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# **Depicting eaters and non-eaters of abnormal fruits and vegetables: Reflections of self-identity and food culture**

**Gervaise DEBUCQUET, Cindy LOMBART, and Blandine LABBÉ-PINLON**

## **Abstract**

To reduce food waste, retailers have been offering non-calibrated fruits and vegetables (FaVs) in recent years, yet the acceptance of such produce is still far from unanimous. Using reciprocal projections, our research performs a comparative analysis of French consumers' representations of eaters and non-eaters of misshapen FaVs. The overall representations rest on lexical registers that refer to economic, ecological, and sociocultural rationales. Results highlight two opposing representations of the two customer segments studied. Ugly FaVs thus reactivate current tensions that are challenging the traditional French food model. The dominant and positive description of eaters of ugly FaVs is manifested as an implicit defense of a particular French food identity that values cooking with natural and special products. Conversely, the description of non-eaters of imperfect FaVs points to the erosion of this identity in favor of a more pragmatic relationship with food, one that values standardized products. Thus, the sustainability of offering misshapen FaVs depends on the retailers' ability to reduce tensions linked to contrasting food identities by implementing educational actions aimed at children and/or immersive point-of-purchase campaigns.

## **Key words**

Ugly fruits and vegetables; food identity; self-identity; mirroring effect; qualitative study

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## 1. INTRODUCTION

The report on “Estimates of European food waste levels” produced by the EU-funded project FUSIONS (2016) found that approximately 88 Mt of food (edible and inedible parts) are wasted every year in Europe (around 143 Bn Euros), with an average of 173 kg of food waste per capita.<sup>1</sup> Food waste generates high environmental (e.g., greenhouse gas emissions, soil degradation, depletion of natural resources, waste generation), economic (e.g., economic losses through the burden of economic and environmental disposal costs), and social (e.g., inequality, poverty) costs.

Food waste occurs in all phases of the food supply chain, from the initial production processes to the final consumer behavior. However, in developed countries, food is largely (around 70%) wasted at the retail and consumer levels (Gustavsson, Cederberg, Sonesson, van Otterdijk, & Meybeck, 2011; FUSIONS, 2016). Moreover, consumers’ waste production will increase in the near future in tandem with the growth of the world population (Parry, Bleazard, & Okawa, 2015) and the probable expansion of the middle class (Morone, 2016). Consequently, food waste reduction at the consumer and retailer levels, induced by tailored actions, is necessary. In this context, retailers are increasingly committed to reduce food waste in response to legal constraints and/or following a retail strategy. A wide range of actions are being implemented, such as upstream improvement of orders and refocusing of assortments, highlighting of short shelf lives, downstream product processing, and donating unsold food to local charities.

Furthermore, retailers discount ugly (abnormal, imperfect, misshapen, or suboptimal) fruits and vegetables (FaVs) in their stores by approximately 30% compared with normal produce (Loebnitz, Schuitema, & Grunert, 2015) as a result of consumers’ expectations, and hence their own, regarding produce. Previously, these ugly FaVs (i.e., class II<sup>2</sup>), which can have up to 10% of defects, were directly discarded or reserved for the food industry for processing. Retailers also produce communication, within and outside their stores, about these imperfect products (Loebnitz, Schuitema, & Grunert, 2015; Louis & Lombart, 2018). Since 2016, the French retailer Intermarché has offered “Inglorious fruits and vegetables.” The Dutch retailer Albert Heijn calls such produce “Buitenbeentjes.” American retailer Whole Foods labels them “Misfit fruits and veggies,” and Canadian retailer Metro sells the “Rebel line” of FaVs.

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<sup>1</sup> <https://www.eu-fusions.org/phocadownload/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf>

<sup>2</sup> FaVs are classified in three classes.

(1) “Extra” Class. FaVs in this class must be of superior quality. They must be characteristic of the variety and/or commercial type. They must be free from defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality, and presentation in the package.

(2) Class I. FaVs in this class must be of good quality. They must be characteristic of the variety and/or commercial type. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality, and presentation in the package, including a slight defect in shape, slight defects in coloring, and slight skin defects.

(3) Class II. This class includes FaVs that do not qualify for inclusion in the higher classes but satisfy the minimum requirements (e.g., free of abnormal external moisture, free of any foreign smell, and/or taste).

[https://www.unece.org/fileadmin/DAM/trade/agr/standard/fresh/StandardLayout/SL\\_FFV\\_2017\\_e.pdf](https://www.unece.org/fileadmin/DAM/trade/agr/standard/fresh/StandardLayout/SL_FFV_2017_e.pdf)

Given that abnormal FaVs help reduce food waste, and consequently diminish the depletion of natural resources, they can be considered as sustainable food products. While the purchase of organic FaVs is mainly driven by health concerns (Rana & Paul, 2020), abnormal FaVs may respond to wider expectations. Indeed, marketing abnormal FaVs promotes sustainability by providing additional incomes to producers, avoiding waste of ecological resources, making healthy food accessible to all citizens (notably those with low incomes), and responding to the governmental government's sustainability-supporting policy (Vermeir & Verbeke, 2006). Thus, these products contribute, through their attributes and consequences, to one or a combination of economic, ecological, and social objectives (Reheul, Mathijs, & Relaes, 2001).

However, empirical research on abnormal FaVs is scarce. Studies have focused on the reactions of adult (and more recently, on child [Makhal, Thyne, Robertson, & Miroso, 2020]) consumers to abnormally shaped FaVs, generally through the use of pictures and outside a real retail setting (for instance, Loebnitz *et al.*, 2015; Aschemann-Witzel, Jensen, Jensen, & Kulikovskaja, 2017; de Hooge, Oostindjer, Aschemann-Witzel, Normann, Mueller Loose, & Lengard Almli, 2017; van Giesen & de Hooge, 2019; Aschemann-Witzel, Giménez, & Gastón, 2020; Aschemann-Witzel, de Hooge, & Almli, 2021; Xu, Jeong, Jang, & Shao, 2021). They did not examine consumers of ugly FaVs extensively, and therefore did not determine their identities or their values. However, Debucquet and Lombart (2017) showed that "abnormality" leads to opposite and rather polarized perceptions among consumers: either very positive or very negative. These views are shaped by the relationship of consumers with land, nature, and natural products' singularities. Ultimately, separate sets of values (Schwartz, 1999) explain the different attitudes and willingness of consumers to eat or not eat abnormal FaVs. As the saying goes, "we are what we eat" (Rozin, Millman, & Nemeroff, 1986; Nemeroff & Rozin, 1989). Therefore, those variations among "eaters," from prompt adoption to outright rejection, could reveal distinct food identities. By adopting a two-way perspective between "pros" and "antis" using a mirroring effect, the present research aims to understand how abnormal FaVs reveal, reinforce, or disrupt consumers' food identities. It will supplement the study of Grewal, Hmurovic, Lamberton, and Walker Reczek (2019) that showed consumers devalue unattractive produce, such as ugly FaVs, because of their altered self-perceptions when they envision buying the produce. As the authors did not distinguish the self-perception and identity issues between actual eaters and non-eaters of ugly FaVs, our research addresses this gap.

The results show that retailers' proposition of abnormal FaVs can shake the food identities of consumers, challenge their feeling of belongingness to French food culture, and consequently contribute to the reinforcement of self-identity and otherness. To categorize those products based on their shape and maintain their valuation for reducing waste, retailers must seriously address the risks of stigmatization among eaters and non-eaters of ugly FaVs.

This article proceeds as follows. Section 2 presents background literature in bridging the issues raised by the development of sustainable food with food identities and self-identity. Section 3 describes the qualitative and quali-quantitative methodology developed to capture the cross-images of eaters/non-eaters of abnormal FaVs. Section 4 presents the findings from the analyses of both profiles, as depicted by the respondents. Section 5 discusses the role of cultural patterns in the findings and the contribution of ugly FaVs to the reinforcement of food identities. This section also reviews the marketing implications to avoid an increasing divide between "pros" and "antis" and thus preserve the cohesiveness of food culture.

## 2. LITERATURE REVIEW

As the literature dealing with consumer reactions to abnormal FaVs relies primarily on a psychological approach (Hartmann, Jahnke, & Hamm, 2021), we are presenting in this part a literature review allowing to broaden the consumer perspective with sociological and cultural theories about sustainable food and food identities issues.

### 2.1 Sustainable food behaviors and the emergence of new food identities

#### *Food incorporation and identity*

Consumption choices have long been studied from an anthropological perspective that transcends the transactional dimension and analyzes the symbols and self-images involved (Douglas & Isherwood, 1979). Consuming is portrayed as a meaningful act (Pietrikowsky, 2004), sending images perceived by others, who in turn influence our consumption choices (Cosgel, 1994). Food consumption has long been identified as one of the main areas of social distinction mechanisms, with some types of food considered as markers of social belongingness (Bourdieu, 1979). The images associated with new segments of food consumption (ethical food, organic food, plant-based food, or even the overall concept of “sustainable food”, etc.) that are perceived and circulate concomitantly produce food identities and position the eater in the social arena.

The “incorporation process of food” widely studied in the socio-anthropology of food, contributes to the development of one’s otherness and self-identity (Fischler, 1988). When eaters incorporate food, they simultaneously “incorporate” all the social and cultural representations associated with it. Thus, the meanings associated with different incorporated types of food are highly important in shaping identity (Durif-Bruckert, 2017). Awareness of the relationship between food choices and environmental issues is growing among consumers, and the expected decrease in meat consumption and reduction of food waste could affect food habits in the long term. Consequently, the imaginary and symbolic dimensions associated with sustainable food and, more broadly, with alternative food choice are currently engendering new food identities.

#### *From cultural food identity to strengthening of self-identity*

As Cherrier (2007) wrote, in a postmodern world with no common shared narrative, the self has been rendered free and autonomous from traditional values, and individuals are becoming independent agents faced with a plethora of possibilities. With regard to food, food heteronomy was defined through the concept of a “food model,” which is a complex set of norms and rules governing the structure, composition, and temporality of meals, forms of sharing, and symbolic ties that the eater forges with nature and living things (Fischler, 1990; Poulain, 2002). In the French case, this model is characterized by an attachment to natural and terroir products, to taste, and lastly to sharing, specifically, the collective dimension of the food act (Fischler & Masson, 2008). As Fischler (1988, 2013) explained, this “food model” has weakened in recent decades, in line with changes in lifestyles, greater awareness on food sustainability and the relationship between food and health, and increased exposure to functional foods. Moreover, if we consider

the complex diversity of choices found in occidental countries (Sneijder & Te Molder, 2009), which also affects food, this situation has heightened anomie in food choices and consequently augmented individual choices. However, the emergence of various diets or food ideologies based on the avoidance of meat, gluten, dairy products, and so forth can be construed as a way to reintroduce a normative logic into everyday eating or even a coherent system of reference (Fischler, 1988).

Given the rapid increase in environmental concern about food and its spread among the young generation (Vermeir & Verbeke, 2008), the salient issue of environmentally friendly foods can contribute to reshaping food identities. Indeed, while choosing food based on environmental criteria has a personal meaning, it can also make sense at the social level when communities of individuals share those food-choice patterns, linking food choices to both personal identity and social identity (Bisogni, Connors, Devine, & Sobal, 2002). In the last decade, consumers have engaged in “voluntary simplicity” (Etzioni, 1999), whereby “ethical consumers” have been identified by their higher concern for environmental issues, animal welfare, social justice, and fair trade. These attitudes respond to a huge sense of obligation to purchase ethically, and these individuals identify themselves as “ethical consumers” (Shaw, Grehan, Shiu, Hassan, & Thomson, 2005). For other motivations, asserting rural food identities can also be a way to express a strong attachment to unpasteurized milk and a rejection of “perfect” food provided by modern food industries (Enticott, 2003). Specific consumption practices invariably contribute strongly to the coproduction of self-expression (Cherrier, 2007).

Thoughts and behaviors related to food and eating coevolve with “self-images” (Sobal, Bisogni, & Jastran, 2014). As a result, food identities tend to be plural, have evolved rapidly in recent decades, and can be clearly manifested in social contexts. Indeed, self-images are determined by mental images that people assign to themselves on the basis of their everyday interactions with people, groups, and objects (Bisogni *et al.*, 2002). When food identity is multifaceted (focused on nutrients, environmental concern, etc.), eaters may decide to assign greater importance to some identities rather than others and enact different identities in different situations (Bisogni *et al.*, 2002). Consequently, capturing these self-images becomes complex. The use of narratives can be relevant to understand the nature (i.e., what they are) and operation of self-images in everyday life (Bisogni *et al.*, 2002).

Cultural food-choice patterns can also be challenged by current food identities. The patterns are reinforced when food habits are strongly anchored in the culture and weakened by new key drivers in food choice, such as health and animal ethics (Debucquet, 2011). Furthermore, as Bisogni *et al.* (2002) asserted, it is worth considering the evaluative dimension of identities because some food identities have higher social value than others. Desirable identities have changed in the past decade owing to emergent lifestyles, along with political and social pressure to adopt environmentally friendly food habits. For instance, avoiding meat and eating seasonal fish are becoming “defining feature[s] of an individual’s social identity” (Rosenfeld & Burrow, 2017). Traditional values, such as those that promote meat, commensality, pleasure, and taste, could be superseded by emergent ecological and ethical values, namely, reduction of food from animal origin and functional food. Given the trend toward escalating individualization of food choices and the growing number of criteria related to food sustainability, are eaters going to increasingly insist on the specificity of how they buy food and what products they choose and eat?

## 2.2 Self-positioning through mirrored/reflected food identities

### *Stereotypes and self-categorization through food habits*

The consequences of strengthening one's self-identity through food can be analyzed through the mechanisms of eaters' social inclusion. The issue of individual and social identity is closely linked to the self-categorization process (Hornsey, 2008). Self-categorization involves classification of the self and others in or out of a group. Individuals are thus perceived as prototypes of their respective group (Hogg, Terry, & White, 1995). Prototypes associated with the consumption of vegetarian/vegetable-based diets versus omnivorous/meat-based diets have been widely studied, and convergent results showed that people avoiding meat are rated as less masculine than omnivores (Ruby & Heine, 2011; Rozin, Hormes, Faith, & Wansink, 2012). The literature on consumption stereotypes likewise found that implicit cognitions are an important driver of attitudes (Nosek, Hawkins, & Frazier, 2011), especially food attitudes (e.g., Roefs & Jansen, 2002). Implicit Association tests (IAT) have been used to assess people's implicit food-related stereotypes through a presentation of different types of food, such as beef and corn (Rozin *et al.*, 2012).

### *Eaters' identity in the social arena: negotiating between cultural patterns and generated images*

In social eating or shared meal contexts, the choice of asserting one's status as a vegetarian or a vegan can be compared to the desire of positioning oneself as being part of a group or an outsider; in other words, choosing whether or not to match one's individual identity with a social identity. Asserting food habits or specific diets can be a way to establish a salient social identity more or less consciously (Rosenfeld & Burrow, 2007). Under special conditions, individuals can consciously modify their eating behavior to create a particular impression of themselves in the eyes of their companions (Vartanian, Herman, & Polivy, 2007). During shared meals, some strategies to hide a food-related identity have been studied among vegans, who, in some contexts, recast their identity to resemble "an ordinary person" (Sneijder & Te Molder, 2009).

Identity construction can then be considered a middle-out process, in which the consumer may foreground the desire to be considered a creative agent or, conversely, express a strong cultural heritage (Cherrier, 2007). The negotiation of identity is therefore an ongoing process, and this co-productive dimension of identity construction can lead to a fragmented sense of self (Arnould & Thompson, 2005). Lastly, some individuals may decide to display their self-identity externally to varying degrees. For example, ethical consumers may decide that they do not want to be seen as "do-gooders" in order to avoid making others feel uncomfortable (Shaw *et al.*, 2005).

### *Ugly food acceptance or avoidance: a new social friction about food identities?*

Recent research on community-supported agriculture/fisheries showed a willingness among consumers to reappropriate food, specifically with regard to origin, singularity (vs. standardized, “perfect” food), and preparation (Salladarré, Guillotreau, Debucquet, & Lazuech, 2018). Indeed, ugly food of plant-based origin disrupts the supply of standardized FaVs that retailers have offered consumers for several decades. By introducing new aesthetic criteria in food choice mechanisms, retailers have reversed the usual criteria for assessing what is a “good” versus a “bad” fruit. Rather than employing moralizing rhetoric pertaining to food waste, their advertising adopts a humorous style to challenge food choice criteria (Debucquet & Lombart, 2017). In line with Chuck, Fernandes, and Hyers’ (2016) work on sustainable and alternative diets, the acceptance or avoidance of abnormal produce can be analyzed like a politicized identity, spurring an awakening or a denial of ecological issues. In alternative diets, specific attitudes reflect different rationales (Chuck *et al.*, 2016), namely, personal logics concerning body and health or altruistic logics related to earth or ecology, which can be opposed to economic logics or established routines of reluctant consumers. Thus, contemporary issues concerning sustainable food are giving rise to a new food confrontation between two dietary identity groups.

Given that ugly FaVs are creating a divide between “pros” and “antis,” with a distinct set of values and different rationales going well beyond the mere valorization of “natural abnormality” (Debucquet & Lombart, 2017), we hypothesize that the confrontation of self-identities generated through ugly FaVs produces social friction, sheds light on food identities and their stereotypes, and lastly, reactivates several features of the French food pattern. To address those issues, we decided, for the empirical study, to recreate, virtually, social settings around ugly FaVs. Through the mere exposure to the “others” and their views of ugly FaVs, the main goal was to arouse cross-depictions between eaters and non-eaters of abnormal FaVs and lastly, to capture self-identities.

### **3. METHODOLOGY**

To obtain a two-way perspective between “pros” and “antis,” we used a mirroring effect to create a research design that produces the conditions for a “virtual” confrontation between eaters and non-eaters of ugly FaVs, where they talk about themselves and portray “others.” Our research method rests on the following phrase: “Tell me if you eat/don’t eat ugly FaVs, and I will tell you who you are relative to others.” As the French food pattern is often presented—against alternative diets—as a flagship of French identity, we adopted a two-step approach in this research. First, we performed a quanti-qualitative approach with the textual analysis software IRAMUTEQ to assess the salience of certain features of the pattern in the overall discourses of eaters and non-eaters of ugly FaVs. Then, we engaged in a manual qualitative approach to deepen the depiction of eaters versus non-eaters of ugly FaVs.

#### **3.1 Sample**

In this research, we used a purposive (Chein, 1981) or purposeful (Patton, 2015) sampling as our goal was to discover, understand, and gain insight on the French consumers’ representations of eaters and non-eaters of misshapen FaVs, using reciprocal projections. To form these two groups of consumers, different major criteria-based selection were considered, such as whether consumers cultivate a private vegetable or fruit garden or not and the place of purchase of FaVs. According to LeCompte and Schensul (2010), with criterion-based selection, the research decide



what attributes of the sample are crucial to the study and find people that meet those criteria. In the same vein, Patton (2015) states that the logic of qualitative purposeful sampling derives from the emphasis on in-depth understanding of specific cases, called *information-rich cases*. Information-rich cases are those from which the researcher can learn a great deal about issues of central importance to the purpose of the inquiry. Consequently, generalizability, in the statistical sense, cannot occur in qualitative research (Eisner, 1998; Belk *et al.*, 2013), but the research can highlight main or global phenomena, that are in our case, the sociocultural drivers of representations.

Thirty in-depth and semi-structured interviews, lasting between one and 2h, were conducted with French buyers and eaters of FaVs, with contrasting sociodemographic profiles, in rural and urban areas (Appendix 1). At this point, we reached a point of saturation or redundancy as recommended by Lincoln and Guba (1985). In purposeful sampling the size of the sample is determined by informational considerations. The sampling is terminated when no new information is forthcoming from new sampled units. In other words, the researcher hears the same responses to his/her questions. No new insights are forthcoming. The first group, eaters of ugly FaVs (18/30), regularly consumes FaVs that they grow themselves or buy from a community-supported agriculture (CSA) group or from producers. In these channels, FaVs are rarely calibrated (i.e., class II). The second group, non-eaters of ugly FaVs (12/30), prefers to buy FaVs in grocery stores (hypermarkets, supermarkets, and convenience stores), channels in which FaVs are highly calibrated (i.e., extra class and class I).

### 3.2 Materials

The interview guide, which contained open-ended questions, was structured around two major themes. The first theme addressed consumers' purchasing and consumption habits of FaVs (calibrated or not) in order to define their profiles (i.e., eaters or non-eaters of ugly FaVs). The second theme focused on abnormal FaVs and employed projective techniques to capture unconscious social and cultural norms (Boddy, 2005).

Interviewees were exposed to several images. Each image presented two anonymous characters (without facial expressions and clothes), to avoid bias, in front of each other. Interviewees were invited to react spontaneously and freely to the opinion indicated in the comic strip bubble of one character and depict it. The ad hoc images that were created concentrated on four major topics: the opportunity to purchase non-calibrated FaVs at a better price (example of sentence used: *"I don't care if they are non-standardized as long as they are cheaper"*) or to reduce waste (*"At least that will reduce the waste and avoid throwing out these types of FaVs"*), difficulties preparing abnormal FaVs (*"I would love to buy some, but I don't know how to cook them"*), and fears associated with FaV abnormality (*"I have never seen FaVs like this .... They worry me a bit!"*). The topics and sentences used for each topic were randomly presented to the interviewees. Through probe questions, interviewees were invited to describe the profile of consumers who could have uttered the sentences. The instruction was, *"Please list all the positive and/or negative words associated with eaters or non-eaters of ugly FaVs."*

### 3.3 Analysis

*Analytical tool*

In this research, we used IRAMUTEQ<sup>3</sup> version 0.7 Alpha 2 which is a textual analysis software. This software is totally inspired from Reinert's method (initially developed with ALCESTE software) and widely used by researchers in social sciences for more than two decades.

First, this software serves to treat corpora of discourses and separate statements into classes according to the downward hierarchical classification based on the co-occurrences of words (Reinert, 2002). In the Reinert's method, the classification relies on ECU (« Elementary Context Unit » as called in ALCESTE). Because of intellectual property, ECU has been renamed TS (« Text Segments ») in IRAMUTEQ. The analysis of co-occurrences of words (more exactly « reduced forms » resulting from lemmatization) aims to cluster the Text Segments (TS) that are part of the same « word context ».

Thus, the method of Descending Hierarchical Analysis (DHA) is applied on Text Segments: TS are clustered according to their vocabularies and distributed according to the reduced forms frequencies. The software calculates descriptive results of each cluster conforming to its main vocabulary (lexic). By concatenation of TS, the classification aims to cluster words (their reduced forms) that have comparable « environments » of co-occurrences; that is clustering words that are part of the same « word context ». The software calculates and provides the most typical TS of each cluster, giving context to them.

More broadly, the Reinert's method is based on the idea that the words used by each respondent were chosen according to the particular mental space that constitutes the person's framework of reference (Reinert, 1993). When data come from a sample of respondents, analysis of mental representations is useful, along with each class of word used, often unconsciously, by respondents. In light of the anchoring process (Jodelet, 1989; Moliner, 2001; Debucquet, 2011), we can also understand how mental representations are embedded in a social and cultural context.

In essence, Iramuteq allows a quanti-qualitative analysis of textual data in engaging in the treatment of words (reduced forms and co-occurrences), following four main steps:

- Step 1: identification of the reduced forms used by an individual or by several individuals;
- Step 2: calculation of the co-occurrences between reduced forms in Text Segments;
- Step 3: descendant hierarchical classification of Text Segments to identify “words contexts” or “lexicon classes” or “lexicon universes”;
- Step 4: calculation of chi-squares for each word to assess the belongingness to lexicon classes (i.e. statistically significant associations of words with each lexical class).

*Quanti-qualitative analysis: identification of lexical universes and salience of French food pattern in the overall sample*

The interviews conducted in this research were recorded and transcribed in full. Using Iramuteq, we analyzed as a whole all positive and/or negative words/short phrases associated with/by eaters and non-eaters of ugly FaVs that were obtained from the open-ended questions included in the projective exercises. We aggregated answers of all respondents to the open-ended question

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<sup>3</sup> IRAMUTEQ is free/open-source software inspired by ALCESTE (Analysis of co-occurent lexemes in simple wordings of a text) and elaborated with R software ([www.r-project.org](http://www.r-project.org)) and python script ([www.python.org](http://www.python.org)).

because they refer to the same theme (monothematic corpus). We defined the Text Segments as each short sentence or words given by one respondent. Then, a set of TS has been analyzed by Iramuteq. This software separated text segments/words issued from all the respondents in several classes, which we further qualified, to refer to the common, French cultural pattern associated with food. This lexical analysis contributes to an assessment on the salience of this pattern and its different dimensions in the depiction of eaters and non-eaters of ugly FaVs. It reveals the minor/major frameworks of references chosen by all the interviewees in our sample.

#### *Content analysis: characterization of the depicted food identities of eaters versus non-eaters*

In this step, we engaged in a manual qualitative approach to deepen the arguments used in the depiction of eaters versus non-eaters of ugly FaVs. First, a content analysis of the qualitative data was performed to obtain an overall view of the themes and recurrent ideas used by respondents when they describe the “others.” Next, we established the correspondence between the themes and recurrent ideas with the characteristics of the French food model, particularly the social norms and rules described in the literature review. In this way, we highlighted the distance (autonomy versus heteronomy) to the French food model as expressed when respondents described the features and psychological traits of eaters versus non-eaters of ugly FaVs (Mayring, 2000; Patton, 2015).

## **4. RESULTS**

First, we present the results of the quali-quantitative analysis of lexicons used all together by eaters and non-eaters of ugly FaVs during projective exercises (Section 4.1). Second, we analyze the representations specifically associated with eaters versus non-eaters of ugly FaVs, together with their profiles, relationship with food, and food identities (Sections 4.2 and 4.3).

### **4.1 Overall lexical universes to describe the relationship of “others” with ugly FaVs**

For the overall data analyzed, 307 initial Text Segments were collected through the different projective exercises (93.46% were classified), together with 1040 different words or lexemes. After several attempts (with different number of final classes), we selected a four class solution because (1) of higher level of TS classified and (2) of greater discrimination between classes (based on factorial analysis automatically provided by the software). Thus, the lexical analysis revealed that while depicting others’ relationships with ugly FaVs, respondents used these four lexical classes which are related to different rationales (Chuck *et al.*, 2016): cultural rituals, altruistic logics for ecology and waste reduction, economic logics, and established routines of reluctant consumers. The more salient rationale reveals some traits of French food pattern (Table 1). Each class is considered as a « world » or « lexical field » or « semantic context » (Reinert, 1990). These four classes reveal the four lexical fields in the aggregate corpus (the aggregated answers of all respondents to the open-ended question). Therefore, one respondent can have said things that can map into 1, 2, 3 or 4 lexical fields.

[insert Table 1 around here]

Class 1, the largest class (37% of occurrences), refers directly to the cultural relationship of French consumers with food and cooking. It juxtaposes those who are heavily involved in

cooking with those who are quite remote from it. The first group takes the time to cook “*real products*” and is thus closer to nature and to the “*countryside*,” with which they form symbolic links. By contrast, the second group views food only through “*standardized*” (calibrated) products and sees a definite advantage in saving time (ugly FaVs are more difficult to prepare and peel).

Class 2 (30% of occurrences) suggests an economic and pragmatic rationale in food choices, depicting “*utilitarian*” buyers who shop at “*supermarkets*,” where they can optimize their “*budget*.” More used to “*pretty*” FaVs, they are averse to buying “*atypical*” products or are prisoners of habit, especially the “*older ones*.”

Class 3 (22%) shares a root with class 1. It illustrates the phenomenon of social distinction closely linked to the social norms described above and associated with cooking and food. In people’s minds, the relationship with and investment in cooking is a social marker, a source of distinction between “*cultivated people*” and the “*middle class*.” This cleavage expressed by the respondents shows that cooking, the relationship with good products, and the capacity to “*feel things*” are part of “*cultural capital*” (Bourdieu, 1979).

Lastly, class 4 (11%) sheds light on the necessary predispositions for the purchase of this type of non-calibrated FaVs, namely, sensitivity to “*ecology*” and the reduction of food “*waste*” and an awareness of the “*non-standard*” product.

In conclusion, given that classes 1 and 3 account for 59% of occurrences, it is interesting to note that respondents strongly expressed, at an unconscious level, the social and cultural norms linked to the specific relationship that French consumers maintain with cooking, in particular, home-made food. The economic and ecological rationales (41% in total), referring to more rational choice criteria, are, by contrast, much less present in the discourse. As a result, the description of “*others*” through the issue of ugly FaVs is not strictly focused on ecological or waste awareness but on affiliation or not to food culture. The content analysis presented hereafter deepens the structuring effect of the French food model in the depiction process of eaters versus non-eaters of ugly FaVs.

#### **4.2 Depictions of eaters versus non-eaters of ugly FaVs**

The detailed content analysis led us to specify the main characteristics of eaters and non-eaters of ugly FaVs as imagined and portrayed by the respondents in the two groups of customers surveyed. The data issuing from the projective techniques result from multiple comparisons of views between eaters/non-eaters of ugly FaVs.

In this section, we will consider and adapt to food identity the Hatch and Schultz’s (2002) research on identity in relation to both culture and image. Although far from the topic of food consumption, some research on the dynamics of organizational identity is relevant to our analysis. Hatch and Schultz (2002) studied identity in relation to both culture and image in order to understand how internal and external definitions of organizational identity interact. They identified four processes linking identity, culture, and image: *mirroring*, the process by which identity is mirrored in the images of others; *reflecting*, the process whereby identity is embedded in cultural understandings; *expressing*, the process whereby culture makes itself known through

identity claims; and *impressing*, the process whereby expressions of identity leave impressions on others (Figure 1). This model can be useful to analyze food-identity building as an ongoing conversation between food culture and self-images as well as explore eaters' degree of autonomy relative to the common culture.

[insert Figure 1 around here]

Considering Hatch and Schultz's (2002) theoretical framework, four processes linking food identity, food culture, and images of eaters/non-eaters of ugly FaVs will underpin our analysis (Figure 2). In the next sub-sections, we will show how "eaters and non-eaters" depict themselves in some ways, specifically, the *reflecting* process (by which food identity is embedded in food cultural understandings) and the *expressing* process (by which food culture makes itself known through food identity claims). We will also indicate how "eaters and non-eaters" depict the others, respectively the non-eaters and the eaters, i.e., the *mirroring* process (by which food identity is mirrored in the images of others), and the *impressing* process (by which expressions of food identity leave impressions on others). To achieve this, when depicting eaters versus non-eaters, we indicated in the quote the profile of the respondent (eaters or non-eaters of FaVs). Applying the aforementioned four processes to ugly FaVs, we will show in this section that representations associated with non-eaters of ugly FaVs are fairly negative overall while those associated with eaters of ugly FaVs are generally positive. In fact, the "projection" prompted by images presented to respondents revealed two food identities. The images of non-eaters give an illustration of a utilitarian rationale (mainly referring to classes 1 to 3) resulting from a weakening of the French food model while the images of eaters offer an idealistic conception of the model (mainly referring to classes 1 and 4). Next, in Section 4.3, we highlight how ugly FaVs stimulate identity-building related to defining oneself or others in terms of attitude toward abnormal products.

[insert Figure 2 around here]

- ***Representations associated with non-eaters of ugly FaVs***

Following the analysis grid of Hatch and Schultz (2002), we detailed the representations of non-eaters as portrayed by eaters (i.e., *impressing* and *mirroring* processes) and non-eaters (i.e., *reflecting* and *expressing* processes). They illustrate a form of resistance and reluctance to imperfect FaVs that is rooted in the weakening of social and cultural norms driven by French food model and identity.

### **Food anomie**

Non-eaters of ugly FaVs are mainly perceived as uneducated eaters uninitiated to natural uniqueness and are thus not skilled enough to cook non-standard foods.

*People not very resourceful, maybe not as willing as me, but who can still be convinced. (Respondent 1, non-eater of ugly FaVs)*

*People who don't know vegetables, it's just a lack of knowledge. You have to teach them, have them taste bizarre vegetables, give them recipe ideas. (Respondent 20, non-eater of ugly FaVs)*

The loss of references for preparing and cooking abnormal FaVs is presented as a "symptom" of the weakening of the French food model, in turn leading to a food anomie (Fischler, 1990).

### **Attachment to convenient food and lack of food enjoyment**

In addition to the lack of food education, these consumers are impervious to ecological discourse; they are mainly interested in the practical aspect of products. They are ready-to-eat enthusiasts.

*A student or worker who works a lot, fairly young, who wants to stay with quite conventional products, and so is not really sensitive to ecology but more to practical aspects. (Respondent 2, non-eater of ugly FaVs)*

*The same people who will buy cooked foods, much more expensive, vacuum-packed vegetables, and prewashed salads in bags. People who stay with what they know, at ground level, who can't see past the end of their noses, not curious. (Respondent 17, eater of ugly FaVs)*

Some respondents see the refusal to consume ugly FaVs as a sign of a lack of food enjoyment; referring in general to non-eaters having a more functional relationship with food.

*Those who have no desire to cook, no pleasure in food. (Respondent 17, eater of ugly FaVs)*

*Someone who does not cook often, a bit like me, or who is not very curious in this area. Uhh, yeah and okay, they have to do their shopping quite repetitively in a fairly formalized way; they buy round lemons, round apples, carrots, carrots you know. (Respondent 7, non-eater of ugly FaVs)*

As a result, ugly FaVs are perceived like an additional constraint they have to deal with.

### **Disconnection from nature and natural singularities**

Non-eaters of ugly FaVs are generally perceived as urbanites, city dwellers, and very far removed from all natural realities.

*The guy who is not at all with it, who never bought fruits or vegetables in his whole life except for in a department store, who never saw anything else, who lives in the city, the good city dweller since birth, a bit like me! (Respondent 8, non-eater of ugly FaVs)*

*The new generation, people who live in low-income housing and never saw a carrot grow. In the suburbs... (Respondent 24, eater of ugly FaVs)*

They are also perceived as eaters shaped by standardized offerings or food standardization discourse.

*A middle-class guy but not very aware of these questions, who needs to be reassured by standard products. (Respondent 4, eater of ugly FaVs)*

*The man in the street, conditioned by standardized sales. (Respondent 13, eater of ugly FaVs)*

### **Preference for nice-looking FaVs as a social distinction and attachment to appearance**

In addition, respondents made a number of moral judgments notably linked to appearance or to a lack of spiritual depth. Non-eaters of ugly FaVs are perceived as people fixated on appearance or on superficiality, and these attitudes are also associated with fantasies about luxury or, more broadly, with the archetypal figure of the bourgeoisie.

*Pretentious people who live only for appearance in general. (Respondent 3, eater of ugly FaVs)*

*People who are more attentive to superficial things. (Respondent 14, eater of ugly FaVs)*

*Mothers in well-off families who cook and have the luxury to afford the most expensive and beautiful fruit. (Respondent 1, non-eater of ugly FaVs)*

*It would be the bourgeoisie, who is convinced that having good products means buying attractive fruits. (Respondent 20, non-eater of ugly FaVs)*

Therefore, for some consumers, acquiring perfect, rare, and/or expensive FaVs is a mark of social distinction.

### **Food choices under economic constraints**

Lastly, the most positive/nuanced visions are very limited and suggest other conceptions of the buyers, namely, consumers who seek to optimize the quality–price ratio of products because of budget constraints. They consequently favor standardized products. They are also viewed as consumers who are anxious and afraid of novelty or of very atypical forms of FaVs.

*A middle-class person who wants a good quality–price ratio, what I’m actually looking for! (Respondent 1, non-eater of ugly FaVs)*

*Consumers who are very picky, ready to overturn the whole fruit bin to find the perfect fruit. So they would not be willing to pay the same price for an atypical fruit. (Respondent 6, eater of ugly FaVs)*

*Someone who’s always worried about what he eats but can’t do much about it in reality. (Respondent 11, eater of ugly FaVs)*

In essence, rejection of ugly FaVs is generally viewed negatively by the French subjects interviewed, even though it was mainly eaters of ugly FaVs who expressed a form of intolerance and a fairly harsh depiction of the “others,” namely, non-eaters of FaVs. This highlights, more particularly among eaters, the *reflecting* and *expressing* processes. In fact, the attitudes and arguments of non-eaters of FaVs, conveyed through the comic strip bubbles, reactivated the social norms and values that are central to their own food identity, which they defended in the projective exercises. By contrast, non-eaters of FaVs question, more particularly by the *mirroring* process, the reasons that lead them to avoid consuming FaVs in a more or less distanced or amused way. At the same time, some non-eaters of FaVs were in some ways challenged by the comic strip bubbles defending eaters through the *impressing* process.

#### **• Representations associated with eaters of ugly FaVs**

Following the analysis grid of Hatch and Schultz (2002), we detailed the representations of eaters as portrayed by non-eaters (i.e., *impressing* and *mirroring* processes) and eaters (i.e., *reflecting* and *expressing* processes). They reveal an implicit defense of the main features of the French food model, especially among interviewees whose food identity is shaped, often unconsciously, by this model. Thus, representations of eaters of ugly FaVs are diametrically opposed to those of non-eaters of ugly FaVs and are much more positive overall.

### **Ecological awareness and affirmation of new values**

Aside from images of engaged, sensitive consumers who are aware of ecological problems, subjects also projected images of people with earth-minded values (i.e., a vision of a nurturing earth and its preservation).

*An environmentalist whose values center on the earth and the environment, from the middle class, who goes to the supermarket hoping to consume quality products, not industrial products. (Respondent 2, non-eater of ugly FaVs)*

*Engaged, ecological types who support a cause, I don’t know, maybe that of local producers. (Respondent 7, non-eater of ugly FaVs)*

*People responsible and logical, sensitive to the issues of excess and waste. (Respondent 3, eater of ugly FaVs)*

*People who are aware of the environment, who have a quite developed political conscience more generally. (Respondent 22, eater of ugly FaVs)*

### **Freedom from industrial food standardization**

Additional quotes describe some personalities likely to reject economic standards and diktats.

*Age 30–40, the guy or woman revolting against the consumption society, all that, for the ugliness of vegetables, who doesn't hesitate to buy something other than calibrated fruit and vegetables, and doesn't mind buying ugly fruits and vegetables. It sounds like me! (Respondent 10, eater of ugly FaVs)*

*Someone who's a bit rebellious, open-minded. (Respondent 13, eater of ugly FaVs)*

Participants also depicted consumers who can be categorized as neophiles, bourgeois-Bohemian, creative (for cooking as well), who are rebelling against the consumption society, looking to stand out, including in their choice of atypical FaVs.

*Someone who is artistic, creative, and spontaneous, rather bourgeois-Bohemian, mainly inclined to see fairly atypical products. (Respondent 4, eater of ugly FaVs)*

### **Acceptance of imperfections in nature as a quest for lost taste**

According to the descriptions, eaters of ugly FaVs are also seeking natural products when cooking and for their real taste.

*People who are tired of eating perfect things, who are looking for natural things. (Respondent 24, eater of ugly FaVs)*

*People mainly of rural origin because they're used to living with nature and accept this type of bizarre-shaped natural product more easily. (Respondent 28, non-eater of ugly FaVs)*

*People who are mainly looking for real taste rather than products that look good. (Respondent 6, eater of ugly FaVs)*

*Someone who is seeking good products, with taste, who is disappointed not to find any, whose ultimate goal is to seek out ugly fruit. Almost an obsession! (Respondent 20, non-eater of ugly FaVs)*

### **Expression of open-mindedness and social inclusivity**

Eaters of ugly FaVs are also depicted as placing lesser importance on the visual aspect of these products and more broadly on the appearance of things.

*People who have common sense and who don't place disproportionate importance on aesthetics. (Respondent 1, non-eater of ugly FaVs)*

*Well it's someone who doesn't pay attention to the visual aspect. (Respondent 11, eater of ugly FaVs)*

By extension, eaters of ugly FaVs are perceived as people who place little importance on people's appearance, as if accepting natural singularities for food applies to humans as well. They are depicted as tending to share with the most disadvantaged and with people excluded from society. Lastly, they seem to be more open-minded than non-eaters of ugly FaVs.

*People engaged in structures like Resto du Cœur, or homes for people in difficulty, or who go to CSA. (Respondent 12, eater of ugly FaVs)*

*People who share with others. (Respondent 22, eater of ugly FaVs)*



*It's mainly someone who is not superficial, who is open-minded. (Respondent 14, eater of ugly FaVs)*

Eating ugly FaVs is also, as the results show, a sign of a capacity for openness toward others and tolerance of differences.

### **Purchase of ugly FaVs for economic purpose or mere social distinction**

Respondents also depicted consumers driven by an economic logic as those who prefer to buy ugly FaVs, which are cheaper than other products, due to budget constraints.

*Someone also of the middle class who pays attention to what they spend and who wants to make their purchases profitable. (Respondent 2, non-eater of ugly FaVs)*

Furthermore, negative images associated with eaters of ugly FaVs are far less numerous and constitute extreme visions of bourgeois-Bohemians and utilitarian buyers. The first group seeks primarily to stand out from the crowd. The second group is mainly concerned with constantly managing their budgets.

*It's bo-bos, people who absolutely want to stand out from the crowd and be different from others. (Respondent 1, non-eater of ugly FaVs)*

*Someone who is price-sensitive, who always tries to take advantage of things in their fridge, who is concerned with the utilitarian, not fitting a particular work profile or age group. (Respondent 19, non-eater of ugly FaVs,)*

*An accountant, people who are always thinking economically, budget managers. (Respondent 21, non-eater of ugly FaVs)*

In essence, the four processes generated almost diametrically opposed images associated with eaters/non-eaters of ugly FaVs. This finding questions the individual and cultural norms that shape people's vision of other eaters, often unconsciously, which is the case for both profiles of respondents. Thus, asking people to depict "others" through the topic of imperfect FaVs revealed very different food identities. In social settings, the confrontation between new food identities around sustainability and the other ones can lead to friction.

### **4.3 Self and others through ugly FaVs: revelation of the links among food identity, food culture, and others' images**

This research shows how ugly FaVs stimulate identity-building related to defining oneself or others in terms of attitude toward abnormal products. Ugly FaVs are also a social object in that eaters/non-eaters are described through social representations, which are "representations determined both by the subject itself [here the respondents], by the social and ideological system in which it is inserted, and by the nature of the links that the subject maintains with this social system [here the other eaters]" (our translation of Abric, 1989, p.188). Indeed, ugly FaVs reactivate food identity and the strength of connection with cultural patterns. The "self-other" talk can also be seen as a reflexive process about the relationship that individuals have with sociality (Ybema, Keenoy, Oswick, Beverungen, Ellis, & Sabelis, 2009), particularly food sociality in our case. Lastly, the representations associated with others who have different attitudes regarding ugly FaVs help "assert its [...] oneness and the otherness of whoever eats differently" (Fischler, 1988, p. 275).

Similar to the study on vegetarian identity by Rosenfeld and Burrow (2017), an investigation of abnormal FaVs can provide useful insight into the self-categorization process and identity

strengthening, given that these unusual products in hypermarkets and supermarkets give rise to opposite attitudes. In the French context where food-related social norms are strong and define the “French food identity,” the risk is that eaters of ugly FaVs, who are unconsciously driven by those norms, pass moral judgment on non-eaters, who feel a lesser connection to such norms (Higgs, 2015). Rothgerber (2014) explored the vegetarian-induced dissonance among meat eaters. Mere exposure to a description of vegetarians, which Rothgerber (2014) also called “reminders,” was found to increase the discomfort of meat eaters and lead them to embrace strategies to reduce dissonance with meat eating and guilt toward animals. At the same time, in a defensive reaction, meat eaters may underscore the deficiencies of vegetarians and stimulate moral judgments. Managing the tensions between food identities in social settings thus seems essential, including when it comes to the consumption of abnormal FaVs.

## 5. DISCUSSION

Our research analyzed representations associated with eaters and non-eaters of ugly FaVs by comparing views and soliciting reciprocal projections. The results point to two opposing representations of these two customer segments. The representations rest on lexical registers and images that refer to the main features of French food pattern. Ugly FaVs are shaking food identities far beyond the waste reduction issue and ecological awareness.

In this section, we discuss the contribution of the results to sociological reflection on the emergence of new identities related to food sustainability in France and, more broadly, on the research on identities. We then explore the role of retailing in the early adoption of sustainable food behaviors, along with potential obstacles linked to identity issues that are reactivated by the offering of ugly FaVs.

### 5.1 New food sustainability-related identities at the test of the normativity of food cultural pattern

The comparatively opposite depiction of eaters/non-eaters of ugly FaVs illustrated the normative scope of a cultural pattern when consumers have to portray “others” through their food choices. In fact, the dominant positive representation projected on eaters of imperfect FaVs—and symmetrically the negative, dissonant representation of non-eaters—is often an unconscious expression of attachment to the French model as a structuring element of food identity. In the context of growing standardization of the food supply, valuing the consumption of ugly FaVs is a way to reinforce or reappropriate one’s food choices in order to defend one’s food identity, thus illustrating strong food heteronomy. As illustrated in Table 2, when respondents narrate the “others,” they go far beyond the features of sustainable food and challenge what we call *nature-related identity*, *gastronomy-related identity*, and *altruism-oriented identity*. More particularly, the depiction of non-eaters of ugly FaVs is at the test of those social and cultural norms, providing images of “disaffiliated consumers” having *nature-disconnected identity*, *utilitarian-driven identity*, and *egotism-oriented identity*. In sum, addressing the food sustainability topic reactivates some unconscious, cultural drivers of food choices.

However, as the use of natural, singular FaVs have been traditionally valorized for a long time in French cuisine and gastronomy, it is inappropriate to talk about a “new food identity” when it comes to ugly FaVs. The use of ugly FaVs is, to a certain extent, “obvious” for heteronomous

consumers. However, the discursive use of sustainability and waste reduction could depend on whether or not the subject wants to assert it in social settings as a new “food sustainability-related identity.” Thus, there is a need to go further in the discussion about the social friction that could be fueled in the social context, because the mirrored representations showed that ugly FaVs replicate the tensions currently observed in French society between these two conceptions of food.

[insert Table 2 around here]

## **5.2 Promoting sustainable food with ugly FaVs: lifting obstacles linked to identity issues**

Not only do ugly FaVs contribute to food waste reduction, but they also represent an opportunity to enhance education about those specific foods. Given that eaters build their food identity at an early age, it would be relevant to increase their familiarity with abnormal or suboptimal FaVs. Recent research shows that children are more likely than adults to accept these FaVs, and they may, in turn, influence their family’s purchases of such produce (Makhal *et al.*, 2020). Earlier education may help avoid tensions when adult eaters and non-eaters encounter one another in social settings. Several studies have shown that neophobia among children can be reduced by information on the absence of dangerousness and through a positive taste experience (Pelchat & Pliner, 1995) that can overcome visual barriers (Birch, McPhee, Shoba, Pirok, & Steinberg, 1987). Moreover, interesting results from adult food education programs that aim to increase FaVs consumption, notably among low-income women, have demonstrated the role of positive social settings, meeting with others, and small-group facilitation by paraprofessionals (Devine, Farrell, & Hartma, 2005). Hence, earlier group support, possibly with co-learning between eaters and non-eaters, on how to prepare ugly FaVs can effectively decrease tensions between food identities that interact in social contexts.

Retailers also play an important role in the adoption of sustainable food behaviors, such as those linked to the consumption of ugly FaVs. The first step is to favor the purchase and consumption of such FaVs by non-eaters and reinforce those of eaters who are already used to eating them either via their own production or that of producers or CSA. In both cases, it is important to reassure consumers about the production conditions of FaVs, along with their intrinsic qualities, via demonstrations in stores, posters, digital displays, or QR codes. For non-eaters, it is mainly important to reassure them about the intrinsic qualities of ugly FaVs by initially offering them in processed form, such as in soups or juices.

The next step would be to favor access to this specific product offering. Integrating ugly FaVs with the offering of classic FaVs at the same price would avoid stigmatizing either of these consumer profiles, whose food identities contrast sharply, as the study results affirm. Recently, Schneider-Kamp (2020) demonstrated that taste regimes, which are constructed by normative systems, can be experienced as exclusive and oppressive rather than inclusive and empowering. Indeed, non-adherence to the hegemonic taste regime for hedonic food consumption in a given cultural context is often perceived as deviant and can lead to social stigma. Currently, non-standardized ugly FaVs are most often grouped together and separated from standardized ugly produce. Ugly FaVs are also typically offered at a 30% rebate. Eaters of ugly FaVs may not understand this placement and price strategy. From the standpoint of consumers, non-standardized FaVs have the same intrinsic qualities as standardized FaVs. Marginalizing these

products and those who eat them is therefore not justified. In the same vein, Grewal *et al.* (2019) encouraged retailers to implement in-store messaging to boost consumers' self-esteem in ways that will first increase their self-perceptions and then their willingness to choose and purchase unattractive produce such as FaVs. Conversely, for non-eaters of ugly FaVs, this distancing may deter potential purchases and be perceived as devaluation, even stigmatization. This approach might induce discomfort when non-eaters encounter eaters, similar to the case of vegetarians preferring not to reveal their preferences in the presence of meat eaters (Rothgerber, 2014).

## 6. CONCLUSION

This study highlighted how comparing depictions of eaters and non-eaters of abnormal FaVs revealed social and cultural norms related to food, along with the fault lines within food identities. Dealing with identity tensions around abnormal FaVs could be a way to reinforce the French food model, given the rise of food particularism and specific dietary requirements that have tended to erode the French food identity in the last decade (Fischler, 2013). Preserving the cohesiveness of food culture seems essential. However, one can assume that this is a main concern, especially for French consumers, whose national identity is highly defined by their food identity. The “French gastronomic meal” and the values associated with commensality and inclusivity were honored as an Intangible Cultural Heritage of Humanity in 2010. To date, French cuisine has successfully valued food products and their singularity in terms of shape, taste, and smell. It is worth extending this know-how to reduce food waste. Further research could also be useful to explore the “self–other” talk about natural abnormality in different food cultures in order to help international retailers adapt their strategy to local cultures.

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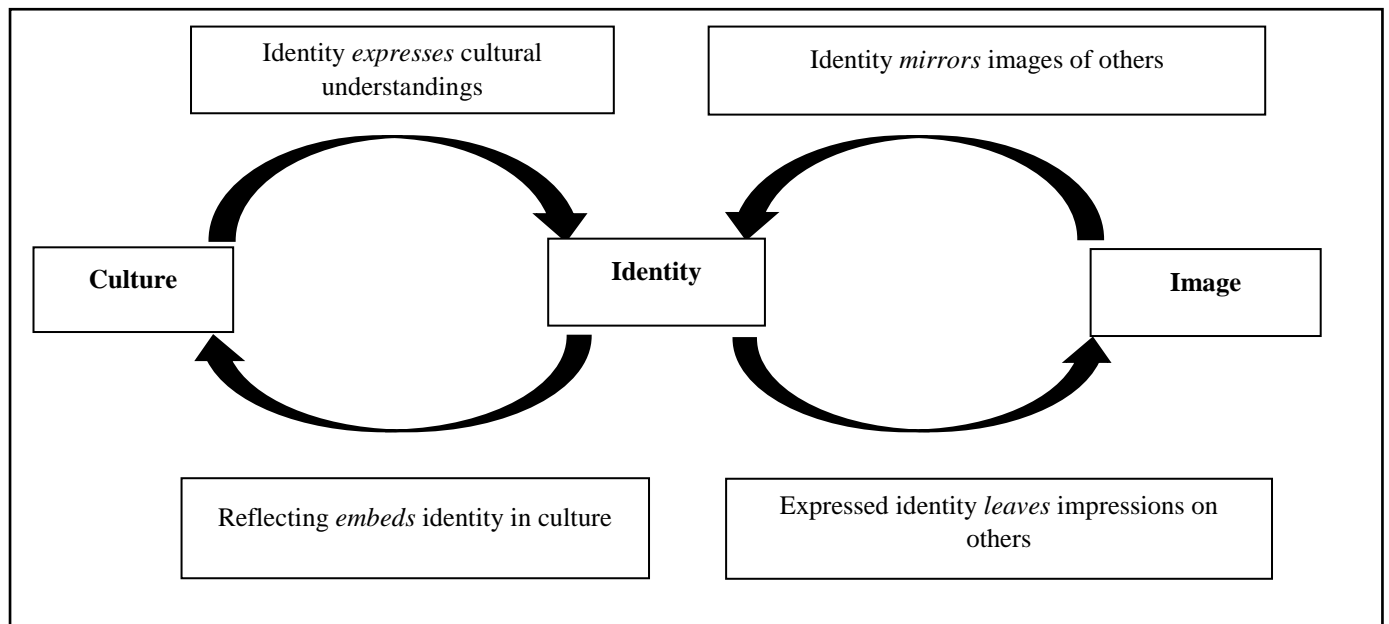
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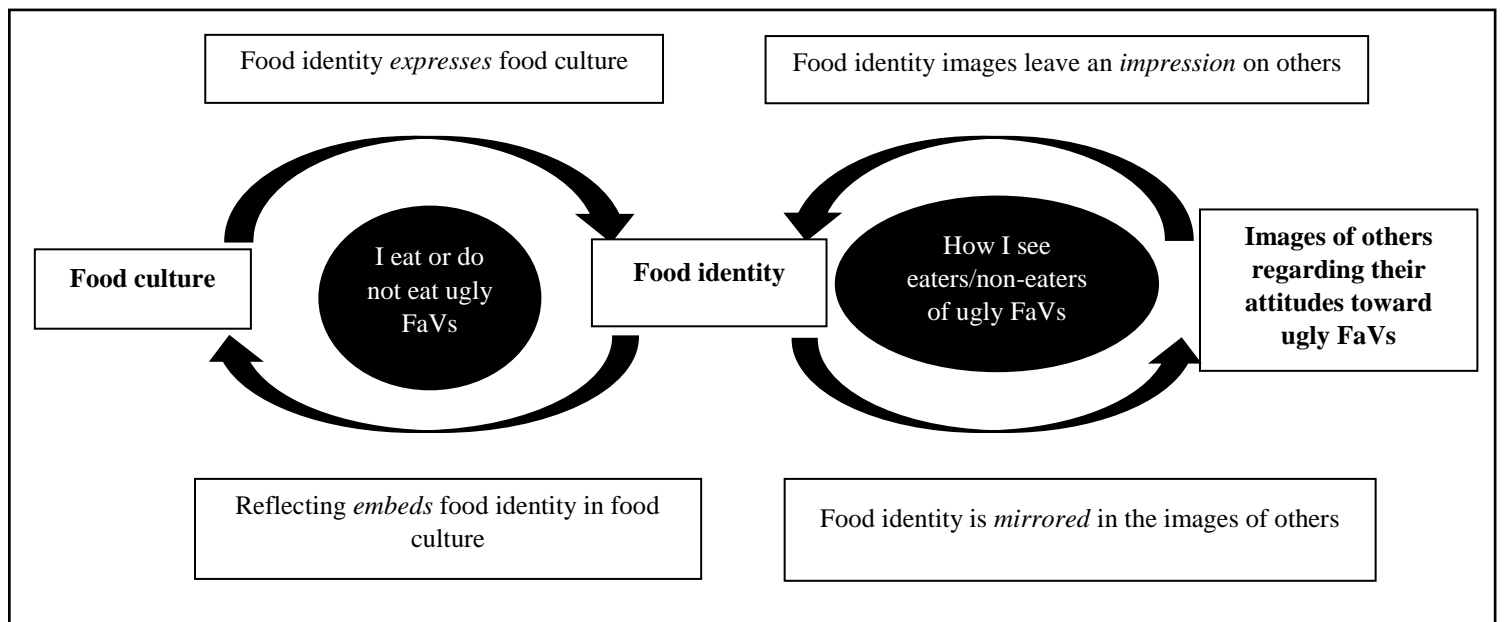
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**FIGURE 1 - Hatch and Schultz's (2002) organizational identity dynamics model**



**FIGURE 2 - Processes linking food identity, food culture, and images of eaters/non-eaters of ugly FaVs**



**TABLE 1 - Lexical classes associated with eaters or non-eaters of ugly FaVs**

<b>Common bigger classes*</b> (Proximity/distance with French food cultural pattern)	<b>Classes</b> - % of Text Segments out of total Text Segments classified	<b>Representative lexical forms**</b>
<b><i>Food selection criteria, including for FaVs:</i></b>  Ugly vs. Standard	<b>Class 2 – 30%</b> <i>Images of utilitarian rationale</i>	Someone who shops at <b>supermarkets</b> , <b>looks for</b> things that fall within their <b>budget</b> , is sensitive to price, favors the <b>utilitarian</b> , consumes <b>pretty</b> products, and is not ready for <b>atypical</b> things <b>and older</b> people with habits
	<b>Class 4 – 11%</b> <i>Images of ecological rationale</i>	Someone who is <b>sensitive</b> to <b>ecology</b> , pays attention to <b>waste</b> in their <b>purchases</b> , and aware of <b>non-standardized</b> products
<b><i>Relationship with nature and cooking:</i></b>  Involvement vs. distancing	<b>Class 1 – 37%</b> <i>Images of nature-driven vs. nature-disconnected rationale</i>	Someone who is <b>near</b> the <b>countryside</b> , used to <b>cooking</b> real <b>vegetables</b> , and used to <b>living</b> with nature <b>AND</b> a <b>young person</b> who wants <b>calibrated</b> products, to <b>consume carrots</b> right away, and has no time to <b>cook</b>
	<b>Class 3 – 22%</b> <i>Images of rationales resulting from cultural detachment</i>	People who are not very <b>cultivated</b> , never <b>tasted many things</b> , and do not know how to <b>feel</b> things, a middle-class <b>guy</b> but not very <b>sensitive</b> to these questions

**Notes:**

\*The DHA method aims at obtaining a classification, i.e. TS clusters with similar vocabulary within, but different from other clusters. A dendrogram is displayed showing relations between clusters. As it is a « descendent » hierarchical classification, « bigger classes » are divided into subclasses and so one.

\*\*All words mentioned differ significantly in their occurrence between classes according to a chi-square test with  $p < 0.05$ .

**TABLE 2: Normative effect of cultural pattern in food identity depiction**

Depiction of eaters of ugly FaVs <i>Cultural identity</i>	FRENCH FOOD MODEL	Depiction of non-eaters of ugly FaVs <i>Disaffiliated identity</i>
REINFORCEMENT		DISSONANCE
<i>Nature-related identity</i> <ul style="list-style-type: none"> <li>• Distancing oneself from the aesthetics of FaVs</li> </ul>	Valorization of natural products and singularities	<i>Nature-disconnected identity</i> <ul style="list-style-type: none"> <li>• Anxiety about “abnormal” forms</li> <li>• Lesser symbolic valence of FaVs</li> </ul>
<i>Gastronomy-related identity</i> <ul style="list-style-type: none"> <li>• Reduction of food waste by appropriating natural deformity</li> <li>• Having abilities to recognize authentic FaVs and natural taste</li> </ul>	Culinary know-how Attachment to the “real taste” of food	<i>Utilitarian-driven identity</i> <ul style="list-style-type: none"> <li>• Search for convenience (price, standardization, loss reduction, long shelf life, etc.)</li> <li>• Attachment to ready-to-eat</li> </ul>
<i>Altruism-oriented identity</i> <ul style="list-style-type: none"> <li>• Open-mindedness to natural imperfections (foods, humans)</li> </ul>	Inclusive dimension of French food culture	<i>Egotism-oriented identity</i> <ul style="list-style-type: none"> <li>• Nice-looking FaVs as registers of social distinction</li> <li>• Imperviousness to ecological or sustainable food discourse</li> </ul>

### APPENDIX 1 - Sociodemographic characteristics and purchasing habits of consumers surveyed

No.	Sex	Age	Marital status	Profession	Cultivation of a private fruit or vegetable garden	Purchases fruits and vegetables from ...					Non-eater vs. eater of ugly FaVs
						Hypermarkets	Supermarkets	Convenience stores	CSA	Producers	
1	Female	22	Single	SPC-	No		X				Non-eater of ugly FaVs
2	Female	22	Single	SPC-	No		X				Non-eater of ugly FaVs
3	Female	50	Single	SPC-	No	X	X			X	Eater of ugly FaVs
4	Male	27	Single	SPC+	No		X			X	Eater of ugly FaVs
5	Male	25	In a couple	SPC-	Yes	X	X				Eater of ugly FaVs
6	Female	21	Single	SPC-	No		X			X	Eater of ugly FaVs
7	Female	21	Single	SPC-	No	X		X			Non-eater of ugly FaVs
8	Female	21	Single	SPC-	No		X				Non-eater of ugly FaVs
9	Female	47	Married	SPC+	No	X					Non-eater of ugly FaVs
10	Male	21	Single	SPC-	No		X		X		Eater of ugly FaVs
11	Male	37	Married	SPC-	No				X		Eater of ugly FaVs
12	Female	48	Married	SPC+	No					X	Eater of ugly FaVs
13	Male	63	Married	SPC+	No		X		X		Eater of ugly FaVs
14	Female	34	In a couple	SPC-	No	X	X			X	Eater of ugly FaVs
15	Female	33	In a couple	SPC-	Yes				X		Eater of ugly FaVs
16	Female	48	Married	SPC+	No	X			X		Eater of ugly FaVs
17	Female	56	Married	SPC+	Yes	X		X			Eater of ugly FaVs
18	Female	39	Single	SPC+	No		X		X		Eater of ugly FaVs
19	Female	47	Divorced	SPC+	No		X	X			Non-eater of ugly FaVs
20	Female	51	Married	SPC-	No		X				Non-eater of ugly FaVs
21	Male	49	Divorced	SPC+	No		X				Non-eater of ugly FaVs
22	Male	52	Divorced	SPC+	Yes	X					Eater of ugly FaVs
23	Male	52	Married	SPC+	Yes				X		Eater of ugly FaVs
24	Female	48	Married	SPC-	Yes				X		Eater of ugly FaVs
25	Female	49	Married	SPC+	No	X					Non-eater of ugly FaVs
26	Male	51	Married	SPC+	No	X					Non-eater of ugly FaVs
27	Female	49	In a couple	SPC+	Yes	X	X				Eater of ugly FaVs
28	Male	49	Single	SPC-	No	X	X				Non-eater of ugly FaVs
29	Male	39	In a couple	SPC+	Yes	X	X				Eater of ugly FaVs
30	Female	32	Single	SPC-	No	X	X				Non-eater of ugly FaVs