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# What is a traditional food? Conceptual evolution from four dimensions

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## Abstract

The purpose was to specify the concept of traditional food and the dimensions that make it up, identifying: definitions, authors and research projects; as well as to determine what is known and possible topics for future research. A literature review of traditional foods was conducted that examined the conceptual development of the term. Social network analysis (SNA) was also used to identify the most relevant definitions and working groups on the topic. Twenty-three definitions were identified in the period 1995–2019. It reveals the difficulty of establishing one that encompasses such a dynamic concept. Although there is variability in the specific characteristics of these foods, four dimensions have been established: time, place, know-how, and cultural meaning. It was found that their main characteristic is the transmission of knowledge and raw materials between generations. The conceptualization of the term has been developed mainly in Europe, based on the perspective of consumers. New trends in research include the contrast and complementarity of innovation in traditional foods and the difference between these products and those named with similar attributes such as typical, regional, ethnic, local, among others. Social network analysis (SNA) was used to study the definitions of a concept, something that had not been done with this approach. Suggestions are made for possible research on the subject, such as the conceptual delimitation of related terms and the compatibility between innovation and tradition.

**Keywords:** Food heritage, Local foods, Social network analysis (SNA), Tradition, Typical foods

## Introduction

Interest in traditional foods has always existed since they are the basis of nutrition in diverse cultures and societies. However, since the food industrialization, that is, the mass production that began in the mid-twentieth century, a clear distinction in quality was accentuated, especially by consumers, which separated food into two large groups: those produced in mass, standardized and from which the origin of the raw material with which they are produced is not known, neither the process of elaboration; and those that are produced in small scale, to a

certain extent heterogeneous and we could say that artisan, and of which the bond producer–consumer is closer, since the process of elaboration is not completely known, the origin of the raw material can be inferred, thus resulting in a bigger confidence for the consumers. Therefore, it can be said that, paradoxically, globalization repressed and encouraged the taste and production of these foods. As a result, interest in these foods has intensified since the 1990s, especially focused on enhancing their value and safeguarding them [1–3].

Trichopoulou et al. [2] mention that under the framework of the EFFoST (The European Federation of Food Science and Technology) conference "Innovations in Traditional Foods" in 2005, the interest to clarify the concept began, since the central theme of the forum was, Is a definition of the term "traditional" necessary?

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From that moment on, the concept began to take shape with a greater sense of formality and hand in hand with the European projects EuroFIR (European Food Information Resource Network) [4] and TRUEFOOD (Traditional United Europe Food), both of which sought to consolidate a food information in Europe, with the aim of improving the quality and safety of food production.

Taking up the question of the forum, it was concluded that it was necessary to precisely define the concept of "traditional food" included in the European legislation protecting these products, which are grouped in three seals of origin-linked quality [5]: Protected Designation of Origin (PDO) refers to an agricultural or food product which is produced, processed, and prepared in a defined geographical area; Protected Geographical Indication (PGI) describes a product that is produced and/or processed and/or prepared in a defined geographical area; and Traditional Specialty Guaranteed (TSG) refers to food products made with traditional ingredients or distinctive for their traditional composition or production process.

In particular, there was confusion with the TSG seal, as it did not specify what was considered to be a "traditional" ingredient or composition, so it was not clear which products could be included [2]. It is worth mentioning that the term "traditional" evokes different perceptions so it is difficult to specify, specifically in the area of food, we can all name at least one traditional food from our region of origin, and this can lead to a different meaning for each person [6] depending on characteristics such as eating habits, socio-demographic profile and experiences. This was proven in research conducted with consumers from different European countries, mainly using the word-free association method [1, 7]. Guerrero and collaborators [8] revealed the diversity of meanings that can be attributed to the concept. It is said that an average person can associate four words with the meaning of "traditional," which demonstrates the wide diversity and complexity involved in this term. In addition, they grouped the words obtained in their research into categories such as ancient, celebration, usual/typical, ancestors, country/region, culture, and farm/field.

Due to this conceptual variability, the need to specify the term "traditional food" arose, so a couple of decades ago, researchers and experts on the subject took on the task of agreeing on and unifying this concept.

The conceptual development was not simple due to the complexity of the term; however, there is currently a greater contribution in this regard, especially from the European literature, but it is still pending the systematization of all this information to make it sufficiently clear what "traditional food" means and what is considered a priority in the study of these foods.

For this reason, this work aims to make a synthesis and systematization of existing information on traditional foods, mainly regarding the concept, to specify the dimensions that define them, to provide an overview of what has been studied through the analysis of social networks (SNA), as well as to establish perspectives of what remains to be researched. The novelty of this work is that although information exists, a global and historical perspective on the development of the concept has not been carried out. Likewise, the SNA has not been incorporated for its study either.

## Materials and methods

This work is structured in three parts: the historical conceptualization of "traditional food"; the development of the dimensions that make up these foods; and research suggestions.

To study the evolution of the concept, four repositories were considered: Scopus, Web of Science, Redalyc and Scielo. The search was carried out with the words: "traditional food," "traditional foods," "*alimento tradicional*" and "*alimentos tradicionales*," contained in the title of the document. The search period was from the oldest year that existed in each base, until 2019. It was not limited to a specific type of work, but predominantly articles and book chapters were obtained. Regarding the subject area, only in the case of Scopus two categories were considered: agricultural and biological sciences, and social sciences. A total of 920 documents were obtained: Scopus (378), Web of Science (291), Redalyc (241), and Scielo (10), which were processed to eliminate duplicates and the search was refined to consider those that most closely fit the topic of interest. Finally, a detailed review of 88 documents was considered, of which only 45 were used, since they contained a definition of "traditional food."

Using this base of 45 documents, a social network analysis (SNA) was carried out to better visualize the collaboration of authors in the construction of the concept. The network generating question was: How is a traditional food defined? Therefore, only papers that strictly mention a definition of their own or other authors' definitions ( $n = 45$ ) were considered, thus generating a "citation network." For a more in-depth analysis of the network, the following indicators were estimated:

*Size of the network.* Represents the sum of all nodes, that is, all those surveyed or referred actors. A larger size of the network suggests that the actors or nodes are mostly connected [9]. *Number of links.* A linkage is established between two actors when they are linked socially, technically or commercially, or for resource management [10]. *Centrality of degree.* The number of other actors to whom a given actor is adjacent, i.e., directly connected by a linkage [11]. *Density.* Expressed as a percentage, it

indicates the relationships between those possible [10]. The SNA was carried out with the program UCINET 6.3, and the graphs were made with the program Gephi 0.9.2.

Based on the results, a historical conceptualization was made, the dimensions that make up traditional food were developed, and finally, some topics are suggested that can be explored in future research.

## Results and discussion

The study of traditional foods is very old. In the results obtained, the oldest article dates back to 1975, considering that the search included "traditional food" in the title of the documents. In addition, it is observed that for a couple of decades, from globalization, these foods have gained interest due to the cultural, sensorial and nutritional properties that they possess, so in the academic environment diverse studies have been developed around them, likewise the development of the concept has been strengthened.

The conceptual part has been developed mainly in Europe, since 90% of the documents that contain a definition refer to countries in this region, unlike Latin American literature, where it was difficult to find a definition, although it is indisputable that interest in these foods has also been present in this region for some time.

This difference may be due to the focus that each region has on these foods. For Europe, setting up protection schemes has been a key factor in enhancing the value of these products, and in order to develop these schemes, it was essential to conceptualize "traditional food," unlike Latin America, that, although it has some protection schemes, it has not been essential to define this fact from the academic point of view, but rather from an organic or institutional point of view, or from the protection schemes mentioned above.

Another reason may be related to the linguistic aspect, since the search was developed with "traditional food," a common term for these foods in the English literature; however, it is not the only concept associated with this range of foods, and those found are widely used in the Latin region: "artisanal food," "typical food" and "regional food," which differ somewhat from the concept sought, and therefore, it is believed to be a factor that influences the conceptual development of the term. Therefore, the evolution of the concept is outlined mainly from European works; however, some important considerations from Latin American literature are rescued.

### Historical conceptualization of the "traditional food"

Before getting into the subject, it is important to specify what traditional means. According to the Royal Spanish Academy Dictionary [12], traditional means "that which follows the ideas, norms or past customs"; and it

is relative to tradition (from Latin *traditio* and this in turn from *tradere*, meaning "to transmit," "to deliver") and refers mainly to the "transmission of news, literary compositions, doctrines, rites, customs, etc., made from generation to generation." In other words, it suggests the idea of transmitting or delivering something, which can be knowledge, theory and practice, behavior, attitudes to ensure continuity between generations [13]. Nora [14] describes tradition as "a remembrance having become historically conscious of itself" [15]. Hervieu-Léger [16] referred by Quaranta and Salvia [13] defines tradition as "the combination of representations, concepts, theoretical and practical know-how, behavior, attitudes, etc. that a group or a society accepts to ensure the continuity between past and present." Therefore, the essence of tradition is generational transmission.

For a greater spatial-temporal location of the evolution of the concept "traditional food," the results are identified and grouped into three stages: Origin (1991–2000), development (2001–2010) and consolidation (2011–2020) (Fig. 1).

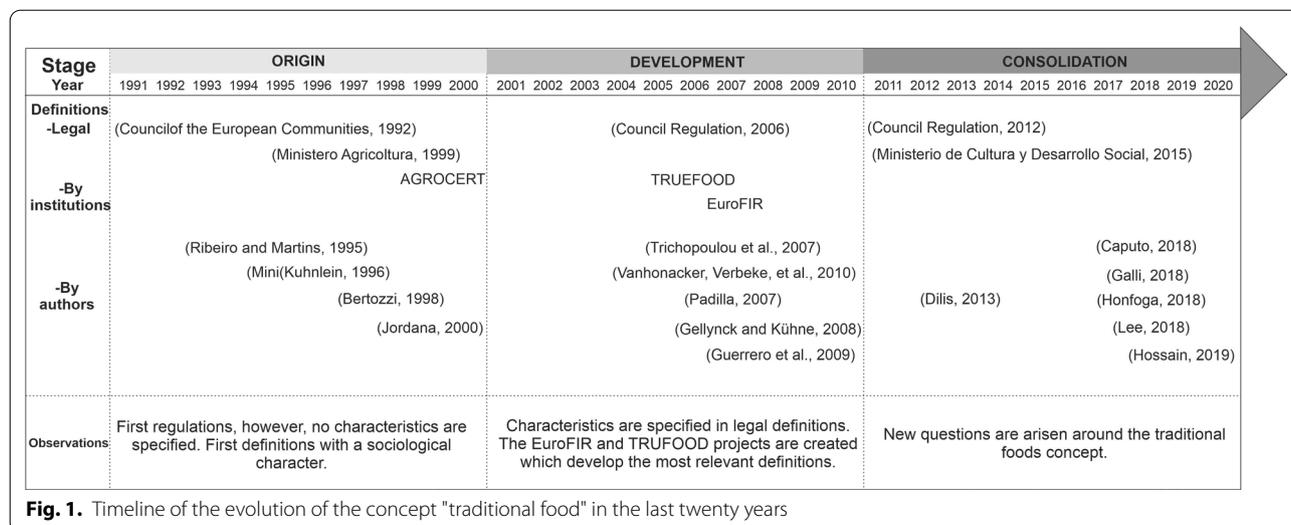
### Origin (1991–2000)

It is considered from the emergence of the first European legislation (Regulation 2081/92 and 2082/92 of 14 July 1992 that applies to the protection of geographical indications and designations of origin of agricultural products; and to certificates of specific character of agricultural products and foodstuffs, respectively [2, 17]) to the first formal definitions found on a traditional food.

Up until the year 2000, few studies addressed a definition as such, somehow the term was used, but no description of what it meant was found, even in these legislations there was no precise definition specifying what was considered traditional, which caused a lot of confusion and resulted in an inability to guarantee exclusive registration of traditional foods [2].

Some of the first definitions can be found in Ribeiro and Martins [18] referred by Zuin and Zuin [19]; Kuhnlein [20] which refer to a traditional food emphasizing the generational transmission of knowledge, as well as the use of local raw materials and the fact that these can have denominations of origin and a strong link to the territory.

The first description used in the legal field is also included at this stage. It should be said that, although regulations already existed to protect traditional foods, this is the only definition found in the European Union, and it specified what was then considered as "a traditional food". It was prepared by the Ministry of Agriculture [21], in Italy, and it is stated as: "Agrifood products whose methods of processing, storage and ripening are consolidated with time according to uniform and constant local use" [3, 7, 22–25].



**Fig. 1.** Timeline of the evolution of the concept "traditional food" in the last twenty years

A sociological nuance contained in Bertozzi’s definition in 1998 is distinguished at this stage: "A traditional food product is a representation of a group, it belongs to a defined space, and it is part of a culture that implies the cooperation of the individuals operating in that territory" [7, 22, 23, 26, 27]. The same is true of Jordana [27], who emphasizes that "to be traditional, a product must be linked to a territory and it must also be part of a set of traditions, which will necessarily ensure its continuity over time" [7, 22, 25, 28, 29]. Both definitions are widely referenced.

Basically, the initiative in this stage is developed to form a definition that unifies the formulated ideas of traditional food and that is of legal use for the protection schemes established in the European Union. The AGRO-CERT working group is formed and, according to Trichopoulou et al. [2, 3], formed a scientific committee that established the following criteria to define a traditional food as: traditional raw material, traditional formulation and traditional type of production and/or processing.

If we analyze the definitions mentioned above, from that stage the dimensions proposed by Amilien and Hegnes [30] are visualized: temporal, spatial, knowledge and cultural meaning. However, over time these dimensions take shape and acquire specific descriptions.

**Development (2001–2010)**

Legally, regulation 509/06 is established (which specifies what is considered a traditional food for the purposes of the Traditional Guaranteed Foods (TSG) protection schemes in the European Union and is applied by the European Parliament and the Council on quality systems for agricultural and food products), in this regulation it is considered: "<Traditional>means proven use in the

Community Market during a period of time that shows transmission between generations; this period of time should be what is generally attributed as one human generation, at least 25 years" [7, 22–25, 30–36].

Working groups are formed in institutions and research projects such as TRUEFOOD and EuroFIR. Research in the conceptual field begins to be developed, due to the lack of a term that specifies which foods are susceptible to be included in European certifications.

The European project "TRUEFOOD" introduced a definition focused on changes over time and partnership with the place [30]. This project resulted in a definition of four aspects (1) Food product, mainly of local, regional, or national production. (2) Available for purchase by the public, for at least 50 years. (3) Authentic, own (4). And with a "gastronomic heritage [30, 38].

Within the framework of the EuroFIR project, Trichopoulou et al. [3] prepared one of the most relevant works at the conceptual and operational level, which establishes that the time frame that distinguishes these foods refers to the practice developed before World War II, that is, before mass production and the introduction of technological innovations that substantially altered food production processes, that period when populations still applied simple and traditional approaches [6, 7, 22, 23, 25, 31, 35, 36, 39]. They also develop the aspects established by AGRO-CERT:

- Local ingredients (raw material or primary product). Raw material (species and/or varieties) or primary product, either alone or as an ingredient, that has been used in identifiable geographical areas and it is still in use (taking into account cases where it was abandoned for a while and then re-established) and

its characteristics are in accordance with the current specifications of national and EU legislation.

- Own composition. It is identified as unique (in terms of ingredients), was first established before World War II and was passed down from generation to generation by word of mouth or other means.
- Specific type of production and/or processing. It is the production and/or processing of a food that has been transmitted from generation to generation through oral tradition or other means, always under the condition that its production and/or processing remains in line with the methods originally used and that the intrinsic characteristics of the food, such as physical, chemical, microbiological or organoleptic ones, are maintained [6, 7, 22, 23, 32, 35, 39–43].

In the same year, Padilla et al. [44] emphasize in her definition the naturalness of traditional foods "... In the same way, the production of these products is characterized by the use of natural raw materials, a low level of industrialization and a low presence of chemical additives in the final product."

Gellynck and Kühne [45] extended the time frame of traditional foods to twice the time of regulation 509/2006, in its definition: "Traditional food products are products where (a) key production steps are performed in a given area at national, regional or local level, (b) they are authentic in their recipe (mix of ingredients), origin of raw material, and/or production process, (c) they are commercially available for approximately 50 years, and (d) they are part of the gastronomic heritage" [46, 47].

In 2009, the most relevant research at the conceptual level was carried out, sponsored by the TRUEFOOD project and entitled "Consumer-driven definition of traditional food products and innovation in traditional foods. A qualitative cross-cultural study" by Guerrero et al. [22], where for the first time the definition was established from the perspective of consumers as: "...A product frequently consumed or associated with specific celebrations and/or seasons, normally transmitted from one generation to another, made accurately in a specific way according to the gastronomic heritage, with little or no processing/manipulation, distinguished and known because of its sensory properties and associated with a certain local area, region or country," and which is, so far, one of the most referenced definitions (Fig. 2) [5, 7, 8, 22–24, 28, 29, 31, 38, 40, 41, 43, 46–52]. A validation of the definition of Guerrero et al. [22] can be clearly seen when considered by 20 later works.

The network is interpreted as those authors who have referred to others who mention the definition of traditional food. It was developed through the SNA from the 45 documents in which the definition was found. A

network size of 63 nodes and 104 links was obtained. The density was calculated (2.69%  $SD = 0.1633$ ), which indicates that there is not much interaction in the network, which may be due to the fact that the work carried out includes only 1 or 2 citations of what is a traditional food, so there is little interaction.

Likewise, it is observed that the centralization of the network is 14.2%, so the quotes are located in few authors such as Guerrero et al. [22], Trichopoulou et al. [3] and Council Regulation [33]. Other works of the most cited are as follows: Council Regulation [59], Jordana [27], Ministero Agricoltura [21] and Vanhonacker, Lengard, et al. [51]; it can be said that these authors have a greater degree of input. On the other hand, the papers that include more definitions of traditional foods (greater degree of output) are those that are shown with a larger circle: Guerrero et al. [22, 23], Pieniak et al. [7], and Verbeke et al. [25], and are mainly reviews or papers that conceptually address traditional foods.

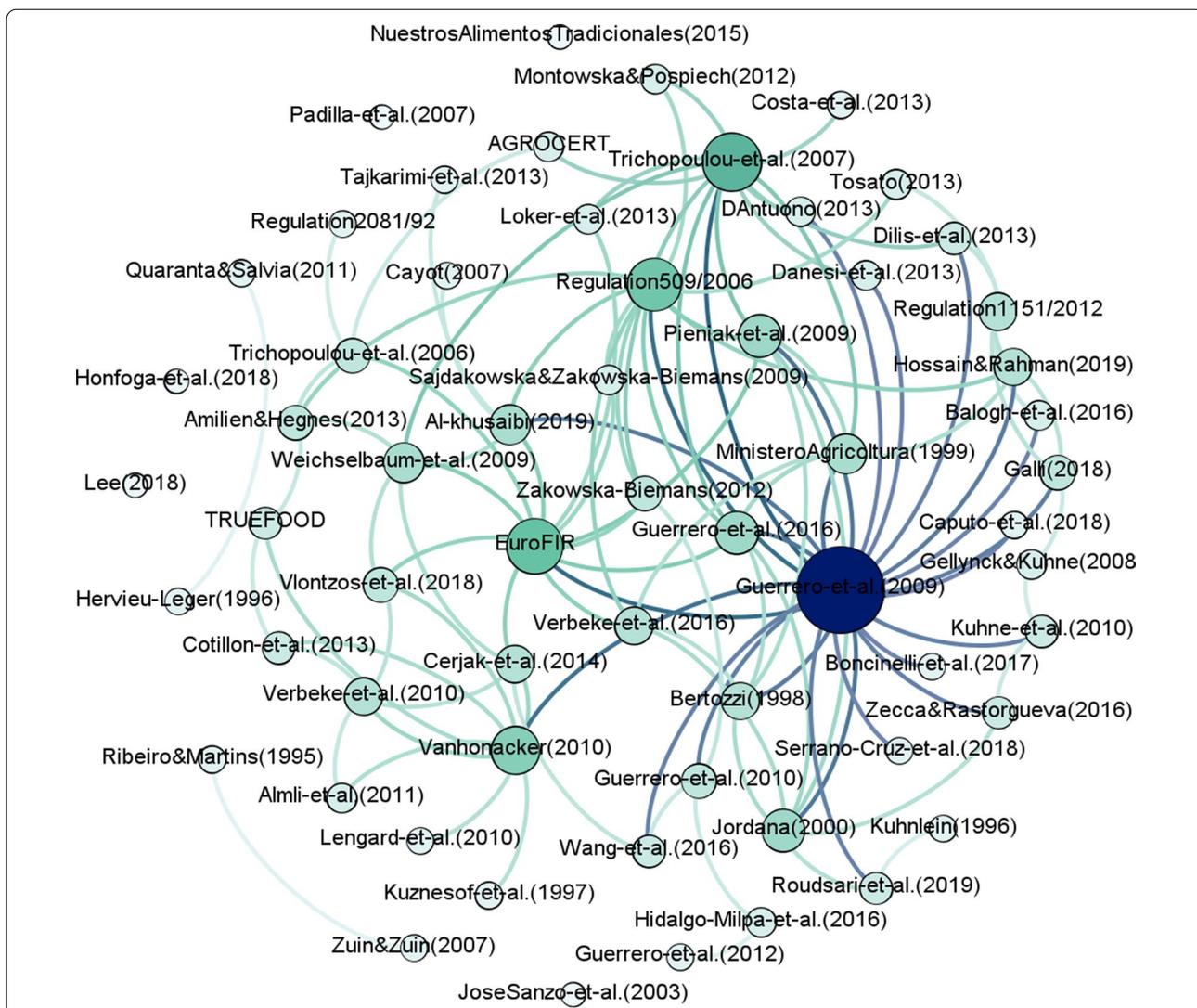
This research by Guerrero [22] was a breaking point in the theme, since then several works have been carried out from the perspective of European consumers in various countries. Some of these are those of Almli et al. [60], Cacciolatti et al. [61], Contini et al. [62], Dilis et al. [40], Feldmann and Hamm [63], Guerrero et al. [8], Rudawska [64], Zecca and Rastorgueva [29]. In addition, the work of Vanhonacker et al. [51] reassure what has been proposed in the field of consumers.

At this stage, the main definitions used in the legal and scientific fields emerge. Important descriptions are established both from the operational side and developed theoretically (EuroFIR, Trichopoulou, 2007), and from the consumer's perspective and formulated empirically (TRUEFOOD, Guerrero, 2009). The aforementioned dimensions are specified when establishing time frames (generational), spatial (local, regional, national) and knowledge of processes (practices before World War II) to differentiate traditional foods from the rest; in addition, the cultural meaning is validated by recognizing that these foods are mainly consumed on special dates and/or celebrations.

#### **Consolidation (2011–2020)**

In the legal field, the time frame is extended to thirty years with the regulation 1151/12 that replaces the 509/06, another modification of the rule is that the place has been changed from "community market" to "domestic" [24, 34, 40, 47, 52, 59].

For this stage, the main characteristics that correspond to the traditional food are already established. In this sense, one of the most relevant works is "The dimensions of 'traditional food' in reflexive modernity: Norway as a case study" by Amilien and Hegnes [30],



**Fig. 2.** Citation Network. Scheme that shows the interaction between authors regarding the conceptualization of "traditional food." Darker knots refer to a higher degree of input (Authors more referred by others). Larger nodes refer to a higher degree of output (Authors who have a greater number of references in their research).\*Note. Some of the citations that make up the graph and that are not mentioned in the document are as follows: Cayot [53], Cotillon et al. [54], Guerrero et al. [55], Hidalgo-Milpa et al. [56], Tajkarimi et al. [57] and Vlontzos et al. [58]

who establish the important aspects of these foods in four dimensions: time, place, know-how and cultural meaning and to which it is expected to contribute in the following section.

It is important to mention that although there are already well-established definitions, in recent years (2015–2019), new definitions have appeared such as that of Caputo et al. [5], Galli [47], Honfoga et al. [65], Hossain and Rahman [24] and Lee [66] which are essentially governed by the same dimensions, but it is highlighted attributes related to diet, cooking habits, customs linked to indigenous cultures.

Likewise, the only definition found in Latin America for the case of these foods, recovered from the book "Nuestros Alimentos Tradicionales" (2015), elaborated under the project "Revaluing our traditional foods" by the Ministry of Social Development and Culture of Argentina [67], and which states the following:

*"Traditional foods are those strongly linked to a territory, a historical depth and constellation of associated knowledge, meanings, values and practices. These foods can be indigenous or introduced from ancient times, but dynamically integrated into the*

*local agricultural system and regional food culture; this implies accepting and understanding their variability and particularity within a given historical context and process."*

So the idea of traditional food in Latin America is not far from the vision provided by Europe. However, it is important to outstand that for this region, the definitions of "artisanal food" [68, 69], "typical food" [70, 71] and "emblematic food" [72] are promoted more at the conceptual level, but are not detailed in depth since the aim was to specify the traditional food.

Finally, at this point, the conceptual development of the term has already been explored and to some extent established, so new questions arise around the issue. Some of these questions refer to the distinction of the now recognized "traditional foods," with another type of similar nuance, such as the typical, artisanal, local, ethnic, regional, emblematic of origin, although they share certain characteristics and in some cases are used as synonyms, there are also elements that differentiate them, and in future research, it will be interesting to clarify these aspects.

#### **Dimensions of "traditional food"**

Up to this point, the traditional food was discussed with emphasis on the concept of "traditional," but it is also important to specify what food is. According to Gross et al. [73], it is any substance that people eat and/or drink to maintain life and growth. Therefore, both solid products with or without processing, as well as beverages, can be considered. In this sense, three main groups of traditional foods can already be distinguished.

As it was already mentioned, it is a very broad and dynamic concept from which it is difficult to establish a definition. However, it is possible to identify characters that distinguish them and are common to them; Amilien y Hegnes [30] called four dimensions: place, time, know-how and cultural meaning, which are elements frequently mentioned in the definitions found, although they vary in detail, and they are discussed below.

#### **Place**

For a food to be considered traditional, it must have a defined place, whether it is local, regional or national, which is why many of them are granted designations of origin or geographical indications. The importance of this dimension can be seen in those that carry the name of some region, such as prosciutto di Parma, Champagne, Brie cheese, among others. In addition, it is for this aspect that many are also called: local, regional or origin foods.

In this physical space, the relations between territory-culture-society converge, so the complexity of this dynamic makes it difficult to delimit the place, since we are societies in movement. That is why there are usually problems in the spatial delimitation, since the food producing culture is not always organized in a geopolitical way, which sometimes makes it difficult to clearly distinguish the territorial limits.

#### **Time**

This is one of the most important aspects because alluding to the definition of tradition (transmission of something from generation to generation) it must take a long time for this process to take place. According to the literature reviewed, at least 25 years or one human generation is considered necessary for the transmission of knowledge to be considered traditional. This is certainly not a problem, since many of the foods are usually inherited from ancestral times; that is, they have been produced and transmitted from the first societies, so they are part of the emblem of these cultures.

#### **Know-how**

Theoretical and practical knowledge transmitted from generation to generation and involved in the elaboration of these foods are basic, since they define the What? (raw material to be used), How? (production techniques and processes), and Who? (person in charge of elaboration). Therefore, some of the traditional foods are also called artisanal, because their elaboration is generally manual or with little use of machinery. The problem is that in recent times, especially since food industrialization, these practices and techniques are not very well regarded, because they are considered to be unsafe due to the lack of production protocols and standards, so many of them have been slightly modified.

#### **Cultural meaning**

Another relevant aspect that gives great meaning to these foods is their ritual and symbolic character, which is intimately linked to the essence of each culture. This part is mentioned in the definition of Guerrero [22] as a product that is consumed or associated with specific celebrations and/or seasons. This indicates that they are consumed not only for a nutritional motive, but also that they contribute a symbolic value related to the customs, ideas and uses of the cultural complex in which they are located, so this cultural charge gives meaning to traditional food. Therefore, this aspect is a clear distinction that must be considered in the differentiation of traditional foods.

From these dimensions, traditional foods can be distinguished from the rest. It is visible to find in the literature a discussion about the degree of tradition. Amilien and

Hegnes [30] discuss these three discourses that appeal to the way of being of traditional foods: the conservative (foods should be as they have always been), the moderator (they can be what they have been and at the same time be renewed), and the innovative (they should be a renewal of food traditions).

In the end, the innovative discourse (which is currently considered far from tradition from a conservative perspective), could be considered, in the not-too-distant future, as a reality for some of the traditional foods, generating a new traditionality. The same happens with the conservative discourse, as these processes are in a dynamic, they cannot always be as they have been, so some of the practices, techniques and materials have had to be adapted because they do not adjust to the new requirements or the materials used have even disappeared. On the other hand, the moderator's discourse covers most of the dimensions and characteristics proposed by the definitions found and is therefore considered to be the most akin to traditional food.

Finally, it is important to emphasize that it is a dynamic, living concept, which is expressed through the culture that produces it, so each of these defines it, and therefore, it cannot be universally delimited, since it would be imprecise to establish a clear and inclusive definition of all these products. However, it is practical to establish a general term for commercial or political purposes, and as it was noted in the review, it is well known that a traditional food has dimensions that have been pointed out.

Thus, traditional foods are considered to be those that have been handed down from one generation to the next in terms of knowledge, techniques or practices used in their preparation or in the choice and use of the raw material, which is generally local, as well as the culture that produces it. Likewise, they carry a symbolic significance that gives them meaning and these in turn to the culture that produces them, as they identify them with it.

### Research suggestions

After reviewing the conceptual development, some lines of possible research are suggested.

One is the problem related to its authenticity and certification. In which the deficiencies in the regulatory schemes, aspects related to the authenticity of food such as the imitation products and the lack of knowledge on the part of consumers about certifications and types of qualities are considered. In this regard, it is also important to develop traditional food markets, which can be viewed from a more economic perspective, where issues

of valorization and appropriation of cultural resources could be discussed.

On the other hand, the issue of innovation in traditional foods has been very controversial. This could undoubtedly be discussed more in depth and investigated the points of view from different positions, since much has been said whether it is appropriate to introduce innovation processes in these products and if so, to what extent it is allowed, so that they do not lose the essence of the traditional.

Another important aspect is the fact that it has been found a variety of terms, which allude to products linked to the territory and culture, such as those here called traditional foods. These concepts generally represent characteristics or dimensions of the traditional, such as local, regional, typical, emblematic, original foods, among others; so it is difficult to distinguish them and it would be worthwhile to delimit, if possible, the characteristics of each of them.

### Conclusions

The concept of traditional food is very dynamic, complex and variable, since its conceptualization depends on the place and the individual who carries it out. A definition of traditional food can be elaborated in a general way from the dimensions that make it up; however, the details in the period of time, the delimitation of the place and the allowed practices have to be specified by the culture that produces them.

In European literature, the definition of Guerrero [22], elaborated under the TRUEFOOD project, is widely accepted in the sector, thus filling a conceptual space that was important to develop.

### Abbreviations

SNA: Social network analysis; PDO: Protected designation of origin; PGI: Protected geographical indication; TSG: Traditional specialty guaranteed; SD: Standard deviation.

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### Authors' contributions

ZR-A performed information collection, manuscript drafting, and incorporating revisions. FC-E was involved in the framework of the study and was involved in editing. The other authors (JAL-R, DC-D, AE-O) contributed to review and editing of the manuscripts, from the first draft to the final version. The author (s) read and approved the final manuscript.

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## Declaration

## Competing interests

The authors declare that there are no competing interests.

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## References

- Cerjak M, Haas R, Brunner F, Tomic M. What motivates consumers to buy traditional food products? Evidence from Croatia and Austria using word association and laddering interviews. *Br Food J*. 2014;116(11):1726–47.
- Trichopoulou A, Vasilopoulou E, Georga K, Soukara S, Dilis V. Traditional foods: Why and how to sustain them. *Trends Food Sci Technol*. 2006;17(9):498–504.
- Trichopoulou A, Soukara S, Vasilopoulou E. Traditional foods: a science and society perspective. *Trends Food Sci Technol*. 2007;18(8):420–7.
- European Food Information Resource Network (EuroFIR). European Food Information Resource Network of Excellence. Available from: [www.eurofir.org](http://www.eurofir.org)
- Caputo V, Sacchi G, Lagoudakis A. Traditional food products and consumer choices: A review. In: Cavicchi A, Santini C, editors. *Case studies in the traditional food sector: a volume in the consumer science and strategic marketing series*. 1st ed. Elsevier Ltd; 2018. p. 47–87. <https://doi.org/10.1016/B978-0-08-101007-5.00004-X>
- Weichselbaum E, Costa H, Benelam B. Synthesis report No 6 : Traditional Foods in Europe Synthesis Report No 6 Traditional Foods in Europe. 2009.
- Pieniak Z, Verbeke W, Vanhonacker F, Guerrero L, Hersleth M. Association between traditional food consumption and motives for food choice in six European countries. *Appetite*. 2009;53(1):101–8.
- Guerrero L, Claret A, Verbeke W, Enderli G, Zakowska-Biemans S, Vanhonacker F, et al. Perception of traditional food products in six European regions using free word association. *Food Qual Prefer*. 2010;21(2):225–33. <https://doi.org/10.1016/j.foodqual.2009.06.003>
- Borgatti SP, Everett MG, Freeman LC. *Ucinet IV network analysis software*. Connections. 1992;15:12–5.
- Wasserman S, Faust K. *Social network analysis in the social and behavioral sciences*. Soc Netw Anal Methods Appl New York, NY Cambridge Univ Press. 1999
- Freeman LC. Centrality in social networks: conceptual clarification. *Soc Networks*. 1979;1(3):215–39.
- Royal Spanish Academy Dictionary. Royal Spanish Academy Dictionary. 23a ed. 2014.
- Quaranta G, Salvia C. Survival and Sustainability. *Surviv Sustain*. 2011;187–94.
- Nora P. Les France. In: *Les Lieux de mémoire*. 1993.
- Bessiere J. Local Development and Heritage: Traditional Food and Cuisine as Tourist Attractions in Rural Areas. *Soc Ruralis*. 1998;38(1):21–34. <https://doi.org/10.1111/1467-9523.00061>
- Hervieu-Léger D. Tourisme, tradition et ethnologie. *Source*. 1996;27:55–86.
- Council of the European Communities. COUNCIL REGULATION (EEC) No. 2082/92 of 14 July 1992, on certificates of specific character for agricultural products and foodstuff. 1992 p. 9–14.
- Ribeiro M, Martins C. A tradição já não é o que era dantes: a valorização dos produtos tradicionais face à mudança social. *Econ e Sociol*. 1995;60(1):29–45.
- Zuin L, Zuin P. Produção de alimentos tradicionais - contribuindo para o desenvolvimento local/regional e dos pequenos produtores rurais. *Rev Bras Gestão e Desenvol Reg*. 2007;4(1):109–27.
- Kuhnlein HW. Dietary change and traditional food systems of indigenous peoples. *Annu Rev Nutr*. 1996;16(1):417–42.
- Ministero Agricoltura. Decreto Legislativo 30 Aprile 1998 n. 173. 1999.
- Guerrero L, Guàrdia MD, Xicola J, Verbeke W, Vanhonacker F, Zakowska-Biemans S, et al. Consumer-driven definition of traditional food products and innovation in traditional foods A qualitative cross-cultural study. *Appetite*. 2009;52(2):345–54.
- Guerrero L, Claret A, Verbeke W, Sulmont-Rossé C, Hersleth M. Innovation in traditional food products: does it make sense? Does it make sense? Innovation strategies in the food industry: Tools for implementation. Elsevier Inc.; 2016. pp. 77–89.
- Hossain A, Rahman MJ. Safety, nutrition and functionality of the traditional foods. In: Al-khusaibi M, Al-Habsi N, Rahman MS, editors. *Traditional foods history, preparation, processing and safety*. Berlin: Springer; 2019. p. 219–38.
- Verbeke W, Guerrero L, Almli VL, Vanhonacker F, Hersleth M. European consumers' definition and perception of traditional foods. In: Kristbergsson K, Oliveira J, editors. *Traditional foods general and consumer aspects*. 1st ed. Berlin: Springer; 2016. p. 3–16.
- Miranda Román G, Ramos Rostrol B, Olguín Arredondo HA. La recolección de insectos con fines alimenticios en la zona turística de Otumba y Teotihuacán, Estado de México. *PASOS Rev Tur y Patrim Cult*. 2011;9(1):81–100.
- Jordana J. Traditional foods: challenges facing the European food industry. *Food Res Int*. 2000;33(3–4):147–52.
- Roudsari AH, Vedadhir A, Rahmani J, Bonab AM. Explaining the barriers and facilitators of ethnic and traditional food choices from the viewpoints of women. *J Ethn Foods*. 2019;6(1):1–8.
- Zecca F, Rastorgueva N. Trends and perspectives of the information asymmetry between consumers and Italian traditional food producers. *Recent Pat Food Nutr Agric*. 2016;8(1):19–24.
- Amilien V, Hegnes AW. The dimensions of "traditional food" in reflexive modernity: Norway as a case study. *J Sci Food Agric*. 2013;93(14):3455–63.
- Al-khusaibi M. Arab traditional foods: preparation, processing and nutrition. In: Al-khusaibi M, Al-Habsi N, Rahman MS, editors. *Traditional foods history, preparation, processing and safety*. Berlin: Springer; 2019. p. 9–35.
- Montowska M, Pospiech E. Is authentication of regional and traditional food made of meat possible? *Crit Rev Food Sci Nutr*. 2012;52(6):475–87.
- Council Regulation. COUNCIL REGULATION (EC) No 509/2006 of 20 March 2006 on agricultural products and foodstuffs as traditional specialties guaranteed. Official Journal of the European Union 2006 p. 93/1–93/10. Available from: <https://eur-lex.europa.eu/eli/reg/2006/509/oj>
- Tosato A. The protection of traditional foods in the EU: traditional specialties guaranteed. *Eur Law J*. 2013;19(4):545–76.
- Zakowska-Biemans S. Żywność Tradycyjna z Perspektywy Konsumentów. *Zywn Nauk Technol Jakosc*. 2012;19(3):5–18.
- Sajdakowska M, Zakowska-Biemans S. Polish consumer perception of traditional food based on the qualitative survey [Postrzeżenie żywności tradycyjnej przez polskich konsumentów na podstawie badań jakościowych]. *Zywn Nauk Technol Jakosc*. 2009;16(3):95–104.
- Traditional United Europe Food (TRUEFOOD). Traditional United Europe Food. Available from: <https://cordis.europa.eu/project/id/16264/es>
- Vanhonacker F, Verbeke W, Guerrero L, Claret A, Contel M, Scalvedi L, et al. How European consumers define the concept of traditional food: evidence from a survey in six countries. *Agribusiness*. 2010;26(4):453–76.
- Löker GB, Amoutzopoulos B, Özkoç SÖ, Özer H, Şatir G, Bakan A. A pilot study on food composition of five Turkish traditional foods. *Br Food J*. 2013;115(3):394–408.
- Dilis V, Vasilopoulou E, Alexieva I, Boyko N, Bondrea A, Fedosov S, et al. Definition and documentation of traditional foods of the black sea area countries: potential nutrition claims. *J Sci Food Agric*. 2013;93(14):3473–7.
- D'Antuono LF. Traditional foods and food systems: a revision of concepts emerging from qualitative surveys on-site in the black sea area and Italy. *J Sci Food Agric*. 2013;93(14):3443–54.
- Costa HS, Albuquerque TG, Sanches-Silva A, Vasilopoulou E, Trichopoulou A, D'Antuono LF, et al. New nutritional composition data on selected traditional foods consumed in black sea area countries. *J Sci Food Agric*. 2013;93(14):3524–34.
- Danesi F, Pasini F, Caboni MF, D'Antuono LF, Bordoni A. Traditional foods for health: screening of the antioxidant capacity and phenolic content of selected black sea area local foods. *J Sci Food Agric*. 2013;93(14):3595–603.

44. Padilla C, Villalobos P, Spiller A, Henry G. Consumer preference and willingness to pay for an officially certified quality label: implications for traditional food producers. *Agric técnica*. 2007;63(3):300–8.
45. Gellynck X, Kühne B. Innovation and collaboration in traditional food chain networks. *J Chain Netw Sci*. 2008;8(2):121–9.
46. Kühne B, Vanhonacker F, Gellynck X, Verbeke W. Innovation in traditional food products in Europe: Do sector innovation activities match consumers' acceptance? *Food Qual Prefer*. 2010;21(6):629–38. <https://doi.org/10.1016/j.foodqual.2010.03.013>.
47. Galli F. Traditional Food: Definitions and Nuances. In: Cavicchi A, Santini C, editors. *Case studies in the traditional food sector: a volume in the consumer science and strategic marketing series*. 1st ed. Elsevier Ltd; 2018. pp. 3–24. <https://doi.org/10.1016/B978-0-08-101007-5.00002-6>
48. Boncinelli F, Contini C, Romano C, Scozzafava G, Casini L. Territory, environment, and healthiness in traditional food choices: Insights into consumer heterogeneity. *Int Food Agribus Manag Rev*. 2017;20(1):143–57.
49. Wang O, Gellynck X, Verbeke W. Perceptions of Chinese traditional food and European food among Chinese consumers. *Br Food J*. 2016;118.
50. Serrano-Cruz MR, Espinoza-Ortega A, Sepúlveda WS, Vizcarra-Bordi I, Thomé-Ortiz H. Factors associated with the consumption of traditional foods in central Mexico. *Br Food J*. 2018;120(11):2695–709.
51. Vanhonacker F, Lengard V, Hersleth M, Verbeke W. Profiling European traditional food consumers. *Br Food J*. 2010;112(8):871–86.
52. Balogh P, Békési D, Gorton M, Popp J, Lengyel P. Consumer willingness to pay for traditional food products. *Food Policy*. 2016;61:176–84.
53. Cayot N. Sensory quality of traditional foods. *Food Chem*. 2007;101(1):154–62.
54. Cotillon C, Guyot AC, Rossi D, Notarfonso M. Traditional food: A better compatibility with industry requirements. *J Sci Food Agric*. 2013;93(14):3426–32.
55. Guerrero L, Claret A, Verbeke W, Vanhonacker F, Enderli G, Sulmont-Rossé C, et al. Cross-cultural conceptualization of the words traditional and innovation in a food context by means of sorting task and hedonic evaluation. *Food Qual Prefer*. 2012;25(1):69–78. <https://doi.org/10.1016/j.foodqual.2012.01.008>.
56. Hidalgo-Milpa M, Arriaga-Jordán CM, Cesín-Vargas A, Espinoza-Ortega A. Characterisation of consumers of traditional foods: the case of Mexican fresh cheeses. *Br Food J*. 2016;118(4).
57. Tajkarimi M, Ibrahim SA, Fraser AM. Food safety challenges associated with traditional foods in Arabic speaking countries of the Middle East. *Trends Food Sci Technol*. 2013;29(2):116–23. <https://doi.org/10.1016/j.tifs.2012.10.002>.
58. Vliotzos G, Kyrgiakos L, Duquenne MN. What are the main drivers of young consumers purchasing traditional food products? European field research. *Foods*. 2018;7(2).
59. Council Regulation. Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs. *Official Journal of the European Union* 2012 p. 343/1–29. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583462674526&uri=CELEX:32012R1151>
60. Almlí VL, Verbeke W, Vanhonacker F, Næs T, Hersleth M. General image and attribute perceptions of traditional food in six European countries. *Food Qual Prefer*. 2011;22(1):129–38.
61. Cacciolatti LA, Garcia CC, Kalantzakis M. Traditional food products: the effect of consumers' characteristics, product knowledge, and perceived value on actual purchase. *J Int Food Agribus Mark*. 2015;27(3):155–76.
62. Contini C, Boncinelli F, Casini L, Pagnotta G, Romano C, Scozzafava G. Why do we buy traditional foods? *J Food Prod Mark*. 2016;22(6):643–57. <https://doi.org/10.1080/10454446.2016.1141137>.
63. Feldmann C, Hamm U. Consumers' perceptions and preferences for local food: A review. *Food Qual Prefer*. 2015;40(PA):152–64. <https://doi.org/10.1016/j.foodqual.2014.09.014>.
64. Rudawska ED. Customer loyalty towards traditional products—Polish market experience. *Br Food J*. 2014;116(11):1710–25.
65. Honfoga BG, N'tandou-Bonzitou G, Vodouhè RS, Bellon MR, Hounhouigan JD. Assessing the role of market integration in the consumption of traditional foods in Benin: a joint price instability coefficient and diet composition approach. *Agric Food Econ*. 2018;6(1):1–18.
66. Lee G. How to protect traditional food and foodways effectively in terms of intangible cultural heritage and intellectual property laws in the Republic of Korea. *Int J Cult Prop*. 2018;25(4):543–72.
67. Nuestros alimentos tradicionales. Buenos Aires, Argentina: Ministerio de Cultura y Ministerio de Desarrollo Social de Argentina; 2015.
68. Domínguez-López A, Villanueva-Carvajal A, Arriaga-Jordán CM, Espinoza-Ortega A. Alimentos artesanales y tradicionales: El Queso Oaxaca como un caso de estudio del centro de México. *Estud Soc Rev Aliment Contemp y Desarro Reg*. 2011;19(38):165–93.
69. Camacho-Vera JH, Cervantes-Escoto F, Cesín-Vargas A, Palacios-Rangel MI. Los alimentos artesanales y la modernidad alimentaria. *Estud Soc Rev Aliment Contemp y Desarro Reg*. 2019;29(53).
70. Champredonde M, Cosiorovski JG. Agregado de Valor o Valorización? Reflexiones a partir de Denominaciones de Origen en América Latina. *Rev Iberoam Vitic Agroind y Rural*. 2016;9(3):147–72.
71. de Gante AV, Cervantes Escoto F. La genuinidad y tipicidad en la revalorización de los quesos artesanales mexicanos. *Estud Soc Rev Aliment Contemp y Desarro Reg*. 2011;19(38):146–64.
72. De Jesús Contreras D, De la Ramírez OI, Thomé Ortiz H. Entre el desarrollo económico y la apropiación cultural Apuntes para el debate sobre la valorización de alimentos emblemáticos. *Estud Soc*. 2016;25(47):327–47.
73. Gross R, Schoeneberger H, Pfeifer H, Preuss HJ. The four dimensions of food and nutrition security: definitions and concepts. *SCN News*. 2000;20(20):20–5.

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