

Behind the labels: Food ethical and unfoldings in the value chain

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BEHIND THE LABELS: FOOD ETHICAL AND UNFOLDINGS IN THE VALUE CHAIN

1. Introduction

Food ethics was originally associated with guaranteeing availability, accessibility, variety and safety of food and beverage products (Korthals, 2001; De Tavernier, 2012). However, while some producers, processors and retailers remain concerned with these conventional perspectives, consumer drivers point to the need for a different approach in terms of food ethics (Hepting, Jaffe, & Maciag, 2014). Indeed, contemporary consumers are increasingly demanding products that promote health and wellness, animal and environmental welfare, as well as fair labor conditions in a global context (Korthals, 2001; Severo, *et al.* 2018).

The importance of ethical consumption and growing social and political participation has brought greater pressure on the food processing industry to act in ways that are humanly, socially and environmentally responsible (Early, 2002). In addition to assuring food security and safety, producers, processors and retailers must consider ethical questions raised by particular production practices and conditions in the food value chain (Coff, 2013). These questions are associated with food related illnesses, such as obesity, cancer and cardiovascular diseases. Furthermore, they are associated with social and environmental concerns, such as fair trade and cleaner production (Silva, Sereno, & Sobral, 2017).

With growing competitiveness in the food processing industry, food ethics may be part of firm's differentiation strategy, creating competitive advantage by promoting their brand reputation and positioning their products as socially and environmentally responsible (Boehe & Cruz, 2010). Brand reputation increases the value perceived by consumers, further strengthening loyalty, advocacy and identification with the firm (Du, Bhattacharya, & Sen, 2010). Additionally, a differentiation strategy based on food ethics helps in better understanding demand and becoming more responsive to consumers' needs and beliefs.

However, in order to act on their ethical preferences, consumers require information (Irvine, 2013). The direct contact between food production and consumption, which originally formed the basis of trust, has largely disappeared (Brom, 2000). With this increasing distance between producers, processors and consumers, the way consumers perceive food and beverage products and build trust has changed and the majority of information with which consumers must make purchasing decisions comes through labeling (Hepting *et al.*, 2014).

In this context, the main purpose of this article was to assess how the concept of food ethics materializes in terms of food and beverage products launches in different segments in Brazil by means of label analysis using Reverse Engineering methodology. The remainder of this article is structured as follows. In the second section, a theoretical background regarding food ethics is presented. In the third section, the food ethics market is described. In the fourth section, the label analysis performed is detailed and in the fifth section, the results obtained are discussed. Lastly, final remarks are presented.

2. Research Context

2.1. Food ethics

Over two centuries of history, the food processing industry has reinvented itself substantially in terms of the orientation of its core business: from vegetable and animal raw material processor with the main purpose of safety and conservation in the early 19th century, to supplier of safe, practical and convenient food, ensuring sensory, nutritional and functional aspects (Aguilera, 2006). Despite observed progress, an important share of global consumers remain unsatisfied, revealing an appetite for more complex industrialized food, in terms of

health assurance at a micro and macro levels, involving individual and social issues (Silva, Sereno & Sobral, 2017).

It is no longer about processing to preserve or ensure safety, considered initial attributes of the industry. Nor is it about processing to exclusively enhance flavor and convenience, or even to contribute to health and well-being. Increasingly and among all economies (developed and emerging countries), consumers demand for a product that meets all of these characteristics, while benefiting the health of society in which the industry operates (Silva, 2017). This leads to the critical understanding that the fascination for a certain process by industry professionals does not necessarily guarantee added value through consumer's eyes (Saguy *et al.*, 2013).

Consumers present an appetite that transcends technical attributes dominated by the food processing industry (Weaver *et al.*, 2014), resulting in the need for technological and scientific developments to be included in the social dynamics of the food processing industry (Kasemodel *et al.*, 2016). Through this ongoing paradigm, the supplier ceases to be understood as interchangeable (Stevenson & Pirog, 2013), in which cost reduction prevailed. In fact, suppliers have assumed a crucial role in creating and sustaining competitive advantages for the company, given that a considerable part of the value or quality of the final product is derived from its origin and processing.

This context gives the food processing industry the opportunity to differentiate products by means of social and environmental attributes. These drivers offer a diversified range of opportunities for the food processing industry considering the rethinking of the technological *status quo* in favor of food and beverage products that contribute not only to the health of the final consumer, but also to the society and the environment in which the company is inserted. This concept is referred to as food ethics and, according to the Food Ethics Council, is comprised of three main aspects: product, society and environment (Figure 1).

The product aspect is associated with healthy food and its effects in terms of, for example, substitution or removal of fat, sugar and sodium, as well as valorization of natural, whole, organic ingredients. The society aspect involves the promotion of sustainable development and empowerment of local communities. Lastly, the environmental aspect is associated with agro forestry systems, conscious use of natural resources, reduction of carbon footprint, management of water resources, and encouragement of the principles of reduction, recycling and reuse.

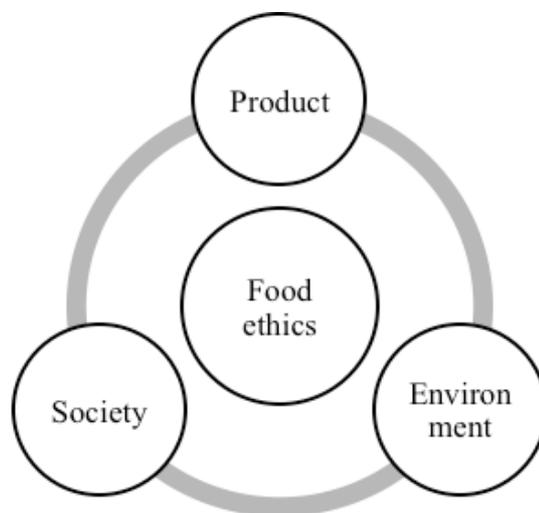


Figure 1. Food ethics: product, society and environment.

2.2 Food Ethics Market at a Glance

With consumers demanding products that promote health and wellness, animal and environmental welfare, as well as fair labor conditions in a global context, the number of food and beverage products launched with an ethical claim has increased over the years. Many brands are using ethical descriptions, certifications and seals on product packaging in order to communicate socially and environmentally responsible practices according to market research performed by Mintel, a global market intelligence agency.

In 2010, 1.362 food and beverage products marketed as ethical were launched worldwide as reported in market analysis conducted by Mintel (2017). In 2016, this number reached 7.441 and a total of 28.082 products with an ethical claim were launched worldwide between 2010 and 2016 (Mintel, 2017). The most representative countries in terms of food and beverage products launches with an ethical claim included Germany, USA and France, which together accounted for over 36% of all launches in the category.

The most representative segments considering number of ethical food and beverage product launches worldwide were the beverages (including hot beverages, juices and fruit beverages, alcoholic beverages, waters and others), chocolate products and bakery products (including breads, cakes, crackers and cookies) segments (Table 1), contributing with over 68% of all ethical food and beverage product launches in 2016 (Mintel, 2017). Concerning growth rate, desserts and ice creams, fruits and vegetable products and bakery products were the most relevant segments between 2010 and 2016, presenting an average growth rate of 61%, 56% and 49% per year, respectively.

Table 1. Ethical food and beverage product launches by category (2010-2016)

Category	2010	2011	2012	2013	2014	2015	2016
Hot beverages	488	598	632	1239	1444	1652	1697
Chocolate products	273	258	419	932	1503	1764	2165
Bakery products	92	115	150	331	527	763	1029
Desserts and ice creams	25	62	51	179	289	365	438
Appetizers	51	74	81	149	180	281	339
Dairy products	48	53	117	115	177	145	183
Sauces and condiments	60	90	59	138	139	176	174
Ready to consume beverages	35	45	67	156	145	173	191
Sides	48	64	53	87	96	151	217
Juices and fruit beverages	34	59	48	108	112	136	132
Fruits and vegetables products	10	32	41	88	73	104	146
Breakfast cereals	32	14	23	60	80	118	98
Fish, Meat and egg products	36	19	49	51	64	90	104
Sugars and sweeteners	24	23	41	45	49	80	85
Other beverages	12	29	24	36	38	51	36
Alcoholic beverages	11	19	27	36	53	45	41
Candys and gums	10	21	31	39	37	27	53
Ready to consume meals	19	18	18	34	31	27	30
Baby food	2	3	13	13	11	44	49

Source: Retrieved from Mintel. Global New Product Database. (2017, April 10). Retrieved from <http://brasil.mintel.com/gnpd-banco-de-datos-de-novos-productos>.

Regarding economies in development, Brazil presents a relevant performance considering the ethical food and beverage market. In 2010, 27 food and beverage products marketed as ethical were launched in the country (Mintel, 2017). In 2016, this number reached 85 and a total of 443 products with an ethical claim were launched in Brazil between 2010 and 2016 (Mintel, 2017). The average growth rate of food and beverage product launches with an ethical claim was of 21% per year in the country.

Concerning product segments, beverages (including hot beverages, juices and fruit beverages, alcoholic beverages, and waters), chocolate products, bakery products (including categories such as breads, cakes, crackers and cookies), desserts, ice creams and dairy products consisted of the most representative considering ethical food and beverage product launches in Brazil in 2016 (Table 2). When combined, these segments contributed with over 51% of all ethical food and beverage product launches in the country (Mintel, 2017).

Table 2. Brazilian ethical food and beverage product launches by category (2010-2016)

Category	2010	2011	2012	2013	2014	2015	2016
Hot beverages	3	20	6	18	27	20	32
Desserts and ice creams	0	0	1	3	14	14	12
Chocolate products	2	2	9	7	3	9	14
Bakery products	3	1	6	6	4	13	9
Fish, Meat and egg products	3	4	6	4	8	2	1
Appetizers	4	1	5	3	3	6	4
Sauces and condiments	3	1	4	7	2	2	1
Dairy products	0	0	4	5	0	2	3
Sides	2	0	2	2	0	7	0
Juices and fruit beverages	0	0	0	6	3	2	2
Breakfast cereals	0	1	41	2	1	3	0
Fruits and vegetables products	1	1	1	1	0	2	4
Sugars and sweeteners	0	0	2	1	2	2	1
Ready to consume meals	0	1	1	4	1	0	0
Other beverages	0	1	1	0	0	2	1
Alcoholic beverages	0	1	1	0	1	1	1
Candys and gums	0	0	1	3	0	0	0
Soups	0	0	1	0	0	0	0
Waters	0	0	0	1	0	0	0

Source: Retrieved from Mintel. Global New Product Database. (2017, April 10). Retrieved from <http://brasil.mintel.com/gnpd-banco-de-datos-de-novos-productos>.

3. Materials and Methods

An exploratory study was conducted with the purpose of assessing how the concept of food ethics materializes in terms of food and beverage product launches in Brazil. A systematic analysis of information contained in labels was performed considering four categories: juices, snacks, chocolates and yogurt, due to their relevance in total number of launches worldwide (Table 1) and in Brazil (Table 3). In total, 278 labels were analyzed, including 36 juice labels, 115 snack labels, 12 chocolate labels and 115 yogurt labels.

From the information contained in labels, data was classified according to product, category, brand, manufacturer, claims and composition. Data collection took place in April

2014 in a retail establishment of 20 check outs, located in Pirassununga (SP), city with 70 thousand inhabitants, situated 200 km from the city of São Paulo. The establishment in question, which will have its identity preserved by the request of its managers, is part of a medium-sized retail network with operations restricted to the Center-East region of the State of São Paulo, with strategic positioning in terms of cost leadership.

In order to perform label analysis, Reverse Engineering (RE) was used. RE may be described as a set of techniques that allows the reproduction of a product by identifying attributes, materials and other constructive characteristics (Ingle, 1994). The RE methodology constitutes a product-oriented deconstruction technique to identify manufacturing characteristics, composition and valuation attributes (Otto and Wood, 1998).

In this particular article, label analysis was performed using the information available in labels as a subsidy for the deconstruction technique of the RE methodology. In addition, label analysis was complemented by a review and analysis of publicity materials and articles published in the field. Through this method, the differentiation strategy adopted in each product analyzed was categorized according to marketing or publicity appeals, new formulations, new product presentation (in terms of packaging and design), new processing technologies and new supply chain designs.

4. Results and Discussion

As a first result, label analysis indicates that food and beverage products with an ethical and human appeal are no longer a niche in Brazil. Following what is observed in other countries, these trends are no longer exclusive to premium brands in the Brazilian market, influencing the development of products aimed at the general public and distributed by retailers with strategic positioning in cost leadership. Indeed, the relevance of ethical issues in processed foods is outstanding in retail shelves. Noteworthy in this regard, conventional products that do not portray an associated benefit and are aimed at the general public are starting to lose space to more differentiated options in terms of ethical aspects attributed to sourcing and processing.

This result corroborates to the understanding that, although ethical issues as a differentiation strategy should prove to be considerably more robust in developed economies, the potential of this strategy cannot be sidelined for economies that are in development (Euromonitor, 2014). In fact, countries in development have the potential to drive product expansion and continuous growth of the ethical category among all economies, as long as properly marketed. In turn, this involves transparency assurance and certificate reputation, as well as pulverization, supply and price repositioning (Euromonitor, 2014).

As a second result, consistent with Silva (2017), label analysis also indicates that food and beverage products with an ethical appeal can be represented by the decision tree-model in which two main branches are highlighted (Figure 1): the inside perspective (product, process, marketing and packaging) and the outside perspective (food processing industry relationships in the value chain). Regarding Brazilian food and beverage product launches, the differentiation strategy is mainly associated with the inside perspective, suggesting important opportunities for the food processing industry in Brazil.

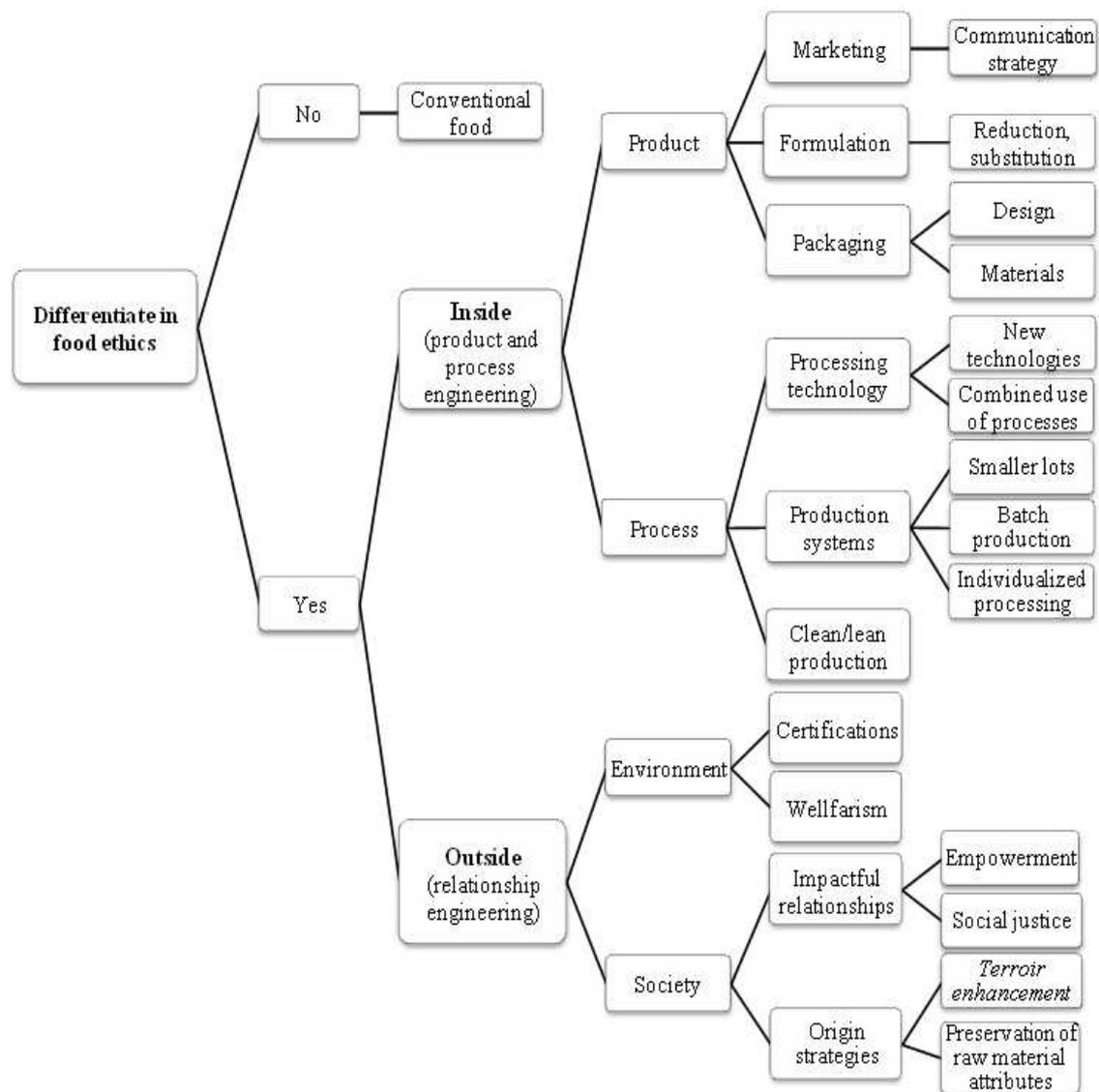


Figure 1. Food ethics differentiation in a decision tree model.

Source: Based on Silva, V.L. (2017).

The differentiation of food and beverage products in terms of food ethics through product and process engineering may be associated with innovations in formulations, productive processes, packaging and marketing. These developments are a trend among new entrants and already leader brands in the market. Examples of this trend may be found in the beverage and bakery product segments, particularly considering the juices and snacks categories. To better illustrate this trend, emblematic cases of these categories enrich the further discussion.

Considering innovations in formulations and productive processes, the snacks and beverages categories present relevant examples. In the snacks category, baked products made with non artificial, whole and organic ingredients and with reduced sodium and fat are highlighted. In the beverages category, new drivers of consumption indicate a trend towards juices with no added preservatives, sugar or water. Additionally, juices processed using milder technologies are also in demand due to the fact that the preservation of sensory attributes that are original to the raw material is possible.

Regarding innovations in packaging and marketing, labels analysis indicates the use of new packaging formats, colors and sizes as differentiation strategies. Packs containing a social or environmental appeal are highlighted as trends. Once again, the snacks category presents important examples concerning this trend. In response to criticism over the encouragement of excessive consumption by family sized packaging, food products in the snacks category present sharing suggestions (“sharing is fun”) in order to reduce the portion consumed.

Despite the particularities of each category, the developments described in this section converge to a common denominator: the differentiating elements were assured within technological limits (product, process, marketing and packaging). These differentiating elements do not present any direct results in terms of raw material procurement (associated with variety and origin) nor in terms of the relationship established with suppliers (associated with bases of governance, considering incentive and control, in order to obtain desired quality attributes).

Nonetheless, this is not the only form of action in order to promote the differentiation of food and beverage products. In fact, label analysis indicates that differentiation strategies go beyond aspects assured inside or within technological limits. Retail shelves are increasingly supplied with brands that promote the health and well-being of the society and the environment in which the company operates. This a premise that marks the contemporary action of the food processing industry and that already materializes in Brazilian retail shelves as further discussed in section 5.2.

The differentiation of food and beverage products in terms of food ethics through the establishment of relationships seems to materialize through three main drivers. These drivers include the development of social and environmental welfare programs, the use of certifications, as well as origin strategies. Examples of such drivers may be found in the beverage, chocolate and dairy product segments, particularly considering the juices, chocolate and yogurt categories. In order to illustrate this trend, representative cases of these categories enrich the further discussion.

The first driver involves the development of social and environmental welfare programs. In addition to welfare initiatives, brand differentiating strategies in terms of food ethics and guided by environmental aspects may also be associated with initiatives of cleaner production standards and reduction of environmental impact, resulting in certifications such as FSC (Forest Stewardship Council), as well as in the development and use of alternative materials.

The second driver refers specifically to the relationship of the food processing industry with its partners, involving public and private certificates of human and social development. Although still representing a positioning modestly employed in the Brazilian market, certain initiatives may not be overlooked. Among these, we highlight the EcoSocial All Fair, a certificate from the Brazilian Institute of Development (IBD) which is applicable exclusively to organic products and processes. The seal can be obtained by companies, properties or producers that indicate a process of human, social and environmental development fostered by commercial relations based on the principals of Fair Trade.

Lastly, label analysis evidences that product differentiation in retail shelves is also largely guided by product origin, constituting the third driver. This driver is associated with maintaining the natural characteristics of the raw material and is a strategy in which the quality of the final product is determined by attributes specific to raw material origin. Concerning this differentiation base, origin, form of confinement, animal breed and other factors interfere decisively in the quality of the final product. A differentiated raw material is necessarily obtained through particularly coordinated supply sources, in terms of relationship with producers.

It is worth highlighting that this particular movement is still considered a niche in Brazil, restricted to premium products that are commercialized in specific channels. Nevertheless, a closer look evidences the start of a movement of dissemination of brands known to be differentiated, suggesting the start of a dispute for space with conventional products aimed at the general public.

5. Final Remarks and Contributions

The main purpose of this article was to assess how the concept of food ethics materializes in terms of food and beverage products launches in different segments in Brazil by means of label analysis using Reverse Engineering methodology.

This article focused on differentiation patterns in health and well-being practiced by the food processing industry considering food ethics. Evidences suggest two main differentiation patterns: inside (product, process, packaging and marketing) and outside (food processing industry relationships in the value chain).

The evolution of consumer drivers is directly related to a greater complexity linked to the information transmitted by brands in their food and beverage product labels. In a provocative way, it can be argued that it is no longer just about shelf life and variety. Increasingly, the food processing industry is encouraged to differentiate its brands with a health appeal at a micro and macro level, that is, the physical health of the consumer and the society in which it is inserted. This trend is relevant in a global context, particularly driven by the food ethics market.

The competitive strategies used by the food processing industry, especially those based on product and brand differentiation, have pointed to the need for an increasingly fine design of the systemic relationships across the value chain. Innovation in products and processes within the firm is still a hallmark of business strategies in the food processing industry, but aspects such as ethics and social responsibility require novel structural innovations that extend beyond the firm's boundaries, involving management and relationship engineering.

One speculation worth investigating is whether this movement is predominantly an important gateway to new and small entrants; which in turn force brand and market repositioning of the companies consecrated by history. Furthermore, this discussion opens an interesting future research agenda, starting with the investigation of the organizational determinants for invested in actions outside of brand differentiation; and the relevance of small businesses to this choice. In this sense, the paper opens room for analyzing the real benefits of food ethics to producers and how this differentiation strategy could benefit them.

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