig Andrews, R. G. Netemeyer & J. Kees, (2018), Marketers' use of alternative front-of-package nutrition symbols: An examination of effects on product evaluations, J. of the Acad. Mark. Sci. 46:453–476

[57] J. Craig Andrews, Scot Burton, Jeremy Kees, 2011, Is Simpler Always Better? Consumer Evaluations of Front-of-Package Nutrition Symbols, Marketing Faculty Research and Publications, Markette University

[58] Laura Enax, Ian Krajbich, Bernd Weber, (2016) Salient nutrition labels increase the integration of health attributes in food decision-making, Judgment and Decision Making, Vol. 11, No. 5, September 2016, pp. 460–471

The presence of Evaluative and/or Reductive FOP labels have consequences also on supermarket and retail stores. Indeed consumers can be influenced by the presence/absence of them in the stores and can change their purchasing habits, favouring one point of sales instead of another. Therefore, what is the best strategy to achieve the maximum benefit also for the retailers? One ad hoc study has revealed that Evaluative labels are in general preferred by consumers when they have to compare more products, while Reductive is more adapt in non-comparative situations (as cited also above). What is particularly interesting in these results is that supermarkets that provide Evaluative and Reductive labels can generate benefits for both consumers and retailers. Indeed, the presence of both type of labels on supermarkets would guarantee the couverture of the two situations that consumers can have and can improve consumers choices, if compared to when no FOP labels are available. Moreover, the presence of these labels can also increase the healthfulness perception of products offer by the supermarket itself. Their implementation can generate a win-win situation, where the retailer can help its customers in making healthier decision, while bringing value to the firm itself, through a higher perception of retailers' concern.[59] However, if Evaluative and Reductive cues are present on the same packaging, they do not increase the fluency, as the presence of the two symbols together is equivalent in terms of fluency to only a single reductive (evaluative) cue.[60]

2.2.2 The importance of colour-scheme

In addition to the analysis of the differences between Evaluative and Reductive, it is also curious to discover how the presence of colours on FOP labels impacts on consumers' attitude. Indeed, coloured FOP symbols, like Nutri Score and MTL, have a stronger impact on a binary choice with a no-coloured symbols, as GDA for example. Thus, the percentage of healthy choices improve when the product is labelled with a colour coded.[61] This result highlights the importance of salience, as the extent to which the label stands out within the visual field, in FOP labels. Indeed, through a research conducted in Australia with the aim to understand the preferences of consumers' in terms of labels, it has emerged the importance of the colour component in the process of choice. Respondents had to communicate their preference among

[59] Christopher L. Newman, Elizabeth Howlett, Scot Burton, (2014) Shopper response to Front-of-Package nutrition labelling programs: potential consumer and retail store benefits, Journal of Retailing

[60] Christopher L.Newman, Elizabeth Howlett, Scot Burton, (2016), Effects of Objective and Evaluative Front-of-Package Cues on Food Evaluation and Choice: The Moderating Influence of Comparative and Noncomparative Processing Contexts, Oxford University Press on behalf of Journal of Consumer Research

[61] Laura Enax, Ian Krajbich, Bernd Weber, (2016) Salient nutrition labels increase the integration of health attributes in food decision-making, Judgment and Decision Making, Vol. 11, No. 5, September 2016, pp. 460–471

no FOPL, Guideline Daily Amount, MTL and Health Star Rating System (HSR), basing their primary evaluation on 3 main criteria: ease of use, salience and interpretive content. What has emerged is that the HSR has been the most preferred, while the GDA the least one, with a consistency in gender and age. The reason behind the choice were linked to the simplicity and the user-friendly aspect of HSR. Therefore, HSR outperformed in ease of use and interpretive content. By contrast, the MTL showed better results regarding salience aspect, suggesting that the inclusion of colours in the nutrient icons allow to FOPL like HSR to meet all the 3 essential criteria for consumers.[62]

2.2.3 Is simpler always better? The risks connected to the FOPL simplification

What we can deduct from the collection of analysis developed during the years until now, is that the visual aspect and the easy-to-interpret content are the most influent elements in consumers behaviours when they face FOPL. Specifically, the simplest they are, the more it seems people appreciate and understand them. However, is this simplicity only beneficial?

The risk connected to it is the approximation. This means the approximation of criteria used, the generalization of situations and the elimination of peculiarities that are of essential importance in evaluating the different contexts. Indeed, as we have already mentioned in the first chapter, all these labels make judgements without considering the context around, the type of person who consumes the product, the frequency of consumption and the portion size. All these spheres are not unavoidable as they can completely change the recommendation obtained through FOP labels. In effect, the consumption of a slice of cake by a man suffering from hearth disease or by a child or by an athlete is completely different for each consumer and has totally different impact on their body.

Therefore simplicity, intended as easy-to-understand, is for sure an element to take into consideration in developing FOPL, but at the same time this simplicity have not to be transferred also in the way that FOPL are created.

Another negative aspect connected to “simplicity” as “generalization” of the contexts is linked to the message that FOPL, and specially the coloured ones, spread: if the product is green, then it is always good for our nutrition, regardless of how many time you consume it and how many portions. The risk linked, in this case, is that people can eat without moderation and have

[62] S. Pettigrew, Z. Talati, C. Miller, H. Dixon, B. Kelly, K. Ball, 2017 The types and aspects of front-of-pack food labelling schemes preferred by adults and children, Appetite

overconsumption behaviours that generate the same problem that Institutions are trying to avoid.

Moreover, if this attitude becomes obsessive, and consumers started to only consider nutrients and healthiness, it can generate an eating disorder called "orthorexia". The term refers to people that suffer from compulsive check of ingredient lists and nutritional labels, cutting out an increasing number of food categories considered unhealthy as sugar, carbs, meat or animal derivatives and who can be stressed if they don't find food products with "healthy" or "safe" mentions.[63]

If we observe the other side of the coin and we think about people who are particularly interested on food taste, the presence of FOPL can cause on them a refusal of the product, since the "healthful" indication can be associated to a loss of taste and pleasure. Consequently, they can decide to not buy the product, thus creating an opposite effect than the one auspicated by Institutions. The outcome is due because consumers generally do not want to compromise their hedonic and pleasure experiences for healthy products.[64]

Despite all these possible negative effects, supporting Institutions are continuing promoting FOPL as a useful method to help people improving their diet, without considering the possibility to review and modify the idea of FOPL, in order to overcome these limits.

What seems to be clear by this first rating of FOP labels, based on the type of information they provide, is that there are many different symbols and many different algorithms that can be used and are present around the world, but that can create confusion and misunderstanding.

This is already visible if we focus only in Europe.

2.3 FOPL in Europe: A comparative analysis of pros and cons

During the Fourth European Logo Round Table in Copenhagen last January 2018, the representatives of several European FOP labelling promotors and the WHO Europe highlighted the necessity to develop a method useful to classify the various FOP labelling schemes, currently available in Europe.[65]

[63] https://www.nationaleatingdisorders.org/learn/by-eating-disorder/other/orthorexia

[64] Civille, G. V., & Oftedal, K. N. (2012). Sensory evaluation techniques – Make "good for you" taste "good". Physiology & Behavior, 107(4), 598–605

[65] Daphne L.M.van der Bend, Lauren Lissner, 2019 Differences and Similarities between Front-of-Pack Nutrition Labels in Europe: A Comparison of Functional and Visual Aspects, Nutrients

To do this, researchers have taken the "Funnel Model" realized by van der Bend et al. in 2014[66] and have updated it, with the aim to summarize and make comparison about all the different labelling systems in Europe, to see more deeply the principal discrepancies in terms of visual and functional aspects, and to allow a better understanding of pros and cons of each one.

This methodology takes into consideration different sections, which are: Components, Reference Unit, Measurement Method, Coverage, Methodological Approach, Purpose, Driver, Directivity, Tone of Voice and Utilization (see fig.19)

Indicator	Explanation
Components	Product criteria of FOP labels may take into account qualifying components, i.e., components in a food product beneficial for health, and/or disqualifying components, i.e., components in a food product with a negative impact on health.
Reference unit	Product criteria of FOP labels may be expressed per 100 g/100 mL, per 100 kcal/KJ, in Energy% and/or per serving, amongst others.
Measurement method	Compliance of foods with the FOP label's product criteria may be determined on the basis of calculated scores and/or threshold values.
Coverage	Product criteria of FOP labels are either developed for a selection of food categories, or they cover all food categories at once. 'All food categories' includes at least all pre-packaged foods, but does not include specific products, such as infant formula, alcoholic beverages and food supplements.
Methodological approach	When FOP labelling systems make use of the same set of criteria for all or most food categories, they use an across-the-board approach. When different criteria have been developed for different food categories, a food-category-specific approach is used. We do not consider liquid versus solid foods to be food-category specific, as the composition of food categories within these groups can still be very variable.

[66] Van der Bend, D.; van Dieren, J.; De Vasconcelos Marques, M.; Wezenbeek, N.L.W.; Kostareli, N.; Guerreiro Rodriques, P.; Temme, E.H.M.; Westenbrink, S.; Verhagen, H. A Simple Visual Model to Compare Existing Front-of-pack Nutrient Profiling Schemes. Eur. J. Nutr. Food Saf. 2014, 4, 429–534

Purpose	The primary aim of FOP labels may be, for example, to inform consumers about the nutritional contribution a food product makes to the diet, help consumers identify healthy foods and/or to stimulate product reformulation by the food industry. FOP labels may have several purposes.
Driver	This refers to the driving force behind a FOP label (at the time of the writing of this article); a driver may be governmental, commercial or be part of a non-governmental organisation (NGO).
Directivity	This specifies to what degree the FOP label leaves interpretation of 'healthiness' of a product to the consumer. Non-directive FOP labels only present factual nutrient information, semi-directive FOP labels combine factual information with easy-to-interpret visuals (e.g., color coding), and directive FOP labels merely summarise the 'healthiness' of a product without displaying any nutritional information.
Tone of voice	A FOP label may convey a positive ('healthy'), mixed (mixture of 'healthy' or 'unhealthy') or negative ('unhealthy') health message.
Utilization	In case of voluntary use, food firms may choose whether or not to use the FOP label on-pack. When a FOP label is mandatory, often determined by national regulations or legislation, food firms are forced to use the label.

Fig. 18: A summary of indicators that are used in the Funnel Model to describe aspects of front-of-pack (FOP) labels, SOURCE: Daphne L.M.van der Bend, Lauren Lissner, 2019 Differences and Similarities between Front-of-Pack Nutrition Labels in Europe: A Comparison of Functional and Visual Aspects, Nutrients

Based on this method, we will focus on Keyhole, that is a positive label (the tone of voice regarding the health message is positive), and on Nutri Score and Multiple Traffic Light that are mixed labels (the tone of voice regarding health message is a mix of healthy and unhealthy aspects).

2.3.1 Keyhole label

This symbol has been the first FOP label introduced in the history, then becoming the FOP emblem of Nordic countries, Macedonia and Lithuania. Based on the classification above, it is a positive and directive label, which means that the tone of voice regarding the health message is positive and the type of information provided is based on a summary of the "healthiness", without showing specific nutritional information.

Regarding the symbol applicability, it is applied to all categories of food, except "hedonic" ones as snacks. The components added in the algorithm are both qualifying and disqualifying, and energy is added as positive and negative element. Moreover, it is the only one that considers in the computation as disqualifying components (artificial) sweeteners, total sugar and added

sugar. All the information provided are on a per 100g/100ml, energy and per serving bases (see fig. 20).

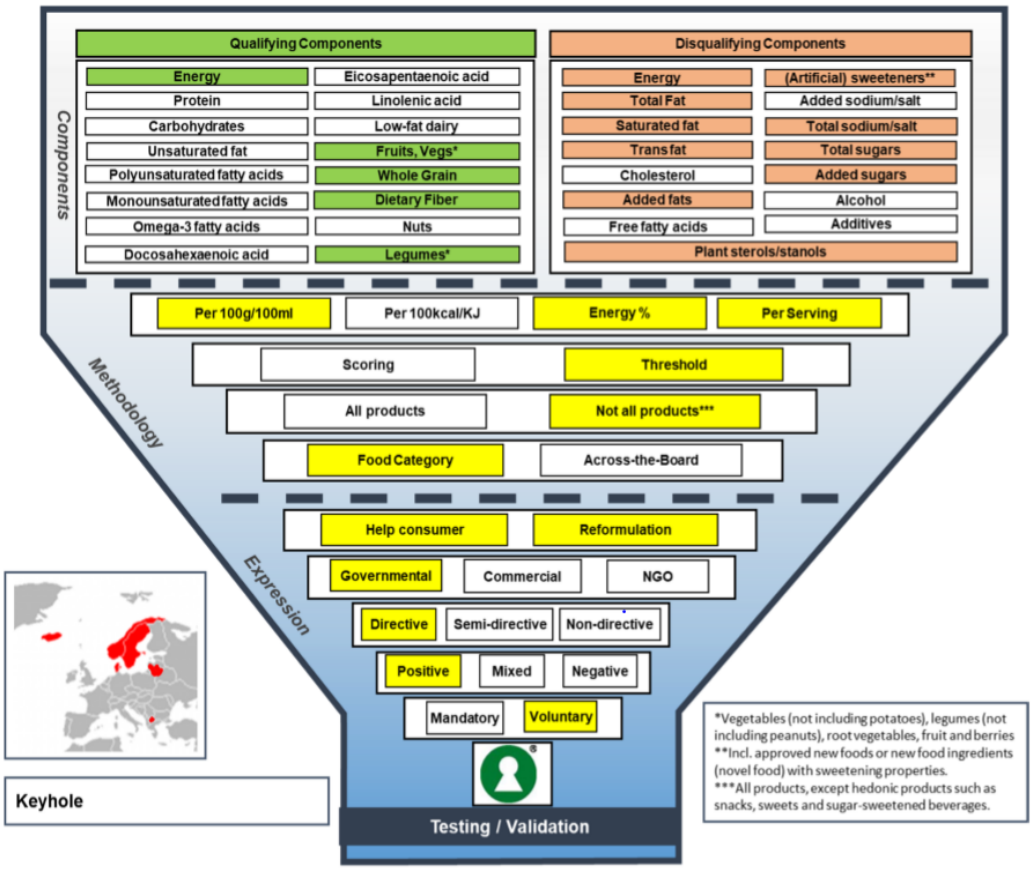


Fig. 19: Keyhole Funnel Model, SOURCE Paper on Funnel Model

2.3.2 Multiple Traffic Light

The English label was first voluntarily introduced in 2013 by the UK Department of Health (DH), conform with the EU Regulation (No. 1169/2011) and the Recommendation of the ministers of Health. This type of label is defined as semi-directive, as combines factual information, that are the percentage Reference Intakes (RIs or known as GDA), with easy-to-interpret visual, which are the green, amber and red color-coding.

More specifically, the MTL shows the percentage of energy, total fat, total sugar and salt in food products. However, energy can be included or not in the final label, which has to show information per 100g/mL only, per portion only, or per 100g/mL and per portion.

Regarding the application of this label, it is applied to every type of food without any distinction or balance on the category analysed (across-the-board label). Moreover, it takes into

consideration only the disqualifying components, not calculating the (artificial) sweeteners, the added sugars and the added sodium/salt. (see fig. 21)

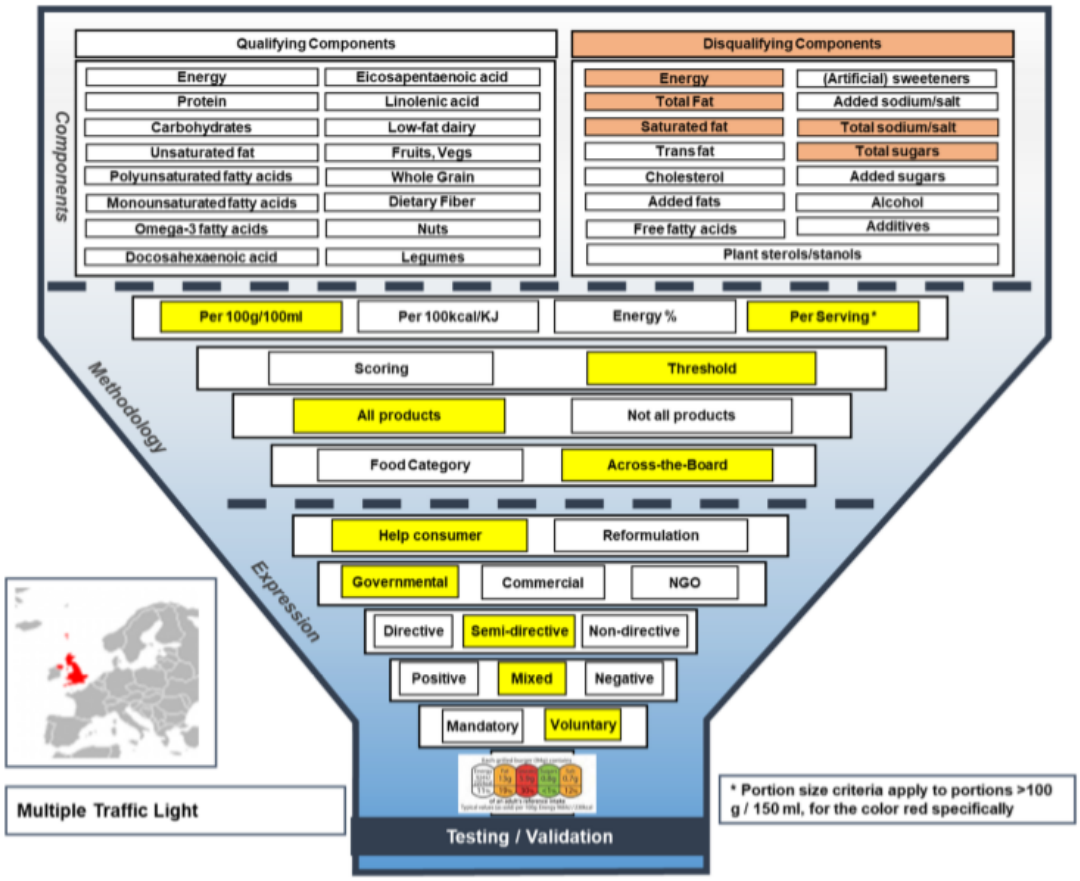


Fig. 20: Multiple Traffic Light Funnel Model, SOURCE Paper on Funnel Model

2.3.3 Nutri Score

As a development and an improvement of MTL, Nutri Score was first introduced in France in 2017. Nutri Score is currently present and adopted in France, Belgium and it is under discussion in Spain and Germany. We can say that it is the label more discussed at the moment, as among the others it is considered the best one in expressing the nutritive aspect, but it still lacks some fundamental elements.

It consists in a 5 colours logo, that with a respective letter wants to inform consumers regarding the nutritional quality of products. Letter A, colour green shows the best product on nutritional basis, while letter E, red colour the least favourable in terms of nutrient composition. The product belongs to the letter which is shown as bigger than the others.[67]

[67] : http://www.mangerbouger.fr/Manger-Mieux/Comment-manger-mieux/Comprendre-les-infos-nutritionnelles2/Le-Nutri-Score-l-information-nutritionnelle-en-un-coup-d-oeil

It shows a summary of nutrients level, without explicitly exposing the specific amount of nutrients, as happen with MTL. Considering that it is a continuum from the healthiest to the least health product, it is neither positive nor negative in the tone of voice, but it can be considered as a mixed scheme. (fig.22)

Being a label that, as we have said, not provides specific information on the amounts of nutrients, it is in the same category of Keyhole logo: directive FOP label. To calculate the final score, the algorithm includes both qualifying and disqualifying components. In the qualifying components, there are considered protein, fruits, vegetables, dietary fiber, nuts and legumes. It is the only label which includes proteins, as they are not taken into consideration in the criteria of any of the positive labels. By contrast negative elements included are energy, saturated fat, total sodium/salt and total sugar. The final calculation is a score that is included between -15 and +40, where positive points are given to disqualifying nutrients and negative points to qualifying ones. The representation is based on a per 100g/100mL and it is not applied to all categories of food in the same way. Indeed, for cheeses, fats and non-alcoholic drinks the ranking is different, since the score of these food products would not respect dietary advices. Moreover, products like fruits, fresh vegetables and fresh fish are not involved in the process, as the alcohol. Nutri Score is the only label that qualifies product on a score and threshold base.

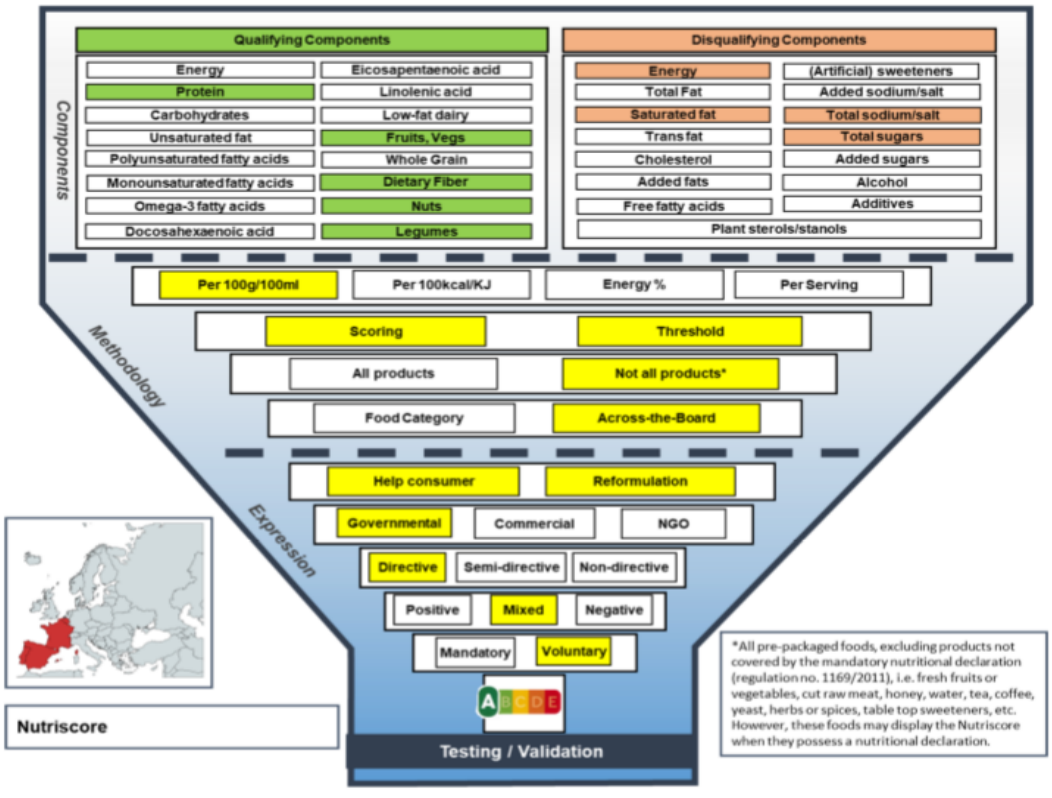


Fig. 21 Nutri Score Funnel Model, SOURCE Paper on Funnel Model

2.3.4 Pros and Cons of Keyhole, MTL and Nutri Score

We can therefore make a final comparison among the 3 FOPL that help to understand which pros and which cons each category has. (see fig.23)

	Positive FOP Labels	Multiple Traffic Light	Nutriscore
Components	Qualifying, disqualifying	Disqualifying	Qualifying, disqualifying
Reference unit	100 g/100 mL, 100 kcal/KJ, per serving, energy%	100 g/100 mL, per serving	100 g/100 mL
Measurement method	Threshold	Threshold	Threshold, scoring
Purpose	Help consumer, reformulation	Help consumer	Help consumer, reformulation
Methodological approach	Category specific	Across-the-board	Across-the-board
Coverage	Differs per label	All products	Not all products
Driver	Governmental, NGO	Governmental	Governmental
Directivity	Directive	Semi-directive	Directive
Tone of voice	Positive	Mixed	Mixed
Utilization	Voluntary	Voluntary	Voluntary

Fig. 22: Comparison of Keyhole, MTL and Nutri Score, SOURCE: Paper on Funnel Model

Among the disqualifying components, total sugar, total sodium or salt, saturated fat and energy are the components in common for the 3 labels. However, added sugar and (artificial) sweeteners are added only in the positive symbol of Keyhole. This is the reason why Coca Cola appears as green in the Nutri Score. The same situation is for TFA, cholesterol, plant sterols/stanol and added fats.

What is present in all types of FOPL is the 100g/100mL as reference unit and the qualification of products on threshold values, which has the objective to influence consumers in making healthier choice.

Another important difference among the Keyhole (example of positive label), the MTL and Nutri Score (mixed labels) is the approach to food categories. Indeed, has we have seen the Keyhole exclude hedonic foods from the application of the label, while Nutri Score readapts it

to some specific categories as food and MTL is applied regardless of the type of food considered. The fact to not make distinctions can create many asymmetries as some foods have a nutritive composition which is for nature high in fat or salt, and therefore become automatically red (as for example Prosciutto or Extra virgin olive oil).

In addition to this, it is of essential importance distinguish the FOPL highlighting the application or not of the "reformulation" process for food products of specific categories. This is applied by all type of FOPL except MTL. Finally, all FOPL analysed are voluntary, established by governments but not mandatory.

2.4 What's next?

Through this chapter the reader has had the possibility to discover more and to clarify some aspects of the FOPL world, which is characterized by many different types of labels and methodologies. What we can therefore conclude is that actually there is no FOPL that can be considered the best to apply. However, the one that seems to be more evolving and acquiring importance is the Nutri Score, as it goes one step further than the MTL and tries to adapt itself to some critical food categories. Nevertheless, it still discriminates some food products, judging their nutrient composition as not good for consumers' health.

This is because, as we have already explained, all types of FOPL varies in terms of nutrients taken into account, but no one includes essential aspects as frequency of consumption or taste experience.

Healthiness is extremely important and has to stay a key point in our daily life to avoid diseases connected to nutrition. By the way, focusing only on healthiness and nutrients is not the right approach. As we have seen, for the moment there is not common accordance about which nutrients consider and which not, and this creates confusion and absence of reliable data that could prove the benefits of FOPL application.

What is sure is, instead, that food experience is not only about nutrients and cannot be limited to it. If so, it will destroy the culinary culture and experience of many countries, spreading an alarming and false message.

There is no good or bad food, but there is a good or a bad balance in the diet. And balance means also including pleasure and hedonic foods, as they favourably impact on our behaviour, influencing our wellbeing.

This gap in FOP labels can generate research ideas to see if and how pleasure and taste feelings can be mixed with healthiness information to really help consumers in making the best choice for their wellbeing, without restricting them in consuming only “green” products.

How pleasure impact on FOPL? Does it have an influence on healthiness perception or not? If yes, should it be taken into account to guarantee a more comprehensive interpretation of food products for consumers?

These questions have been the starting point of our research, that has the objective to see how integrate hedonic aspects in the present FOP labelling schemes to reach a more holistic view.

CHAPTER 3

Marketing Analysis

During this journey through food experience and FOP labels, we have seen how all the institutions have developed labelling systems which are focused only on nutrients, rather than including also those aspects that characterize wellbeing. Therefore, until now the concern of researches has been to analyse the different impact of these labels on healthiness and willingness to buy, without asking how pleasure can enter in this environment and how it can modify the customers decisions. Considering that food experience cannot be limited only to nutrition, but it englobes various aspects, the objective of this research is to see how the drivers that act on consumer wellbeing can be included in the FOP labels to reach a more holistic interpretation of food and reduce the war against some specific food products.

Thereby, the objective of this chapter is to show and give an interpretation of the results obtained through the questionnaire. The experiment has been developed presenting in a random way one of the six total images. Each image can or cannot include FOP label Nutri Score and/or Pleasures symbols. The decision to use the Nutri Score as the FOP label of reference is due to the general agreement that this type of label is the most effective in promoting healthy choices and, furthermore, it is the label adopted by different European countries, as France, Belgium , Switzerland, and is under discussion in Spain and Germany.

Thus, the objective is to test the following research questions:

RQ1: Does the presence of FOP label Nutri Score, without any other symbols, on "pleasure food products" negatively impact on the healthiness perception and decrease the pleasure feeling in consumers?

RQ2: Does the presence of Pleasure symbols increase the perception of pleasure by consumers? Can the presence of Pleasure symbols mitigate the negative effect on healthiness' perception caused by the presence of Nutri Score?

RQ3: Regarding the willingness to buy, can it be influenced by the presence of Pleasure symbols and/or by Nutri Score label? If yes, in which way (positive or negative)? Is their impact equal?

Therefore, in the questionnaire there are queries that have the objective to investigate the perception of healthiness and pleasure of the product, seeing how these two elements are

interpreted alone or combined. The other variable that is tested is the willingness to buy. Moreover, a section regarding "health concern" has been added to verify if a high (low) health concern can influence the negative (positive) impact of Nutri Score on healthiness perception.

3.1 Research Design

The research has been conducted through an online questionnaire (see Appendix) sent by email and social network (Facebook, LinkedIn and WhatsApp) in the period between May 22nd and May 26th, 2019; the time requested to complete the survey was about 5 minutes.

The questionnaire is divided in 7 section:

- Introduction of the questionnaire and randomization of the picture
- Healthiness perception
- Pleasure
- Willingness to buy
- Health Concern
- Personal information
- Attention check

The survey presents in the first section an introduction of the product that people will see. In reality, the respondents have not the entire photo of the packaging in front of them, but the picture was a zoom of the information that they can see in the front of the pack. Therefore, the food product has been described as a general dessert to be launched by a renowned confectionery company. This decision has been taken in order to eliminate possible influences by brand used and by personal preferences for dessert products. The idea behind this was to use a food generally defined as "pleasure" that cannot be conditioned by personal tastes. Here the Italian version, as the questionnaire has been completely written in Italian, since the sample was 100% Italian: "Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno" (The team of a well-known confectionary company is launching on the market a new dessert to be consumed during the breaks or as a dessert. Here an image of some information you can see on the packaging. Look carefully at the image before answering the questions that will follow).

Moreover, each respondent had a different picture which was taken in a randomize way by a group of 6 images. This is the result of a 2 (Nutri Score Label: present vs. absent) x 3 (Pleasure symbol: present vs. Pleasure Score vs. Multisensorial symbol) between-subjects experiments. The distinction between two different types of pleasure symbols has been done with the idea to test if the congruency or not of stimuli (Nutri Score and Pleasure symbol) in terms of wording, colours and visual can drive to two different outcomes regarding our dependent variables: consumers' perception of healthiness, pleasure and willingness to buy.

The first picture is the one defined as "control", with only information regarding total calories for dessert consumed and for 100g. This information is replicated in all the next 5 pictures.

The second picture has the Nutri Score, without any Pleasure symbol.

The third picture includes the Nutri Score and the first symbol of Pleasure that we will define "Pleasure Score".

The fourth picture includes the Nutri Score and the second symbol of Pleasure that we will define "Multisensorial symbol".

The fifth picture has only the Pleasure Score.

The sixth and last one has only the Multisensorial symbol

Fig. 23: Control

Fig. 24: Nutri Score only

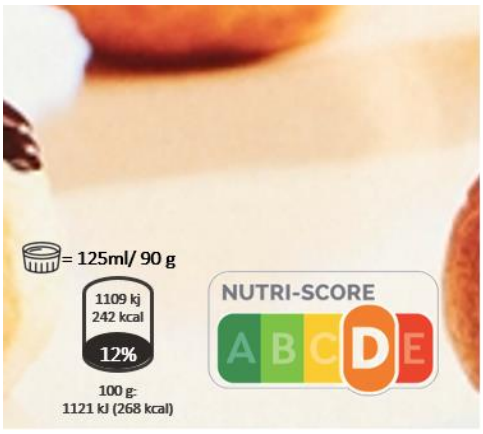


Fig. 25: Nutri Score + Pleasure Score

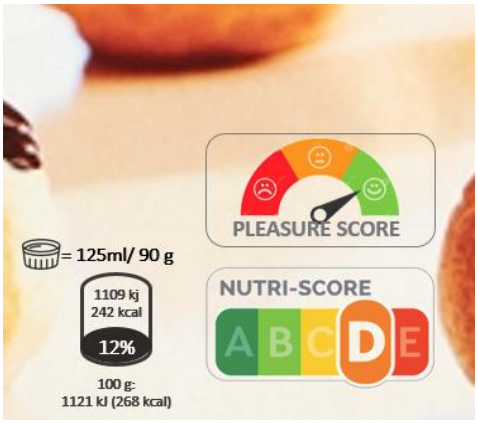


Fig. 26: Nutri Score + Multisensorial

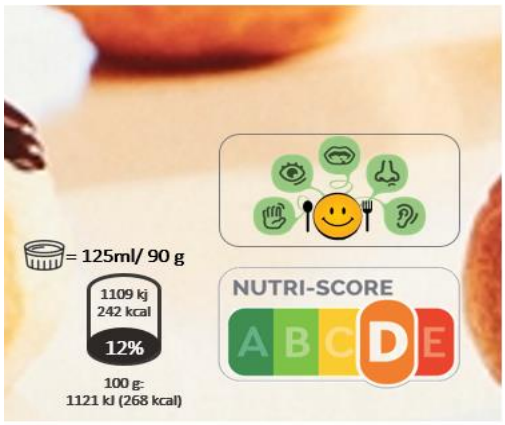


Fig. 27: Pleasure Score only

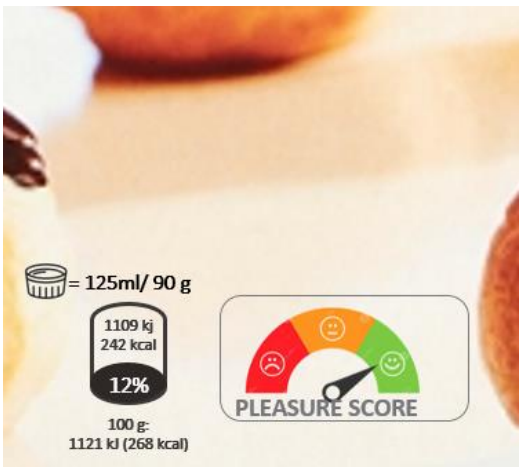
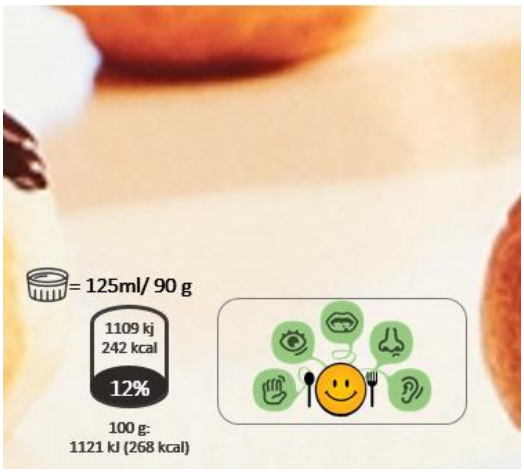


Fig. 28: Multisensorial only



Sections 2, 3 and 4 are the core of the questionnaire. After viewing one of the images above, the respondent started evaluating the food product in relation to healthfulness.

Healthfulness has been measured by 4 different questions and for each one the respondent could choose a score from 1 to 7 in the Likert Scale. Specifically, the question was: "Thinking about the image you saw, how do you evaluate the product?" (Pensando all'immagine che hai appena visto, come valuti il prodotto). Regarding the scale, these were adapted by some scales used in other publications by researchers[68] analysing the theme of healthiness: "not at all

[68] Newman et al., 2018 Marketers' use of alternative front-of-package nutrition symbols: An examination of effects on product evaluations, Journal of the Academy of Market Science;
J.Craig Andrwes and al., 2011 Is Simpler Always Better? Consumer Evaluations of Front-of-Package Nutrition Symbols, Journal of Public Policies and Marketing;

nutritious/highly nutritious"(per niente nutritivo/altamente nutritivo), "very unhealth/very healthy" (molto nocivo/molto sano), "unhealthy for me/ healthy for me" (molto nocivo per me/molto sano per me), "less nutrient than the average/ more nutrient than the average" (meno nutriente della media/più nutriente della media).

After this, the respondent is introduced to some questions regarding pleasure perception. This has been measured by three different sentences that he/she has to evaluate on 7 points scales from "totally disagree" (totalmente in disaccordo) to "totally agree" (totalmente d'accordo): "this product could give me great pleasure" (questo prodotto mi potrebbe dare una sensazione di grande piacere), "buying this product could be like buying a present for myself"(l'acquisto di questo cibo potrebbe essere un regalo per me stesso/a), "this product could be somewhat of a pleasure to me" (questo cibo per me è in qualche modo di piacere).

After this, the respondents had a question that had the aim to analyse the willingness to buy: "Assuming you were interested in purchasing this type of food, how likely are you to buy this specific item given the information shown on the package" (assumendo che devi comprare un dessert, quanto probabilmente sei disposto ad acquistare questo specifico prodotto). Answers were always on a 7 points scales and the three scales were: "very unlikely/very likely" (molto difficilmente/molto probabilmente), "not probable/very probable" (molto improbabile/molto probabile) and "definitely would not/ definitely would" (sicuramente no/sicuramente si)[69].

Then, the questions regarding the "health concern" had the objective to analyse the level of health interest for each respondent. This section has been developed through the following questions, always on a 7 points scale: "I am concerned about getting a lot of salt in my food" (sono preoccupato/a di avere molto sale nel mio cibo), "I am concerned about the risk of high blood pressure" (sono preoccupato/a per il rischio di ipertensione), "I am concerned about the risk of coronary heart diseases" (sono preoccupato/a per il rischio di malattie coronariche), "I am concerned about food additives" (sono preoccupato per gli additivi alimentari). Regarding last question, this has been eliminated after the test of reliability, as the Cronbach's alpha improves delating this item (0,887 vs 0,867).

Demographic section has been developed through 5 questions, where respondents have to give information regarding sex, age, number of family members, educational qualifications and profession.

[69] Burton and Kozup, 2014 Shopper response to fop nutrition labelling programs potential consumer and retail store benefits, modification from Howlett Journal of Retailing 90(1):13-26

Last question was about how many symbols the respondents remembered to have seen, with the objective to check their attention and their reliability in responses.

3.2 Questionnaire and measurements

The questionnaire had 20 closed questions that were the same for each respondent. This has been done with the aim to see how responses change in relation with different images, and so with different visual stimuli.

The sample is constituted by 232 respondents and the average age is 32,11 years old. The level of health concern of respondents did not influence the final results achieved. Since the overall population of respondents is Italian and the sample is constituted by a variegate range of age: from 16 to 66, the language of the survey has been Italian, to avoid misunderstanding or miscomprehension of the questions for people that are not confident in English.

Questions were formulated using a simple syntax, with familiar and commonly used words. The response options have been selected in such a way as to be exhaustive and mutually exclusive, avoiding influencing the respondent towards a specific choice. Regarding the experiment, all questions were based on the Likert scale.

The scale chosen is the one from 1 to 7, because if compared to the 5 points one, it appears to be sensitive enough to have an accurate evaluation, and it is more adapt especially for electronic distribution. As already anticipated, the variables at the core of the experiment have been healthiness, pleasure and willingness to buy.

Fig 29.: Example of a seven-point Likert Scale used in the survey, SOURCE: Questionnaire

3.3 Results obtained

Total responses collected through the questionnaire are 232, during the period May 22nd – May 26th 2019. The platform used to share the questionnaire has been Qualtrics XM and results have been analyzed though SPSS software.

During the questionnaire the design of the experiment was 2 (Nutri Score Label: present vs. absent) x 3 (Pleasure symbol: present vs. Pleasure Score vs. Multisensorial symbol). However, in the analysis of results, we have separated the Pleasure variable in 2 parts to obtain:

- 2 (Nutri Score Label: present vs. absent) x 2 (Pleasure Score: present vs. absent)
- 2 (Nutri Score Label: present vs. absent) x 2 (Multisensorial symbol: present vs. absent)

This choice relies on the objective to analyze the overall impact of pleasure on Nutri Score, therefore we review separately the impact of Pleasure Score and then the impact of Multisensorial symbol. This analysis also consents to compare the effect of these two Pleasure symbols over the variables and provide insights regarding the stimuli congruency.

Indeed, the two pleasure symbols are built following a different ratio that can impact on consumers in different way.

The "Pleasure Score" follows the same design of Nutri Score, with the colored scale of red, orange and green. The implicit idea behind these colors is intrinsic in our mind since we are children, as we associate the red color to "alarm/stop", the orange to the "approaching to the stop/start to pay attention" and the green to "go". Therefore, in the specific case of Pleasure Score we have created a colored level indicator, as the one we usually see for the gasoline in the cars, and we have added the connection between the colors and the smiley faces: red color = sad, orange = stoic and green= happy. This creates a visual contrast especially when the two labels are together, as the Nutri Score shows an orange color for nutrients and the Pleasure Score a green one for Pleasure. Moreover, the presence of the happy smiley connects to the sensation of pleasure other feelings like happiness, satisfaction, joy etc. Thus, the congruency in term of design, color and idea behind them can probably help in elaborating more easily the information.

Fig. 30 : Pleasure Score FOP Label, SOURCE Questionnaire

On the other hand, the Multisensorial symbol wants to visually describes the relation between pleasure and multi sensorial experience. Indeed, as we have seen in the description of the holistic approach of EPF, the experiential pleasure of food derives by the use of all five senses. This type of label is not as intuitive as Pleasure score, because it provides different type of symbols that have to need to be interpreted by the consumer's mind with a higher level of attention. Therefore, the risk could be that people elaborates firstly in their mind the Nutri Score, as more impacting, and later the Multisensorial symbol. Considering that consumers are usually in a hurry when they are at the supermarket, the non-congruency between these two labels can create some misunderstanding. However, this label reflects better the holistic idea of "mindful eating", as it shows a happy face with a fork and a knife that reminds food, surrounded by the 5 senses symbols coloured in green, to highlight the benefits deriving.

Fig.31 : Multisensorial Symbol FOP Label, SOURCE: Questionnaire

3.3.1 Preliminary analysis

After having created a data set with the results, in first place it has been analyzed the Cronbach's alpha for each scale to evaluate the reliability of them. This has resulted positive for each item, with an α greater than 0.8 for each variable, that is to say that the scale is highly reliable to evaluate the attitude of respondent towards the variables analyzed.

Reliability Statistics

Cronbach's Alpha	N of Items
,859	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
HEALTH1	11,40	12,526	,663	,839
HEALTH2	11,48	12,588	,747	,804
HEALTH3	11,53	12,320	,701	,822
HEALTH4	11,45	12,976	,713	,818

Fig.32 Output SPSS: Cronbach's Alpha for Healthiness

Reliability Statistics

Cronbach's Alpha	N of Items
,887	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PLEASURE1	7,55	10,439	,728	,884
PLEASURE2	7,97	9,064	,796	,827
PLEASURE3	7,66	9,289	,821	,803

Fig.33 Output SPSS: Cronbach's Alpha for Pleasure

Reliability Statistics

Cronbach's Alpha	N of Items
,945	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WTB1	7,44	8,446	,892	,914
WTB2	7,32	8,772	,909	,900
WTB3	7,41	9,221	,855	,942

Fig.34 Output SPSS: Cronbach's Alpha for Willingness to buy

Regarding health concern we considered only the first three items in our analysis, as the last one, "I am concerned about food additives", if deleted improve the reliability of α.

Reliability Statistics

Cronbach's Alpha	N of Items
,867	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
HC1	12,06	24,462	,707	,835
HC2	12,36	22,883	,803	,795
HC3	12,26	23,221	,803	,796
HC4	11,46	26,806	,571	,887

Fig.35 Output SPSS: Cronbach's Alpha for Health Concern

The results are firstly showed considering the design 2 (Nutri Score Label: present vs. absent) x 2 (Pleasure Score: present vs. absent)

3.3.2 Healthiness measures

The first variable we wanted to analyse within the experiment is the impact of Nutri Score and/or Pleasure score over healthiness. The objective is to discover if the only presence of Nutri Score decreases the perception of healthiness of the food product (if compared to the control situation). Another interesting aspect to analyse is if the combined presence of Pleasure Score with Nutri Score mitigates the negative effect of Nutri Score over healthiness perception.

To do this we should examine data obtained through the survey, first calculating the mean and the standard deviation. This allows to work through average values.

Dependent variable: health

NUTRISCORE	PLEASURE SCORE	MEAN	STD. DEVIATION	N
0	0	4.0417	0.9806	30
0	1	3.9786	1.3495	35
1	0	3.575	1.1932	40
1	1	3.7738	1.41185	42

Fig.36 Output SPSS: Mean, St. Deviation of Health (dependent variable)

If we consider the mean when only Nutri Score is present and we compare it with the control situation, we see that there is a decrease in the perception of healthiness from 4.04 (control) to

3.575, so there is tendency towards lower healthiness perception. This demonstrates that the presence of a "D" and orange label over the pack of the product can depress health perception.

If we compare the average of only Nutri Score (3.575) and Nutri Score + Pleasure Score (3.7738) we see that the presence of Pleasure Score mitigates the negative impact of Nutri Score over the healthiness perception.

This effect can be analyzed better if we calculate the ANOVA.

Tests of Between-Subjects Effects

Dependent Variable: health_m

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4,843[a]	3	1,614	1,017	,387
Intercept	2133,488	1	2133,488	1343,660	,000
NUTRISCORE1yes0no	4,072	1	4,072	2,564	,111
PLEASURE_score	,166	1	,166	,105	,747
NUTRISCORE1yes0no * PLEASURE_score	,620	1	,620	,390	,533
Error	227,058	143	1,588		
Total	2380,500	147			
Corrected Total	231,901	146			

a. R Squared = ,021 (Adjusted R Squared = ,000)

Fig.37 Output SPSS: Cronbach's Alpha for Health Concern

As we can see from the Sig. of Nutri Score there is a tendency through a negative effect of Nutri Score over the perception of healthiness (0.111), which is not significative.

Therefore, to better understand this effect we have done a comparison by pairs considering what happen in presence and absence of Pleasure Score.

In absence of Pleasure Score (Pleasure score = 0) the ANOVA strengthen what we marginally have seen before: there is a negative effect over healthiness perception if we add the Nutri Score to a pleasure food product. (0.086 is more significative than 0.111).

ANOVA[a]

		Sum of Squares	df	Mean Square	F	Sig.
health_m	Between Groups	3,733	1	3,733	3,044	,086
	Within Groups	83,410	68	1,227		
	Total	87,144	69			

Fig.38: Output SPSS: ANOVA with Pleasure = 0

Then, we analyse what happen if we add the Pleasure Score to the FOP label and if this change the overall perception of healthiness. In this case the Sig. is equal to 0.520, which means that the Nutri Score effect over healthiness perception is absent and it is not statistically significative. Subsequently, we can resume that: since the presence of Nutri Score has a negative impact on consumer perception of healthiness, and since the presence of Nutri Score and Pleasure not have a negative impact on the same variable, the discriminant element that mediates the negative effect is the Pleasure Score, which reduces the negative effect of the FOP label.

ANOVA[a]

		Sum of Squares	df	Mean Square	F	Sig.
health_m	Between Groups	,800	1	,800	,418	,520
	Within Groups	143,648	75	1,915		
	Total	144,448	76			

Fig.39: Output SPSS: ANOVA with Pleasure = 1

Another observation which is interesting to highlight is that the effectiveness of Nutri Score over healthiness is present when Nutri Score is the only FOP label on the packaging. Indeed, when it is assembled with Pleasure Score, it loses its efficacy.

3.3.3 Pleasure measures

The second variable of our interest is pleasure and how this perception changes through the presence of Nutri Score and/or Pleasure Score.

First of all, as for Healthiness measurements, we calculate the mean to work on average value and standard deviation.

Dependent variable: pleasure

NUTRISCORE	PLEASURE SCORE	MEAN	STD. DEVIATION	N
0	0	3.7556	1.49567	30
0	1	4.5048	1.75896	35
1	0	3.4	1.26806	65
1	1	4.2063	1.60445	40

Fig.40: Output SPSS: Mean, St. Deviation of Pleasure (Dependent variable)

If we consider the mean of control condition (3.7556) and we compare it with the mean when only the Pleasure Score is present (4.5048) we assist to an increase of pleasure perception of 0.7492

The positive impact on pleasure is much more evident in the ANOVA calculation. Indeed, the presence of Pleasure score gives a sig. of 0.003 which is statistically significant to accept the hypothesis that Pleasure Score increases pleasure perception. At the same time, the presence of Nutri Score does not have effect on pleasure perception as the sig. value is 0.203 so it is not statistically significant. The same is for Nutri Score + Pleasure Score that gives a value of 0.911 which demonstrates that adding the Nutri Score next to Pleasure score does not have effect on the perception of pleasure.

Dependent Variable: pleasure_m

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	26,728[a]	3	8,909	3,766	,012
Intercept	2273,881	1	2273,881	961,106	,000
NUTRISCORE1yes0no	3,863	1	3,863	1,633	,203
Pleasure_score	21,856	1	21,856	9,238	,003
NUTRISCORE1yes0no * Pleasure_score	,029	1	,029	,012	,911
Error	338,324	143	2,366		
Total	2677,222	147			
Corrected Total	365,052	146			

a. R Squared = ,073 (Adjusted R Squared = ,054)

Fig.41: Output SPSS: ANOVA with Pleasure

3.3.4 Willingness to buy

The other variable we want to test is the willingness to buy. This is influenced by the presence of pleasure score, as we can see from the mean. Indeed, the presence of Pleasure Score increase the mean from 3.6889 (control) to 4.000 (Pleasure Score) and this is also proved by the ANOVA measurements.

Dependent variable: Willingness to buy

NUTRISCORE	PLEASURE SCORE	MEAN	STD. DEVIATION	N
0	0	3.6889	1.41132	30
0	1	4	1.53618	35
1	0	3.25	1.54468	40
1	1	4.0238	1.53265	42

Fig.42: Output SPSS: Mean, St. Deviation of Willingness to buy (Dependent variable)

Indeed, the sig. regarding the impact of pleasure on WTB is 0.033 which is statistically significant. This is not the same for the Nutri Score, whose sig. is 0.411 and so not significant. These results show that Pleasure Score has a positive impact on willingness to buy, while Nutri Score not.

Dependent Variable: wtb_m

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	15,431[a]	3	5,144	2,245	,086
Intercept	2022,163	1	2022,163	882,764	,000
NUTRISCORE1yes0no	1,556	1	1,556	,679	,411
Pleasure_score	10,631	1	10,631	4,641	,033
NUTRISCORE1yes0no * Pleasure_score	1,934	1	1,934	,844	,360
Error	327,572	143	2,291		
Total	2398,333	147			
Corrected Total	343,004	146			

a. R Squared = ,045 (Adjusted R Squared = ,025)

Fig.43: Output SPSS: ANOVA with Willingness to buy

3.3.5 Summary of the findings of 2 (Nutri Score Label: present vs. absent) x 2 (Pleasure Score: present vs. absent) analysis

The analysis of these data gives interesting insights regarding the research questions we mentioned in the first part of the chapter. Therefore, to summarize:

- The presence of Nutri Score on a pleasure food product have a negative impact over the perception of healthiness. However, this is true only when Nutri Score is isolated, as when Nutri Score is with Pleasure Score, the presence of the pleasure symbol mediates the negative effect. Thus, the Pleasure Score cancels the effect of Nutri Score.
- The presence of Pleasure Score on the same food product have a positive impact over the perception of pleasure. On the other hand, the perception of pleasure is not affected by the presence of Nutri Score. Moreover, when Nutri Score is added to Pleasure Score, it not impacts the pleasure sensation.
- Regarding the Willingness to buy, the presence of Pleasure Score positively affects the intention to buy the product, while the presence of Nutri Score not affect the purchase.

These results highlight the importance of "pleasure" component in our food experience and show that pleasure can influence the overall perception of healthiness, acting as a moderator in decreasing the severe judgments deriving by the nutrients algorithm of Nutri Score.

3.3.6 The analysis using 2 (Nutri Score Label: present vs. absent) x 2 (Multisensorial symbol: present vs. absent)

Can the positive effect of pleasure, obtained with Pleasure Score, be replicated also by the Multisensorial symbol? To discover this, we have replicated the analysis done before with this second pleasure label. However, the study didn't give any significative results. (See Appendix)

The differences between the two pleasure labels can be linked, as mentioned before, to the fact that the Pleasure Score is visually congruent to the Nutri Score and it is simple, easy to understand and relies on cultural signs known worldwide, as colours symbols. On the other hand, the Multisensorial symbol is more interpretative and can be more difficult to easily understand.

This highlights the importance to develop symbols easy to interpret and elaborate in our mind, to be effective in helping people finding the right balance to reach enduring wellbeing.

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CONCLUSION

After having developed the topic of FOPL, the debate around this, the holistic view of Experiential Pleasure of Food and the theme of enduring wellbeing, the journey has been concluded with a marketing research. This has allowed to highlight the importance of emotions and multi sensorial impact in our daily food experience, showing how pleasure plays a fundamental role in making choices related to food products.

The results have tested that the interest of people for pleasure is something so powerful that need to be taken into consideration, as a key aspect of their conception of food wellbeing and their choices at supermarket/grocery stores. Indeed, we have seen that the addition of a pleasure symbol, which we have called "Pleasure score", have increased in consumers their willingness to buy (sig.0.033) and their pleasure perception (sig. 0.003). By contrast, the presence of a Nutri Score, which highlights the "healthiness of the product", has a lower impact on consumer perceptions and its effect is mediated if a Pleasure Score is present (sig. 0.520). Indeed, the impact of Nutri Score on healthiness is partially evident (sig.0.086) only if the symbol is isolated and there are not pleasure symbols included in the packaging. Also the willingness to buy is not affected by the presence of a Nutri Score, while it is influenced by the Pleasure Score.

Moreover, as we have discovered during this path, pleasure can be seen as something positive that can drive healthy eating behaviours in various food cultures. It can become an ally to conceive a new idea of food wellbeing, where it is not more an enemy of healthy eating habits, but it enters in the healthy food experience, improving and enriching it.

This means that an alternative approach, in order to guarantee consumer wellbeing and healthy attitude, is possible and it is not linked to restrictions, elimination of some food categories consumption and sense of guilty. On the contrary, it is more a hymn to the beauty of food and to the experiences that are connected to it, as conviviality, taste, exploration of new food cultures, art, experimentation of new cuisines etc. Italians are an example of the positive effect of this vision. Bloomberg Healthiest Country Index defined Italy as one of the healthiest country in the world and the secret is not only in the Mediterranean diet, but it is also on eating leisurely, balancing quality and quantity, enjoying homemade meals and approving a "no diet" vision, which means that they do not feel guilty or frustrated if they eat something sweet on occasion.

All these results can have managerial implications. As we have already mentioned, the holistic idea of food can be an alternative model in contrast with FOPL, but with the same purpose: help people make better choices regarding food. Therefore, include symbols of pleasure can create a balance between the need to conduct a healthy lifestyle and the pleasure sensation that people want to find in their food experience. It allows to eliminate the direct association of "healthy=bad taste" and "pleasure = bad for health", while promoting a varied diet where people can find an equilibrium and a positive approach to food. However, as we have highlighted with the comparison between "Pleasure Score" and "Multisensorial symbol", the Pleasure stimulus should be intuitive, simple and coloured, as people can easily recognize it and associate in their mind even if they are in a hurry at the supermarket.

Another important aspect is that through this different approach, we can preserve the different food cultural heritage that each country has. This means that all the aspects related to food experience are protected and food ends to be seen as a list of nutrients utilized only to take energies for our bodies. By contrast, through EPF there is a celebration of food culture and how food can positively impact on our life, using a mindfulness approach.

Indeed, another aspect that is important in this shift of vision, is that adopting a more holistic view involves being conscient and mindful of food intake. This means that we have to consider the positive pleasure related to eating, while maintaining a balance of moderation and portion consumption. Therefore, this approach is deeper than the one of nutrients, as it understands the importance to integrate various aspects with a conscious approach. This can have positive and reliable impacts on nutritional disorders, as obesity and overconsumption. Indeed, the chance to eat some pleasure food during the diet, without feeling guilty but being mindful regarding portions, can reduce the sense of depression that people, especially those who suffer from eating disorders, can have and which can also cause an opposite effect: gain more weight.

Finally, considering that Italy is one of the healthiest countries in the world, it is the symbol of "eat well" and Italians have never renounced to the pleasures of the table, we have considered something of interest to develop this research really starting from an Italian sample, that can become a practical example to how combine healthiness and pleasure to reach an enduring wellbeing.

APPENDIX

Annex I: Questionnaire

INTRO

Gentile partecipante sono una studentessa laureanda in Management dell'Università LUISS Guido Carli di Roma. Ho costruito questo questionario per una ricerca universitaria finalizzata alla realizzazione della mia tesi di laurea.

Le chiedo 5 minuti del suo tempo per rispondere ad alcune brevi domande. Le ricordo che tutte le risposte resteranno anonime e i dati raccolti verranno trattati solo per scopi di ricerca accademica.

Non ci sono risposte giuste o sbagliate, sono esclusivamente interessata alla sua opinione.

Grazie per la sua disponibilità.

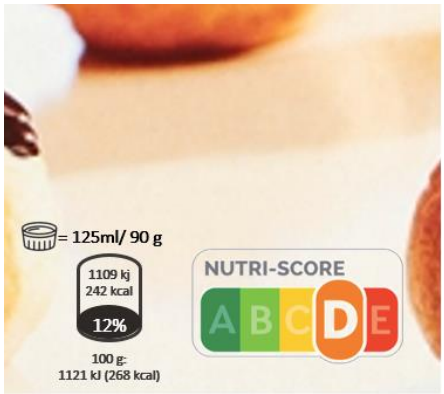
Start of Block: Randomization

Randomization 2A

Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno

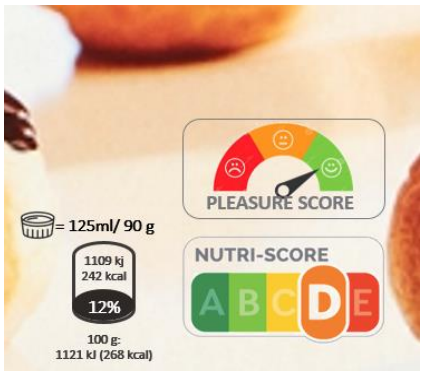
Randomization 2B

Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno



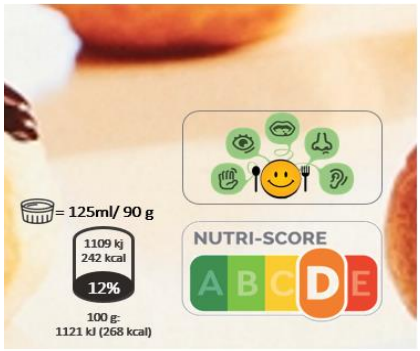
Randomization 2C

Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno



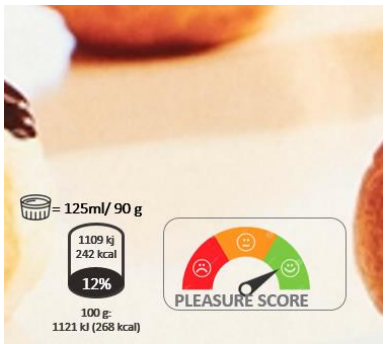
Randomization 2D

Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno



Randomization 2E

Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno



Randomization 2F

Il team di una rinomata azienda dolciaria sta lanciando sul mercato un nuovo dessert monodose da consumare durante i break o a fine pasto. Sotto un'immagine di alcune delle informazioni presenti sul pack. Osserva attentamente l'immagine prima di rispondere alle domande che seguiranno

Q1

Pensando all'immagine che hai appena visto:

Come valuti il prodotto

	1 Per niente nutritivo (1)	2 (8)	3 (9)	4 (10)	5 (11)	6 (12)	7 Altamente Nutritivo (2)
(1)	○	○	○	○	○	○	○

Q2

	1 Molto nocivo (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Molto sano (7)
(1)	○	○	○	○	○	○	○

Q3

	1 Molto nocivo per me (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Molto sano per me (7)
(1)	○	○	○	○	○	○	○

Q4

	1 Meno nutriente della media (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Più nutriente della media (7)
(1)	○	○	○	○	○	○	○

Q5 Sempre sulla base dell'immagine che hai visto:

	1 Totalmente in disaccordo (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Totalmente d'accordo (7)
Questo prodotto mi potrebbe dare una sensazione di grande piacere (1)	○	○	○	○	○	○	○
L'acquisto di questo cibo potrebbe essere un regalo per me stesso/a (2)	○	○	○	○	○	○	○
Questo cibo per me é in qualche modo di piacere (3)	○	○	○	○	○	○	○

Q6 Assumendo che devi comprare un dessert, quanto probabilmente sei disposto ad acquistare questo specifico prodotto (domanda unica per le tre scale seguenti)

	1 Molto difficilmente (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Molto probailmente (7)
(1)	○	○	○	○	○	○	○

Q7

	1 Molto improbabile (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Molto probabile (7)
(1)	○	○	○	○	○	○	○

Q8

	1 Sicuramente no (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Sicuramente si (7)
(1)	○	○	○	○	○	○	○

Start of Block: domande personali

Q9 Rispondi adesso ad alcune domande che ti riguardano

	1 Totalmente in disaccordo (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 Totalmente d'accordo (7)
Sono preoccupato/a di avere molto sale nel mio cibo (1)	○	○	○	○	○	○	○
Sono preoccupato/a per il rischio di ipertensione (2)	○	○	○	○	○	○	○
Sono preoccupato/a per il rischio di malattia coronariche (3)	○	○	○	○	○	○	○
Sono preoccupato per gli additivi alimentari (4)	○	○	○	○	○	○	○

Q10 Sei:

○ Uomo (1)

○ Donna (2)

Q11 Qual é la tua età (indica il numero)

_____

Q12 Indica il numero di componenti della tua famiglia:

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ + di 4

Q13 Qual é il tuo titolo di studio?

- ○ Master post universitario/dottorato
- ○ Laurea
- ○ Qualche anno di università
- ○ Titolo di studio superiore al diploma, diverso dalla laurea
- ○ Diploma scuola media superiore
- ○ Diploma scuola media inferiore
- ○ Licenza elementare
- ○ Nessun titolo

Q14 Qual é la tua professione?

- ○ Imprenditore
- ○ Libero professionista
- ○ Dirigente/ quadro
- ○ Impiegato
- ○ Operaio
- ○ Studente
- ○ Pensionato
- ○ Non occupato

Q15 Quanti simboli ricordi di aver visto nel pack del prodotto?

- ○ 1
- ○ 2
- ○ 3

Annex II: Output SPSS 2 (Nutri Score Label: present vs. absent) x 2 (Multisensorial symbol: present vs. absent)

Between-Subjects Factors

		N
NUTRISCORE (1:yes; 0:no)	0	81
	1	74
Pleasure_symbol	,00	70
	1,00	85

Descriptive Statistics

Dependent Variable: health_m

NUTRISCORE (1:yes; 0:no)	Pleasure_symbol	Mean	Std. Deviation	N
0	,00	4,0417	,98059	30
	1,00	3,8186	,89174	51
	Total	3,9012	,92591	81
1	,00	3,5750	1,19320	40
	1,00	3,8162	1,06299	34
	Total	3,6858	1,13405	74
Total	,00	3,7750	1,12381	70
	1,00	3,8176	,95773	85
	Total	3,7984	1,03278	155

Tests of Between-Subjects Effects

Dependent Variable: health_m

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3,803[a]	3	1,268	1,193	,314
Intercept	2166,753	1	2166,753	2039,026	,000
NUTRISCORE1yes0no	2,050	1	2,050	1,929	,167
Pleasure_symbol	,003	1	,003	,003	,957
NUTRISCORE1yes0no * Pleasure_symbol	2,007	1	2,007	1,889	,171
Error	160,459	151	1,063		
Total	2400,563	155			
Corrected Total	164,262	154			

a. R Squared = ,023 (Adjusted R Squared = ,004)

Between-Subjects Factors

		N
NUTRISCORE (1:yes; 0:no)	0	81
	1	74
Pleasure_symbol	,00	70
	1,00	85

Descriptive Statistics

Dependent Variable: pleasure_m

NUTRISCORE (1:yes; 0:no)	Pleasure_symbol	Mean	Std. Deviation	N
0	,00	3,7556	1,49567	30
	1,00	3,7843	1,29927	51
	Total	3,7737	1,36608	81
1	,00	3,4000	1,26806	40
	1,00	3,5490	1,45617	34
	Total	3,4685	1,35026	74
Total	,00	3,5524	1,37130	70
	1,00	3,6902	1,36062	85
	Total	3,6280	1,36275	155

Tests of Between-Subjects Effects

Dependent Variable: pleasure_m

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4,026[a]	3	1,342	,719	,542
Intercept	1955,493	1	1955,493	1047,223	,000
NUTRISCORE1yes0no	3,252	1	3,252	1,741	,189
Pleasure_symbol	,294	1	,294	,158	,692
NUTRISCORE1yes0no * Pleasure_symbol	,135	1	,135	,072	,789
Error	281,964	151	1,867		
Total	2326,111	155			
Corrected Total	285,990	154			

a. R Squared = ,014 (Adjusted R Squared = -,006)

Between-Subjects Factors

		N
NUTRISCORE (1:yes; 0:no)	0	81
	1	74
Pleasure_symbol	,00	70
	1,00	85

Descriptive Statistics

Dependent Variable: wtb_m

NUTRISCORE (1:yes; 0:no)	Pleasure_symbol	Mean	Std. Deviation	N
0	,00	3,6889	1,41132	30
	1,00	3,6667	1,29615	51
	Total	3,6749	1,33122	81
1	,00	3,2500	1,54468	40
	1,00	3,5392	1,42610	34
	Total	3,3829	1,48834	74
Total	,00	3,4381	1,49453	70
	1,00	3,6157	1,34273	85
	Total	3,5355	1,41140	155

Tests of Between-Subjects Effects

Dependent Variable: wtb_m

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4,844[a]	3	1,615	,808	,492
Intercept	1863,708	1	1863,708	932,061	,000
NUTRISCORE1yes0no	2,988	1	2,988	1,494	,223
Pleasure_symbol	,664	1	,664	,332	,565
NUTRISCORE1yes0no * Pleasure_symbol	,904	1	,904	,452	,502
Error	301,933	151	2,000		
Total	2244,222	155			
Corrected Total	306,777	154			

a. R Squared = ,016 (Adjusted R Squared = -,004)

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SUMMARY

The objective of this research is to analyze the topic of Front-of-Pack Labels and the nutrients approach and compare them with a more holistic vision of food and wellbeing.

The present work is articulated in 4 chapters, that want to accompany the reader in a journey around food experience and the debate around FOPL. He will discover more about how many different types of FOPL are present today worldwide, which are their limits and he will see how a more holistic approach can become an alternative way to analyse food, instead of the mainstream conception of nutrients, currently adopted by many countries.

The term "Front-of-package" labels (FoPLs) designates efficient tools for increasing consumer's awareness of foods' nutritional quality and encouraging healthier choices, while stimulating at the same time the industry to put on the shelfs of the supermarkets healthier products.

These types of labels have been implemented by different stakeholders during the last two decades, starting with Sweden in 1989. Then, due to a loss of common international agreement regarding national FOP nutrition labelling, many countries have developed their own FOP label, working in collaboration with various multi-stakeholders' groups, including experts, scientists and exponents of the industry. Therefore, even if the principal aim for each type of these labels is to simplify nutritional information presented on-pack to help consumers choose the healthier food and stimulate healthy product reformulation by industries, there is a world ongoing debate focusing on what label is the most effective in reporting complex nutritional information.

In particular, nutritional labelling is an emotive subject in Europe, with countries that strongly promote FOP labels, as France with Nutri Score or United Kingdom with Multiple Traffic Light system, and countries that openly and vigorously object to this application, with Italy as principal opponent. The debate is still ongoing and now is mainly focused on "The Codex Alimentarius", the "Food Code" adopted by the Codex Alimentarius Commission.

The Codex Alimentarius is the most important food standard program promoted by the WHO in collaboration with the FAO. The principal aim of Codex is to guarantee international food standards, protect consumer health and remove barriers to trade. Among these topics, an important role is played by labelling systems. Specifically, as mentioned in its website, "the

Codex Committee on Food Labelling (CCFL) sets standards and guidelines for nutrition information on food packages enabling consumers to make informed food choices".

Although not legally binding, the quality standards adopted by the Codex Alimentarius are recognized as based on solid scientific documentation and have relevant weight for taking decisions. Where appropriate, the World Trade Organization refers to Codex standards in the solution of commercial disputes involving food or food products. These standards are the first element to work on national and regional laws and regulations.

Last recent discussion has been raised in occasion of the 45th Session of the Codex Committee on Food Labelling, held in Ottawa last May, from 13th to 17th 2019. The discussion already started few days before, when the Permanent Mission of Italy to the International Organization in Geneva raises questions regarding the draft document "WHO guiding principles and framework manual for front-of-pack labelling for promoting healthy diets", that was first written in December 2018 by the Department of Nutrition for Health and Development, and had to be discussed during the meeting in Ottawa. However, this document has risked being published and spread without the approval of Member State's health officers and experts. Thus, Italy denounced poor transparency, highlighting that the possible publication of it could interfere with the Committee's work.

To avoid this risk, the Permanent Representative of Italy to the International Organization in Geneva, Ambassador Gian Lorenzo Cornado wrote a letter to the WHO Director-General to express his opposition and highlight the lack of transparency and unanimity of the term "nutrient profiles", which is considered by Italy as a political concept without scientific foundation. The Italian ambassador asked to eliminate this definition, as the term is defined both in the draft and in the WHO website as "the science of classifying or ranking foods according to their nutritional composition". Cornado explained that we cannot define " a science" something which is absolutely without foundation and which doesn't consider the frequency of consumption in its calculation.

Indeed, the theme of "moderation of consumption" is not included in the algorithm of nutrients. This means that there is no specification about the effect of frequency of consumption of food. Moreover, the system, eliminating the idea of balance and moderation can risk to create an opposite effect: people can start abusing of those food considered "healthy", consuming them without being mindful.

Therefore, the position moved by Italy emphasized the necessity to review the entire system, as it does not show improvements in terms of health, but for the moment it has only increased the war against some specific foods and in particular the most typical Italian quality foods, as gorgonzola, prosciutto di Parma, parmesan and extra-virgin oil that have the red or black label. Furthermore, nutritional experts usually specify that the question is not about healthy or unhealthy food, but it is about healthy or unhealthy diet, as a balance of different type of food.

However, the reply to the strong opposition of Italy came straight away, especially from France and United Kingdom, as first promoter of FOP labelling system. After the publication of Cornado letter, a group of scientists and professors coming from France, Australia, United Kingdom and Canada published an article against the position taken by the Italian government, declaring that this decision is undermining the WHO report for economic reasons. To defend the definition of "nutrient profile", they explained that it is more precise than the overall concept of "quality", as the first only focuses on the dimension of nutrition, which is built through decades of scientific studies that connect food, health and nutrients. Furthermore, they point out that these measures of nutrition have the objective to show which foods contain some nutrients that have to be consumed with moderation, so they can be included in the overall diet but with a limit on consumption in terms of frequency and amount. In their opinion, the strength point of FOP labelling system is that it can reduce the gap deriving by the difficulties of consumers to put in practice the food-based dietary guideline on a daily basis and also their challenge in choosing the healthiest product when they are in front of the shelves.

However, there is no scientific document or studies that proves the beneficial effect of FOPL for the moment.

In this debating context it is necessary to analyze the case considering: on one hand, the necessity to develop a common FOP labelling system that gives clear indications to reduce incertitude among what is good and what is not good to include in FOP label, and on the other hand the need to consider the differences among countries and food culture, that cannot be embedded in an unique label.

Another aspect to be taken in mind is the concept of wellbeing, rather than healthiness, in analyzing food consumption and balanced diet. Indeed, this distinction allows to understand better why FOP label, and more specifically Nutri Score and Traffic light, are not the good solutions to reduce obesity and overweight, as they are built on a more limited and restricted

view, the one of healthiness, which exclude important aspects as portion size and moderation of consumption.

To be able to take in mind all these important elements, we should pass from the idea of "food as health" to the one of "food as wellbeing" (fig.1), which includes a vision based more on the positive effect of food, rather than the negative ones that cause restrictions and constraints. This means considering a more holistic view of food as emblematic element in the person's overall wellbeing.

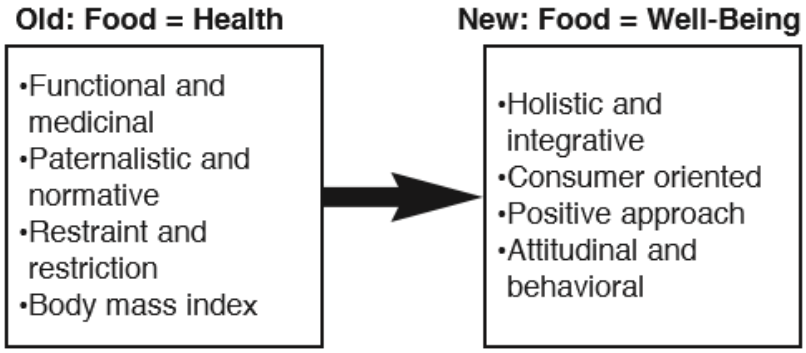


Fig. 1: The Paradigm Shift to Food Wellbeing, SOURCE: From Nutrients to Nurturance: A Conceptual Introduction to Food Well-Being, 2011 Journal of Public Policy & Marketing Vol. 30 (1) Spring 2011, 5–13

This new vision takes into consideration several aspects that allow to change the idea from nutrients to nurturance. "Food wellbeing means a positive psychological, physical, emotional, and social relationship with food at both the individual and societal levels". This concept allows to understand how food is one of the most important cultural aspects of our life and it is the results of many different aspects that are all linked among them and which contribute to the satisfaction of the human being.

There has always been a contrasting vision regarding "pleasure". Especially in the past, food pleasure has been considered as one of the key factors that influences more the visceral impulses which conduct to overeating. This is because pleasure has always been related to a way that people can use to reduce their sadness or momentary pains through food.

Despite this view, a new positive concept regarding "pleasure" has been developed through the idea of "Epicurean" aspects of eating, as "the enduring pleasure derived from the aesthetic appreciation of the sensory and symbolic value of the food".

This type of pleasure is disconnected to the visceral impulse of eating, as it is related, instead, to sensory, symbolic, aesthetic eating moments that accompany the wellbeing through a

moderate consumption. Therefore, if visceral attitude is seen as the perfect antagonist to wellbeing and balanced diet, since this impulse causes the consumption of larger quantity of food and overeating problems, the Epicurean pleasure embraces the beauty of eating, without renouncing to pleasure, but conceptualizing it into smaller portions and higher wellbeing.

All these characteristics allow to move away from the restricted view of healthiness, highlighting its limits, and introduce a new way to interpret pleasure food as a key to improve our wellbeing. Specifically, the experiential pleasure of food (EPF) introduces the idea of enduring health and wellbeing, going one step further than epicurean eating pleasure. Indeed, EPF is described as "the enduring cognitive (satisfaction) and emotional (i.e. delight) value consumers gain from savouring the multisensory, communal, and cultural meaning in food experiences". EPF introduces the importance of "cultural meaning" in food experience, as every country has its peculiarities for food that derive by social norms, values, beliefs that cannot be deleted or not considered when we speak about healthiness and wellbeing, as they are intrinsic part of our life. Moreover, this positive approach enables different actors to play as contributors to reach food wellbeing, connecting storytelling, symbolism, values, social norms, country identity, convivial experiences.

In Italy, all these elements have been developed during the years, through a culinary culture known worldwide, which is the results of a holistic approach that remembers the EPF idea.

Basing their daily nutrition on Mediterranean diet, Italians reflect a food consumption that goes in two directions: from one hand they are interested in healthy feeding, rich in vitamins and fibres, but on the other hand they cannot renounce to their hedonistic desires. The Italian passion for food is also evident in the advertising realized by Barilla and Ferrero during these years. The story of Barilla is a journey into the "family/home" topic, with a focus on its ability to maintain the tradition, while improving every day. The subjects of family and beauty of simple and genuine aspects of life are also present in Ferrero advertising, especially those of Nutella and Kinder. Barilla is the answer to our emotive feelings, it is always there to remember us that we can always feel at home and never alone, it is our cocoon. Ferrero is the beauty of happiness and joy, it is more about benefit from the gifts that life gives us, it is the optimism and enthusiasm.

In both of them, therefore, pleasure and taste are seen as a positive element that cannot be detached from the single food product, but they are essential elements that enrich our lives and make us feel better.

However, all these important holistic elements related to food are not embedded by FOPL.

FOP labels have been introduced worldwide through Institutional regulations, which being not connected to a unique policy, have generated many different terminology and symbols.

To better understand which the limits of FOPL are, here an overview about their main characteristics, with a specific focus on Europe.

Regarding nutrients' information they can be directly transferred on the label, without expressing judgement, as the Guideline Daily Amount (GDA), which represented what is called as "Reductive system" or "Non directive FOP labels", or they can be used to guide consumers in choosing the healthiest choice, without exposing the nutritional specific information, as the "Interpretive nutrition rating system", called also "semi-directive FOP labels". This method consists in an algorithm that on the basis of the presence or not of some nutrients, generates a final symbol that gives an opinion regarding the healthiness of the specific food product. This means that it is a manipulation of quantitative information that is translated in a more qualitative judgement, as mix factual information with easy-to-interpret visuals (ex. colours). Examples of this methodology are Star-based system, Nutri Score, Multiple Traffic Light and Health Logos.

Another type of method that can be used is the "Evaluative/summary indicator system", which uses different criteria to have a final indication of the healthiness of a product, expressing a judgement, recommendation or opinion that has no specific information. Examples can be Star-based system or Health Logos.

Finally, the "Nutrient-specific system" gives nutrients information regarding some specific categories, that generally are considered as critical, as sodium, fats (saturated, trans) and total sugars. One of the examples most evident is the Multiple Traffic Light or the "High in" warning symbols.

Regarding the analysis on these FOPL, it has emerged that Evaluative labels are in general preferred by consumers when they have to compare more products, while Reductive is more adapt in non-comparative situations. Consumers with high Nutrition Consciousness (NC) can use both labels to choose among good, moderate and poor nutritive food among a set of products, as they have more favourable nutrient and overall healthfulness consideration than people with less NC. At the same time, on the other hand, if people have a lower level of NC, the presence of Evaluative FOP system can be more beneficial than the one of Reductive. This

because, as GDA labels are cognitively more complex than TL labels, they present information that is more difficult to process, which are in turn utilized less.

Moreover, the presence of both type of labels on supermarkets would guarantee the couverture of the two situations that consumers can have and can improve consumers choices, if compared to when no FOP labels are available. The presence of these labels can also increase the healthfulness perception of products offered by the supermarket itself.

In addition to the analysis of the differences between Evaluative and Reductive, it is also curious to discover how the presence of colours on FOP labels impacts on consumers' attitude. Indeed, coloured FOP symbols, like Nutri Score and MTL, have a stronger impact on a binary choice with a no-coloured symbols, as GDA for example. Thus, the percentage of healthy choices improve when the product is labelled with a colour coded, highlighting the importance of salience.

If we focus on Multiple Traffic Light (MTL), Nutri Score and Keyhole we can discover that Keyhole exclude hedonic foods from the application of the label, while Nutri Score readapts it to some specific categories as food and MTL is applied regardless of the type of food considered. The fact to not make distinctions can create many asymmetries as some foods have a nutritive composition which is for nature high in fat or salt, and therefore become automatically red (as for example Prosciutto or Extra virgin olive oil).

For the moment there is not common accordance about which nutrients consider and which not, and this creates confusion and absence of reliable data that could prove the benefits of FOPL application.

What is sure is, instead, that food experience is not only about nutrients and cannot be limited to it. If so, it will destroy the culinary culture and experience of many countries, spreading an alarming and false message.

This gap in FOP labels can generate research ideas to see if and how pleasure and taste feelings can be mixed with healthiness information to really help consumers in making the best choice for their wellbeing, without restricting them in consuming only "green" products.

How pleasure impact on FOPL? Does it have an influence on healthiness perception or not? If yes, should it be taken into account to guarantee a more comprehensive interpretation of food products for consumers?

These questions have been the starting point of our research, that has the objective to see how integrate hedonic aspects in the present FOP labelling schemes to reach a more holistic view.

The experiment has been developed presenting in a random way one of the six total images. Each image can or cannot include FOP label Nutri Score and/or Pleasures symbols (Pleasure Score and Multisensorial symbol). The decision to use the Nutri Score as the FOP label of reference is due to the general agreement that this type of label is the most effective in promoting healthy choices and, furthermore, it is the label adopted by different European countries, as France, Belgium , Switzerland, and is under discussion in Spain and Germany.

Fig. 23: Control

Fig. 24: Nutri Score only

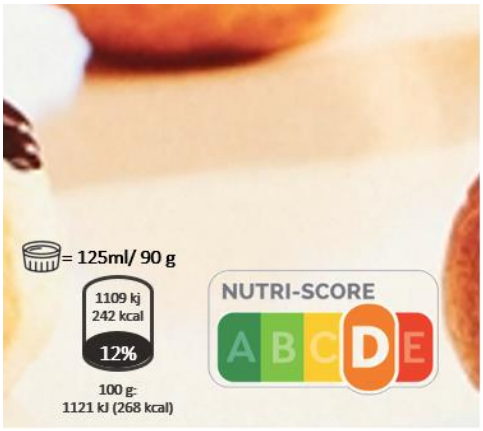


Fig. 25: Nutri Score + Pleasure Score

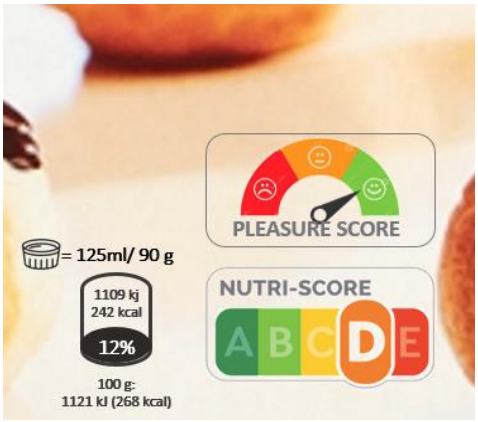


Fig. 26: Nutri Score + Multisensorial

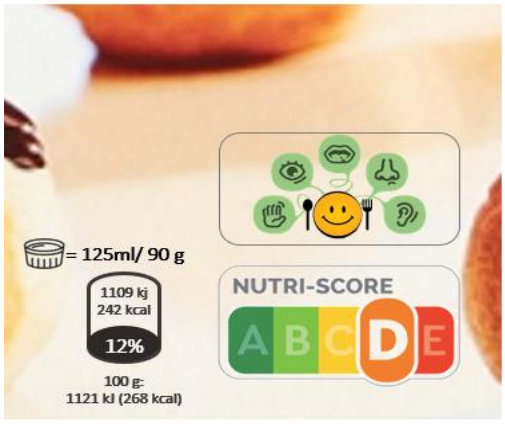


Fig. 27: Pleasure Score only

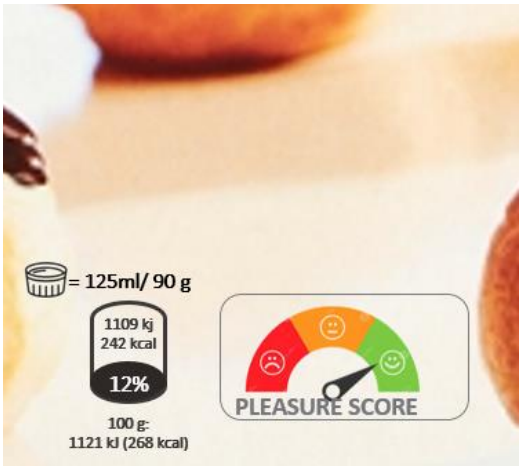
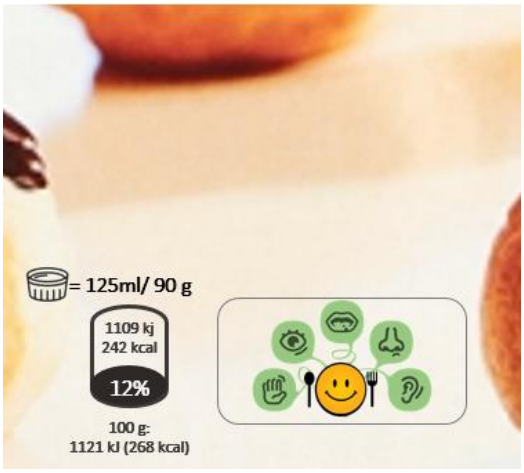


Fig. 28: Multisensorial only



Thus, the objective is to test the following research questions:

RQ1: Does the presence of FOP label Nutri Score, without any other symbols, on "pleasure food products" negatively impact on the healthiness perception and decrease the pleasure feeling in consumers?

RQ2: Does the presence of Pleasure symbols increase the perception of pleasure by consumers? Can the presence of Pleasure symbols mitigate the negative effect on healthiness' perception caused by the presence of Nutri Score?

RQ3: Regarding the willingness to buy, can it be influenced by the presence of Pleasure symbols and/or by Nutri Score label? If yes, in which way (positive or negative)? Is their impact equal?

Therefore, in the questionnaire there are queries that have the objective to investigate the perception of healthiness and pleasure of the product, seeing how these two elements are interpreted alone or combined. The other variable that is tested is the willingness to buy. Moreover, a section regarding "health concern" has been added to verify if a high (low) health concern can influence the negative (positive) impact of Nutri Score on healthiness perception.

During the questionnaire the design of the experiment was 2 (Nutri Score Label: present vs. absent) x 3 (Pleasure symbol: present vs. Pleasure Score vs. Multisensorial symbol). However, in the analysis of results, we have separated the Pleasure variable in 2 parts to obtain:

- 2 (Nutri Score Label: present vs. absent) x 2 (Pleasure Score: present vs. absent)
- 2 (Nutri Score Label: present vs. absent) x 2 (Multisensorial symbol: present vs. absent)

This choice relies on the objective to analyze the overall impact of pleasure on Nutri Score, therefore we review separately the impact of Pleasure Score and then the impact of Multisensorial symbol. This analysis also consents to compare the effect of these two Pleasure symbols over the variables and provide insights regarding the stimuli congruency.

The "Pleasure Score" follows the same design of Nutri Score, with the colored scale of red, orange and green. The implicit idea behind these colors is intrinsic in our mind since we are children, as we associate the red color to "alarm/stop", the orange to the "approaching to the stop/start to pay attention" and the green to "go". Therefore, in the specific case of Pleasure Score we have created a colored level indicator, as the one we usually see for the gasoline in the cars, and we have added the connection between the colors and the smiley faces: red color = sad, orange = stoic and green= happy. This creates a visual contrast especially when the two labels are together, as the Nutri Score shows an orange color for nutrients and the Pleasure Score a green one for Pleasure. Moreover, the presence of the happy smiley connects to the sensation of pleasure other feelings like happiness, satisfaction, joy etc. Thus, the congruency in term of design, color and idea behind them can probably help in elaborating more easily the information.

On the other hand, the Multisensorial symbol wants to visually describes the relation between pleasure and multi sensorial experience. Indeed, as we have seen in the description of the holistic approach of EPF, the experiential pleasure of food derives by the use of all five senses. This type of label is not as intuitive as Pleasure score, because it provides different type of symbols that have to need to be interpreted by the consumer's mind with a higher level of attention. Therefore, the risk could be that people elaborates firstly in their mind the Nutri Score, as more impacting, and later the Multisensorial symbol. Considering that consumers are usually in a hurry when they are at the supermarket, the non-congruency between these two labels can create some misunderstanding. However, this label reflects better the holistic idea of "mindful eating", as it shows a happy face with a fork and a knife that reminds food, surrounded by the 5 senses symbols coloured in green, to highlight the benefits deriving.

The analysis of these data gives interesting insights regarding the research questions we mentioned in the first part of the chapter. Therefore, to summarize (analysis with Pleasure Score, as the Multisensorial didn't give relevant results):

- The presence of Nutri Score on a pleasure food product have a negative impact over the perception of healthiness. However, this is true only when Nutri Score is isolated, as

when Nutri Score is with Pleasure Score, the presence of the pleasure symbol mediates the negative effect. Thus, the Pleasure Score cancels the effect of Nutri Score.

- The presence of Pleasure Score on the same food product have a positive impact over the perception of pleasure. On the other hand, the perception of pleasure is not affected by the presence of Nutri Score. Moreover, when Nutri Score is added to Pleasure Score, it not impacts the pleasure sensation.
- Regarding the Willingness to buy, the presence of Pleasure Score positively affects the intention to buy the product, while the presence of Nutri Score not affect the purchase.

The results have tested that the interest of people for pleasure is something so powerful that need to be taken into consideration, as a key aspect of their conception of food wellbeing and their choices at supermarket/grocery stores. Indeed, we have seen that the addition of a pleasure symbol, which we have called "Pleasure score", have increased in consumers their willingness to buy (sig.0.033) and their pleasure perception (sig. 0.003). By contrast, the presence of a Nutri Score, which highlights the "healthiness of the product", has a lower impact on consumer perceptions and its effect is mediated if a Pleasure Score is present (sig. 0.520). Indeed, the impact of Nutri Score on healthiness is partially evident (sig.0.086) only if the symbol is isolated and there are not pleasure symbols included in the packaging. Also the willingness to buy is not affected by the presence of a Nutri Score, while it is influenced by the Pleasure Score.

Moreover, as we have discovered during this path, pleasure can be seen as something positive that can drive healthy eating behaviours in various food cultures. It can become an ally to conceive a new idea of food wellbeing, where it is not more an enemy of healthy eating habits, but it enters in the healthy food experience, improving and enriching it.

This means that an alternative approach, in order to guarantee consumer wellbeing and healthy attitude, is possible and it is not linked to restrictions, elimination of some food categories consumption and sense of guilty. On the contrary, it is more a hymn to the beauty of food and to the experiences that are connected to it, as conviviality, taste, exploration of new food cultures, art, experimentation of new cuisines etc. Italians are an example of the positive effect of this vision. Bloomberg Healthiest Country Index defined Italy as one of the healthiest country in the world and the secret is not only in the Mediterranean diet, but it is also on eating leisurely, balancing quality and quantity, enjoying homemade meals and approving a "no diet" vision, which means that they do not feel guilty or frustrated if they eat something sweet on occasion.

All these results can have managerial implications. As we have already mentioned, the holistic idea of food can be an alternative model in contrast with FOPL, but with the same purpose: help people make better choices regarding food. Therefore, include symbols of pleasure can create a balance between the need to conduct a healthy lifestyle and the pleasure sensation that people want to find in their food experience. It allows to eliminate the direct association of "healthy=bad taste" and "pleasure = bad for health", while promoting a varied diet where people can find an equilibrium and a positive approach to food. However, as we have highlighted with the comparison between "Pleasure Score" and "Multisensorial symbol", the Pleasure stimulus should be intuitive, simple and coloured, as people can easily recognize it and associate in their mind even if they are in a hurry at the supermarket.

Another important aspect is that through this different approach, we can preserve the different food cultural heritage that each country has. This means that all the aspects related to food experience are protected and food ends to be seen as a list of nutrients utilized only to take energies for our bodies. By contrast, through EPF there is a celebration of food culture and how food can positively impact on our life, using a mindfulness approach.

Indeed, another aspect that is important in this shift of vision, is that adopting a more holistic view involves being conscient and mindful of food intake. This means that we have to consider the positive pleasure related to eating, while maintaining a balance of moderation and portion consumption. Therefore, this approach is deeper than the one of nutrients, as it understands the importance to integrate various aspects with a conscious approach. This can have positive and reliable impacts on nutritional disorders, as obesity and overconsumption. Indeed, the chance to eat some pleasure food during the diet, without feeling guilty but being mindful regarding portions, can reduce the sense of depression that people, especially those who suffer from eating disorders, can have and which can also cause an opposite effect: gain more weight.

Finally, considering that Italy is one of the healthiest countries in the world, it is the symbol of "eat well" and Italians have never renounced to the pleasures of the table, we have considered something of interest to develop this research really starting from an Italian sample, that can become a practical example to how combine healthiness and pleasure to reach an enduring wellbeing.