

The Mainstreamization of Sustainable Plant-Based Food Alternatives to Transform Market and Society

Autoria

Lucas Roecker Lazarin - lucas.lazarin@hotmail.com

Prog de Pós-Grad em Admin/Esc de Admin - PPGA/EA/UFRGS - Universidade Federal do Rio Grande do Sul

Walter Nique - walter.nique@ufrgs.br

Prog de Pós-Grad em Admin/Esc de Admin - PPGA/EA/UFRGS - Universidade Federal do Rio Grande do Sul

Agradecimentos

À CAPES.

Resumo

This theoretical essay deals with the process of transformation of the food market. The food market is in constant transformation, but is it possible to consider a transformation more directed to an environmentally sustainable, healthy, ethical and economically more efficient horizon? A plant-based format is assumed as the better scenario, and some facts that demonstrate actions for the transformation or braking of transformations in this market are presented, going beyond consumer practices, considering the tangle of actors, according to diverse theoretical perspectives. Recent happenings in the plant-based food market are listed and somewhat contrasted with theoretical perspectives, generating inquiries for future researches aligned with this transformation.



The Mainstreamization of Sustainable Plant-Based Food Alternatives to Transform Market and Society

ABSTRACT: This theoretical essay deals with the process of transformation of the food market. The food market is in constant transformation, but is it possible to consider a transformation more directed to an environmentally sustainable, healthy, ethical and economically more efficient horizon? A plant-based format is assumed as the better scenario, and some facts that demonstrate actions for the transformation or braking of transformations in this market are presented, going beyond consumer practices, considering the tangle of actors, according to diverse theoretical perspectives. Recent happenings in the plant-based food market are listed and somewhat contrasted with theoretical perspectives, generating inquiries for future researches aligned with this transformation.

KEYWORDS: Marketing and Consumption; Market Transformation; Food Market; Plant-based, Vegetarian and Vegan.

Is it plausible to consider an ethical and sustainable transformation of a market so culturally and economically entrenched as the food market? Our society are facing climate and environmental challenges and opportunities that seem to have solution in changing market dynamics (GIDDENS, 2010). Among various markets with high environmental impact – energy, mobility, construction and clothing –, food market draws attention to the complexity and magnitude of its direct and indirect impacts, as recently verified by scientific advances¹.

Concerning to the complexity of food market impacts, environmental sustainability, human healthy and food security are convergent questions that are urging us to rethink the direction that this market has been taking in the last decades. The high level of food processing, the intensity of livestock production and the focus on animal products over diversified vegetables are causing health and social problems that affect the whole world.

The increasing scientific advances – in several areas such as climate (SCARBOROUGH, et al., 2014), environmental (TILMAN, CLARK, 2014), health (DINU, et al., 2017), economics (SPRINGMANN et al., 2016.), marketing (BEVERLAND, 2014) and interdisciplinary approaches (ALEKSANDROWICZ et al., 2016) – that allow us to be aware and rethink the food market, pointing to urgency but also to the complicity of changing unsustainable and unhealthy meat-centric food production and consumption patterns.

In a previous initiative to cohere this question, by studying the transformation of individual food consumption patterns, Lazarin (2018) concludes that NGOs and new social movements (NSM) concerned with the promotion of vegan/vegetarian diets tend to attribute too much responsibility and overestimate the agency capacity of consumers. In that sense, the advertising of speeches and strategy development blames consumers and focus on individual changes performed alone – or at most aided by the mediation of internet devices, minimizing food materiality and supply chain.

This overestimation of agency capacity is responsible for the production of frustration and a bunch of new ex-vegetarians and ex-vegans. The assumption that consumer alone can, not only radically transform their eating habits but, be leaders of a radical market transformation, finds base in social and sometimes even scientific ideas fomented within consumer research.

By the other side, the blame on the consumer for unhealthy and unsustainable practices and overestimation of their individual agency capacity starts to has been recognized as short-sighted in several fields such as the economics, food and social sciences and the CCT itself.

Thompson, Arnould and Giesler (2013, p.1), critically proposes that CCT “has institutionalized a hyperindividualizing, overly agentic, and sociologically impoverished mode of analysis that impedes systematic investigations into the historical, ideological, and sociological shaping of marketing, markets, and consumption systems.”

In this sense, the so-called distinctions between consumer research focused on cognitive-psychology-based-on-laboratorial-experiments and consumer research aligned with CCT propositions seems to be not so distinct (COCHOY, TROMPETTE, ARAUJO, 2015; THOMPSON, ARNOULD, GIESLER, 2013). Consumer research in general adopts a narrative that takes consumers as stable and a priori defined actors, relegating to a context – sometimes not even mentioned – the practices of diverse market devices which in fact shapes markets dynamics and consumer behavior (COCHOY, TROMPETTE, ARAUJO, 2015).

Zwick and Cayla (2011) stand out that the work of marketing and market formation processes has received relatively scant attention from social sciences. The “work” of the consumer and of consumption itself, on the other hand, has received much more attention, time, resources and energy from researchers. According to these marketing authors, a “minor effort has been made to study the growing army of economic actors whose work it is to define markets and give shape to the consumer culture as we know it” (ZWICK, CAYLA, 2011 p.5).

Thus, considering both the current market challenges and the scientific advances and lacks, a more complex and systemic approach that accounts for the dynamic interrelations that act and make it act between the various actors that constitute markets and consumption patterns is essential.

The role of consumers is always very important and recognized by marketing science and organizations, in no way is intended to limit or de-characterize this power. However, novel perspectives in the economy, more specifically from economic sociology – which began to be drawn with Granovetter in 1985 –, allow us to understand markets as more complex than a simple and direct relation between demand and supply.

Economic sociology proposes perspectives in which markets are social practices par excellence – and as such, regardless of whether they are more or less conventional or alternative, are permeated by social values. "Such a view, we might say, opens a more optimistic horizon for the degree to which [agrifood] markets can be socially traded" (WILKINSON, 2016, p. 54) and transformed.

Michel Callon (2007), with a novel perspective rooted in science and technology studies (STS), reinforce this non-reductionist approach to markets, permitting us to glimpse an analytical overcoming of the assumed common dualism between markets and society inherent in most economic theories. As Wilkinson (2016) critically observes, such antagonistic dualism also occurs in agrifood system studies, sometimes opposing market versus society, sometimes conventional/mainstream markets versus alternative/embedded markets.

It is relevant to understand that the changes already in courses in the food market for its reconfiguration based on proteins of plant origin are clearly hybrid, complex and cannot be reduced to dichotomous antagonisms. These changes are not occurring driven mainly by the interests and practices of consumers, nor do they are strictly based in responding to demands of engaged groups of consumers. The current (and future) changes are aligned with interests of the food industry and diverse actors that constitute it – primarily meeting the financial system's priority demands (e.g.: environmental, social and governance - ESG issues) (FAIRR, 2018).

To clarify: Tyson Foods, the second largest meat processor in the worldⁱⁱ, is one of the top shareholders of Beyond Meat, a food tech plant-based startup, whose product, The Beyond Burger, is already on sale in more than 20,000 outlets in the U.S., admittedly proposing to

revolutionize the current unsustainable food market (WILKINSON, DELLEPIANE, 2018; FAIRR, 2018).

On the other hand, clashes promoted by livestock sector associations and animal food industries and their subsidiaries – such as chemistry and pharmaceuticals – mobilizes the state apparatus to limit the mainstreaming of alternative products and avoid market transformations, in intricate efforts to maintain the *status quo*.

The diverse livestock producer associations lobbying with politicians to impede the use of the term “meat” in plant-based meat analogues marketing devices, with bills stating concerns about “marketing integrity”, is an example of these efforts. In the U.S. State of Missouri, the Missouri Cattlemen's Association has recently secured a law that punishes – even with prison – food companies and marketing professionals who use the term “meat” to promote products that are not "derived from harvested production livestock or poultry" as meat (CCN, 2018).

Even in countries like Brazil, with a more centralized legislative dynamic, that kind of reactionary initiatives to brake market transformation also occur. Federal Congresswoman Tereza Cristina (DEM-MS), indicated as Brazilian minister of agriculture from 2019, supports the bill drafted by the Brazilian Association of Milk Producers, which prohibits the use of the term "milk" and related ones in non-animal origin products (CÂMARA DOS DEPUTADOS, 2018). This bill drafted threatens not only the marketing of new vegan products but also products already consecrated in Brazilian food culture such as coconut milk.

Another recent initiative to restrict the advance of plant-based food alternatives in Brazilian market is a new bill project filled by a federal Congressman, Nelson Barbudo (PSL-MT). The project aims to ban the use of the word meat and its synonyms in packaging, labels and advertising of plant-based foods. According to the newspaper Folha de S. Paulo (2019), the deputy, who is a rural producer and a member of the House Committee on Agriculture, Livestock and Rural Development, argues that terms such as steak, hamburger, fillet, bacon and sausage must be restricted to "edible tissues of butchery, including muscle mass, with or without bone base, fat, kidneys, blood and viscera, which may be in natura or processed". Folha de S. Paulo (2019) highlights that the Sociedade Vegetariana Brasileira stands against the project and acknowledges that the bill project is a response of a strong sector to the growth of demand and supply of plant-based food products.

These conflicts, however, do not constitute a reality that reduces market dynamics to a dualism. They, in fact, create a much more complex and dynamic reality, because the practices of a market agent are not always aligned with only one coherent interest (HAGBERG, KJELLBERG, 2010). A food company, a media company or, mainly, the state, with its wide and multiple apparatus, can operate against and in favor of a change at the same time in different levels and scopes.

We can consider, for example, that in the U.S., even if it is a state law now hampering marketing operations to promote plant-based meat, there is a new policy assigned by the governor of California, to promote plant-based meat, in which public institutions that provide food, including hospitals and prisons, are now obliged to offer vegan meals (THE DAILY CALIFORNIAN, 2018). In Brazil, public school lunch and popular restaurants has been target of proposals, laws and policies to offer vegan meals. The Brazilian version of the program “Meatless Monday”, guided by the Brazilian Vegetarian Society, is an important actor in this question, especially in the State of Sao Paulo. It is worth pointing out that government purchases are a significant supporter of a agrifood market order (SCHNEIDER, MARQUES, CONTERATO, 2016), and, thus, frequently under dispute.

Through the advances in economic sociology – considering especially Fligstein (2001)

and his approximation with the bourdieusian theory – the boundaries between market and social spheres are evidenced as highly fluids (WILKINSON, 2016). In the same sense, it becomes manifest the increasing number and complexification of constituency of relevant market actors and their practices.

Cochoy, Trompette and Araujo (2015, p. 4) explain that the callonian perspective address the notion of “a single yet multidimensional socioeconomic world”. In this way, analysis that opposes society versus “the supposedly corrosive and ‘de-socializing’ forces of markets” (p. 4) are clearly limited. “Rather, market settings should be regarded as an ongoing collective experiment in which the political and economic (or even techno-scientific) concerns are continuously articulated and revised” (COCHOY, TROMPETTE, ARAUJO, 2015, p. 4).

In that sense, markets result from relationships, practices and social interactions, so they can be changed and shaped in accordance with agent interests, social interests and democratic interests. “Market boundaries are temporarily stable; they are determined as a consequence of the calculations undertaken within, as objects in their versions as goods are continually qualified and requalified, related and re-related, ranked and re-ranked” (FINCH, GEIGER, 2010, p. 242). It becomes more evident that through the transformation of practices and devices, markets can be transformed, in such a way that: “Markets can be submitted to control and power of individuals and society, and not the opposite, as may happen and as are make believe by those who resemble markets to the invisible hand” (SCHNEIDER, MARQUES, CONTERATO, 2016, p. 12).

Specifically in marketing theory, Luis Araujo and Hans Kjellberg elaborates theoretical work dealing with markets as ongoing productions, as social performances, claiming to a “reconnection of marketing to markets” – Araujo (2007), Araujo, Kjellberg and Spencer (2008), Araujo and Kjellberg (2009). In that way, marketing researchers should be aware that various practices shape markets and consumption patterns, not restricting studies to activities traditionally associated with marketing practitioners.

Strengthening this conception, Hagberg and Kjellberg (2010, p. 1029), in a discussion about “who performs market-ing”, elaborate a notion of market and marketing practices agents as hybrid and collectives, including devices, individuals and organizations, temporarily situated, that establish associations with diverse degree of interconnection. Is important to highlight that this, among other questions, evidences the basement of market studies in actor-network theory from Latour (2005), mediated by Callon’s more direct influence, and, less referenced but also present, the assamblage theory from DeLanda (2006).

Cochoy (2011) implements an historical analysis of material devices that make up not only the product (or service) marketing mix, but the shopping setting (e.g.: shelves display, shopping carts), demonstrating how this material devices frame buyer and consumer behavior, managers, marketers and market constituency itself. Therefore, aligned with Callon et al. (2007), Cochoy enlighten the agency of market objectsⁱⁱⁱ and technologies, evidencing how crucial is to analyze material devices for a sociological understanding of markets and markets transformations. Thus, the notion of multiple and hybrid agents in the market analysis becomes more palatable: “social meaning and social agency are thus both distributed between people and things. So if we want to fully understand consumption, we need to study marketers, consumers, and market-things at the same time” (COCHOY, 2011, p. 80).

The importance of studying the material devices and understand their performance to comprehend marketing and markets lies in the fact that in most of the time, the “relationships between producers and consumers, buyers and sellers, are enacted or performed in market spaces and can only be indirect, as they are mediated by a market’s objects” (FINCH, GEIGER, 2010). And in that sense, STS approach is relevant.

Finch and Geiger (2010) explain that, although market and marketing objects are similar, they are, in fact, distinct. Marketers' and managers' practices involve influencing and shaping markets through marketing objects (product qualification through positioning practices is an example). Differently from the market object, a marketing object extrapolates the market domain. In accordance to Slater (2011) propositions, a marketing object is a hybrid object that holds both cultural and economics properties, challenging the dualistic opposition settled between economics and culture – both ends taken as pure, in an antagonistic studies tradition, similarly as previously cited in markets and agrifood systems. “Economics, on the one hand, has expelled all cultural logics in its analysis of formal rationality, while cultural disciplines, on the other, have focused on marketing as ideology and meaning, thus ignoring marketing as a commercial practice.” (ZWICK, CAYLA, 2011, p.9).

Zwick and Cayla (2011), in accordance with a growing group of researchers, proposes that marketing activities must be understood as an “amalgamation of institutional, cultural, economic, and technical processes by which goods and markets—and objects and categories—are determined, contested, and provisionally given stable forms” (p. 6). With this broad understanding of market and marketing phenomena, marketing operation “cannot be reduced to an analysis of the production and consumption of signs, ideologies, myths, and codes” (p.6).

The adequacy with “markets as performance” theoretical approach, as proposed by Geiger, Kjjelberg and Spencer (2012), is therefore evident. This specify approach differs from neoclassic microeconomics, traditional marketing management, social networks approach, consumer culture theory, markets as networks, institutional approaches and Marxist Theory. According to “markets as performance”, markets are constantly “in the making”, been:

practical outcomes of economic organizing processes involving parallel efforts to shape markets according to particular templates. Market agents are hybrid collectives whose capacities to act depend on how they are being constituted (equipped). Market objects and devices are central in this and are both shaped by and shape market practices (situated performances of interlinked activities) (GEIGER, KJJELBERG, SPENCER, 2012, p. 138).

Beyond this relevant research stream in marketing theory considering markets, within the CCT area Marcus Giesler has been more recently proposing “market-system dynamics” as a new research area – and brand – focusing on understanding markets as constituted and complex social systems. Giesler and Fischer (2017), states that markets are formed by multi-level relationships performed by diverse actors and institutions which actively shape and are shaped by markets. The authors reinforce the importance of “unpacking the co-constitutive relationships between micro-, meso- and macro-levels of analysis” (p. 4), avoiding and surpass micro-level bias. This bias is defined as “the tendency of conventional marketing scholarship to reduce macro-cultural, historical and market-level structures and forces to mere contextual variables in favor of more specific micro-level theoretical questions and concerns” (p. 4). Then, the authors recognize that theoretical approaches such as actor–network theory and assemblage theory are strategic to address the “market system dynamics” inhibiting a limited focus on micro actors. However, they do not make reference to market-*ing* stream of studies elaborated by Araujo, Kjellberg and other European researchers.

How does a market change?

The multiplicity of agents and devices that acts to structuring a market confers an idea of how complex a market change can be. Nevertheless, that theoretical understanding provides

diverse ways to act towards a transformation.

New market urban manifestations, with *prosumeristic* character, usually associated with short-chains and small scale, mainly derived from the vegetarian consumption ideology, are important but markedly as alternative and selected. They are associated with NSM and can guide more consumers and society to reflexivity towards consumption and unsustainable, unethical and unhealthy practices, concluding on the importance of changing a market logic (WEIJO, MARTIN, ARNOULD, 2018). Can they, however, affects and transform a mainstream market logic?

Martin and Schouten (2014) investigated the emergence of a market driven by consumers, noting inclusive the establishment of networks with material subsidiaries. Although, the market under investigation lost strength and did not institutionalize, demonstrating a more relation to ephemeral creativity in the consumption world, and do not constituting a durable market, at least in a common sense. Given that these studies don't present a transformation in the daily consumption practices in a perennial way.

Kjeldgaard et al. (2017) investigate a prosumer movement that starts to changing the beer market, highlighting that "Actors have a shared interest in the maintenance of the field. Therefore, the unit of analysis is not so much the actions of individual actors. Rather, the analysis examines the dynamics of collective strategic action that reproduces predominant field logics." (p. 4). In that way, the movement under investigation have the potential to really challenge the institutionalized logic of mass production and consumption, but they do that being a group of producers. Considering it, is possible to infer that consumers are not the only nor the strongest actor in a market constitution. Thus, we reaffirm that to investigate a market reconfiguration, study consumers seems to be not enough. It is important to keep in mind that markets are performed through a set of practices of diverse actors and device operations (ZWICK, CAYLA, 2011).

As seen repeatedly, markets are complex social performances, mobilizing devices and diverse economic and cultural actors, which legitimize and confer stability to certain practices. Therefore, we assume that – notwithstanding challenging the current structure and the status quo of a market, and being a relevant actor to press for changes – consumers or prosumers does not have the agency capacity to change the food market.

A movement to seek plant-based ingredients in big food industries has begun, driven in part by pressures for sustainability and pressure from consumers and NGOs, and in part by scientific advances and climate concerns. For example, Nestlé is now committed in replacing animal-derived ingredients in existing product ranges where possible, dedicating a significant part of R&D budget to the topic of plant proteins. In an effort to ensure the strategic development of this initiative and to confer credibility investors, the food company starts to monitors what percentage of its proteins are derived from plant-based ingredients and what percentage of its R&D investments is dedicated to projects on these alternatives (FAIRR, 2018). Unilever is part of Plant Meat Matters, a consortium of companies and academic researchers to develop a plant-based steak, thus investing in science and cross-sectorial collaboration for innovation towards plant-based solutions (FAIRR, 2018).

In addition to R&D, food companies are facing opportunities in acquisition and/or venture investment strategies, funding new enterprises. For example, White Wave Foods acquired diverse plant-based food new companies, at the level of becoming the fastest growing food company in the U.S. (WILKINSON, DELLEPIANE, 2018). In 2016, it was acquired by Danone, becoming Danone Wave, and receiving a \$60 million investment in its U.S. plant-based beverage plant. Besides that, Danone has launched an intensive investment marketing strategy to promote its newly acquired vegan ice cream brand, So Delicious, increasing product

sales steadily (FAIRR, 2018).

Boosted by the frisson of plant-based meats, Burger King launched a version of its most famous sandwich, with Impossible Burger, which “nobody can tell the difference” (THE GUARDIAN, 2019), and the expectation is that the plant-based burger arrives in the more than 7 thousand Burger King stores in the US.

Nestlé is also interested in the promising plant-based meat market. The company has recently launched soy protein based hamburgers in Europe, they will be sold under the "Garden Gourmet" brand. In the US, Nestlé launches a similar, the “Awesome Burger”, of the brand "Sweet Earth", which aim to compete directly with Impossible Burger and Beyond Meat in supermarkets (STARTSE, 2019).

Addressing the issue of venture investments, it has been a crucial issue in the development of plant-based meats – given the development of disruptive innovation allowed by the reality of startups. The alternative dynamics, the cross-sector collaborative capacity and the expert management of innovation allying science and pretensions to change the world, besides, mainly, its detachment in relation to the traditional capital of agribusiness or agrifood industries, has allowed the development of meat analogues. In this context, brands such as Beyond Meat and Impossible Foods gain space in U.S. food market, proposing an industrial revolution by producing meat entirely from plants. As already quoted, Tyson Foods invests in Beyond Meat, besides it, Google Ventures and Bill Gates too.

So, Californian venture-capital funded food-tech startups are emerging as an important actor proposing to catapult plant-based foods and reshape the food market. These startups positioning themselves as a solution to significantly reducing environmental and ethical animal-origin meat impacts and give greater productive and economic efficiency to the food market. Thus, they join the vegetarian ideology, but supported and strengthened by capital.

The transformative potential of such financial movements is noticeably stronger in comparison with consumer and prosumer movements, given the established social order through which markets operate. Anyway, the attempt is to avoiding dualisms and understand that both are agents reshaping market practices, reinforcing each other initiatives in a quasi-convergent way, in different contexts and scales.

Questions that emerges from this currently market scenario in light of the mobilized theoretical approaches involves the qualification process of these innovative food products and the role of marketers – both in industry, retail and food services – in marketing devices operation to mainstreamize this alternative food products, in face of other market agents with diverse interests.

Fuentes and Fuentes (2017) analyze a marketing strategy of a Swedish plant-based milk brand, Oatly, seeking to change from a niche product to a product that appeal to a large group of consumers, being mainstream. The study is totally aligned with “market as performance” approach proposed here. The authors focus on analyzing marketing devices operation, through an object-focused ethnography conducted online and in retail settings. The study explains that the plant-based firm adopts two integrated but different moves. The oat-based milk product is qualified both alternativeness, through marketing communication discourses, especially online, and as a conventionalized alternative, through packaging and the position on retail display.

That seems to be the case for plant-based meat produced by the food-techs Beyond Meat and Impossible Foods too. The Farm Animal Investment Risk & Return report (FAIRR, 2018), produced to investors, presents these food-tech startups as competitive by highlighting its price strategy by being quite similar to traditional products, and its intensive distribution in retail and food services.

In addition, through exploratory research, is possible to identify that these products are packaged in a similar way to the traditional meats and positioned in the retail in near places. In online communication, however, the plant-based, vegan, environmental and health advantages over the traditional product are constantly reiterated.

According to Fuentes and Fuentes (2017, p.13) “similar packaging allows Oatly’s products to work within the same socio-technical infrastructure as dairy products”, facilitating compliance with current consumer practices and inscribing similarity and exchangeability (COCHOY, 2004; FUENTES, FUENTES, 2017).

A look at the architecture of the stores and shelf positioning is also very important, given the agency of these devices (COCHOY, 2011). Along with this, Callon et al. (2007, p. 6) address that “Merchandising is a crucial management instrument that helps construct the encounter of supply and demand through a controlled arrangement of products at the point of purchase.” In that way, merchandising operates as a complex and hybrid marketing device that constitutes and shapes the market, being under a constant dispute and under the logic of negotiation and interests (that are not always convergent) between retailers and food producers. In an analogous way, we should consider that in food services context the dish location on the menu and the language used in the description are also elements that operate as marketing devices.

Researchers and marketers already notice that the use of adjectives such as “vegan” or “veggie” can reduce the interest in a product by consumers who do not associate themselves with those identities (BEVERLAND, 2014). Furthermore, studies in nutrition and marketing sciences demonstrate that labeling a food product as “healthy” or “nutritious” can reduce the interest and product appeal (BUBLITZ, PERACCHIO, 2015).

The World Resources Institute (WRI) is undertaking an initiative to engage academics and practitioners to work towards strategic language used to qualify plant-based products. The collective initiative assumes that “one potentially high-impact but low-cost strategy to help consumers shift their diets is changing the language used to describe food” (2018, p. 1). One of the findings, through an online survey experiment study, has shown that putting plant-based dishes in a vegetarian section of a menu can reduce consumer ordering by 56 percent, in comparison to order it merged like any other offer in the menu, in line with Beverland's (2014) propositions. However, the initiative ponders that any change in the use of language to promote plant-based foods must consider also the information needs of vegetarians and vegans, an important and growing group of consumers.

Considering brand and naming of industrial products, Fuentes and Fuentes (2017) demonstrate that Oatly’s labeling strategy focus on convenience and food replacement, aligned with packaging strategy. The same can be observed in Beyond Meat and Impossible Foods strategy (and the Brazilian Futuro Burger too).

However, as already discussed, livestock associations are already mobilizing to restrain the marketing practices and competitive qualification of these products, summoning the government and institutional force, in favor of status quo maintenance. This should make marketing work for the mainstreamization of these alternatives even more challenging.

In addition to this set of specific marketing questions, before finalizing this essay, is important to address the global dynamics of this current market phenomenon. By 2016, there were around 40 startups of this category in the U.S., and similar trends are seen in many other countries. However, the highly technological dynamics – mainly to knowledge and R&D – of these startups associate them with companies such as Google and Microsoft. Furthermore, these startups are also based on the dynamics of the financial market, which has been driving

technology markets, making it an inherently financial and sometimes speculative phenomenon (WILKINSON, DELLEPIANE, 2018; FAIRR, 2018). By recognizing that the U.S.'s food techs vegan startups are in the center of this phenomenon and raising funding, which are the alternatives to Brazilian and other peripheral countries industries?

The Good Food Institute, aimed at the promotion of a market and consumption transformation in favor of plant-based foods, analyses that better quality plant-based meat is much needed in Brazil, as the products currently offered are expensive and mostly tastes bad: "They're [Brazilians] selling canned, plant-based meat that reminds me of the plant-based meat I was eating in the 1980s, and it's the equivalent of \$6 a can." declares the director of the institute (QUARTZ, 2017). Besides that, accordingly to EXAME (2017), a Brazilian leading business magazine, The Good Food Institute has hired a representative in Brazil. He has the challenge of making Brazilian companies import (U.S.) alternative plant-based protein products.

Recently, a Brazilian enterprise launch its version of "Beyond Meat" burger: the "Futuro Burger", part of a brand named "Fazenda Futuro". This enterprise is part of "Sucos do Bem", a storytelling specialist. In direct contact with the The Good Food Institute representative in Brazil was possible to infer that the organization acted together with Fazenda Futuro in the constitution of this product – which is national with imported raw material and technology. The "Futuro Burger" presents the same texture and flavor of a meat burger, and started to be sold in gourmet restaurants of Rio de Janeiro and Sao Paulo, in sandwiches composed of all plant-based mozzarella cheese and mayonnaise. It is relevant to consider that, despite the advance that the product represents, investment in product research and development is low, the raw material and the technology are imported, and not adapted to the Brazilian cultural-food standard.

Wilkinson and Dellepiane (2018) clarify handicaps of Brazilian food industry, stating that it is the weakest link in the country's agrifood system. Brazilian policies do not facilitate the diffusion of technologies in the food and beverage manufacturing sector as a whole. With strong presence of global companies, Brazilian food industry lack international competitiveness, is orientated to the domestic market and lack integration in global chains due to the transnational strategies.

However, as markets are multi-level performances (GIESLER, FISCHER, 2017), we cannot assume that these macro context problems are the only explanation nor an insurmountable barrier. Even if Brazilian food industry does have a series of deficiencies, we highlight that plant-based food startups are not at first submitted to the logic of the conventional food industry. Why do not plant-based food startups develop in Brazil? What are the obstacles?

Besides the grievous problem in innovation, why the current plant-based meat products in Brazil are not qualified and operationalized as American and European products, as seen by Fuentes and Fuentes (2018)? It is essential to understand together with industry players why Brazil is so backward in this regard, even with the verified growing interest and increasing adherence to plant-based diets (IBOPE, 2018). Hagberg and Kjellberg (2010) stand out that in spite of the importance of marketers practices, which influence not only the results of a firm but also shape the market – and, thus, society – there are relatively few empirical practice studies addressing this kind of performances. A good example is Cayla and Peñaloza (2012) study with managers in India, showing the biases that compromised the effectiveness of consumer understanding and marketing strategy development.

So, what's the role of Brazil in that market "revolution"? Brazil and other peripheral countries that produces biggest part of food in the world will just wait for a coming of Californian high branded and patented products?

It is essential to understand the complex and multilevel dynamics that constitute a market change, and deal with this complexity involves marketing devices in diverse actors. Not only analyzing consumer needs and attitudes, but considering the large spectrum of possible practices and frames of practices that market actors can mobilize. To find convergence points for the actors in a changing market seems to be essential too. The figure in the appendix tries to demonstrate some of this stated complexity and current imbrications of actors in a mainstreamization of plant-based food in the market.

This essay deals with diverse and broad questions related to market evolution. It is a process in the middle of a frisson, which makes very thought-provoking but also complicated. Marketing academics should not stand aloof in favor of such impartiality. These are important issues for the development of the market and a sustainable society. And the contribution of academic research into the strategic operation of the market, marketing and consumption in favor of a vegan logic is important at a time of so many novelties, uncertainties and constant challenges.

There are a set of questions involving market, entrepreneurship, transformation and consumption, and different theories and levels of analysis must be improved, but in sum we can claim that is important to understand how to stimulate entrepreneurship in this market to meet the existing latent demand, how can food and beverage firms go through a process of transformation adopting more plant-based raw materials, and how to activate the consumption of new plant-based alternatives in common consumers (non-vegetarians); this three set of questions seems to be somehow urgent to contribute to the aforementioned mainstreaming of vegan alternatives – *it is relevant to consider that the strategic operationalization of marketing devices to promote plant-based products are under the three set of questions.*

REFERÊNCIAS

- ALEKSANDROWICZ, Lukasz et al. The impacts of dietary change on greenhouse gas emissions, land use, water use, and health: a systematic review. **PloS one**, v. 11, n. 11, p. e0165797, 2016.
- ARAUJO, Luis. Markets, market-making and marketing. **Marketing Theory**, v. 7, n. 3, p. 211-226, 2007.
- ARAUJO, L., KJELLBERG, H., & SPENCER, R. Market practices and forms: Introduction to the special issue. **Marketing Theory**, v. 8, n. 1, p. 5–14. 2008.
- ARAUJO, Luis; KJELLBERG, Hans. Shaping exchanges, performing markets: The study of marketing practices. **The SAGE handbook of marketing theory**, p. 195-218, 2009.
- BEVERLAND, Michael B. Sustainable eating: mainstreaming plant-based diets in developed economies. **Journal of Macromarketing**, v. 34, n. 3, p. 369-382, 2014.
- BUBLITZ, Melissa G.; PERACCHIO, Laura A. Applying industry practices to promote healthy foods: An exploration of positive marketing outcomes. **Journal of Business Research**, v. 68, n. 12, p. 2484-2493, 2015.
- CALLON, Michel; MILLO, Yuval; MUNIESA, Fabian (Ed.). **Market devices**. Blackwell, 2007.
- CÂMARA DOS DEPUTADOS. Projeto proíbe o uso da palavra leite em produtos de origem vegetal. Agropecuária. Reportagem – Murilo Souza Edição – Rachel Librelon. 30 de setembro de 2018. Disponível em: <<http://www2.camara.leg.br/camaranoticias/noticias/AGROPECUARIA/560725-PROJETO->

[PROIBE-O-USO-DA-PALAVRA-LEITE-EM-PRODUTOS-DE-ORIGEM-VEGETAL.html](#)>

CAYLA, Julien; PEÑALOZA, Lisa. Mapping the play of organizational identity in foreign market adaptation. **Journal of Marketing**, v. 76, n. 6, p. 38-54, 2012.

CNN 'Fake meat' is at the center of food fight in Missouri. By Madison Park, CNN. August 29, 2018. Disponível em: < <https://edition.cnn.com/2018/08/29/health/missouri-meat-law/index.html>>.

COCHOY, Franck. Is the modern consumer a Buridan's donkey? Product packaging and consumer choice. In: **Elusive Consumption**. EKSTRÖM, Karin M.; BREMBECK, Helene (Ed.). Berg Publishers, 2004.

COCHOY, Franck. 'Market-things inside:' insights from Progressive Grocer (United States, 1929-1959). In: **Inside Marketing: practices, ideologies, devices**, ZWICK, Detlev; CAYLA, Julien (Ed.). Oxford University Press, 2011.

COCHOY, Franck; TROMPETTE, Pascale; ARAUJO, Luis. From market agencements to market agencing: an introduction. **Consumption Markets & Culture**, v. 19, n. 1, p. 1-16, 2016.

DELANDA, Manuel. **A New Philosophy of Society: Assemblage Theory and Social Complexity**, A&C Black. 2006.

DINU, Monica et al. Vegetarian, vegan diets and multiple health outcomes: a systematic review with meta-analysis of observational studies. **Critical reviews in food science and nutrition**, v. 57, n. 17, p. 3640-3649, 2017.

EXAME. A carne do futuro poderá ser 100% carne e 0% animal. Servido?. Ciência. Vanessa Barbosa. 3 de outubro de 2017. Disponível em: <<https://exame.abril.com.br/ciencia/futuro-podera-ser-livre-de-carne-como-a-conhecemos-servido/>>.

FAIRR, Farm Animal Investment Risk and Return. Plant-Based Profits: Investment Risks & Opportunities in Sustainable Food Systems. Fairr Briefing, 2018. Disponível em: <<http://www.fairr.org/resource/plant-based-profits-investment-risks-opportunities-sustainable-food-systems/>>.

FINCH, John; GEIGER, Susi. Positioning and relating: Market boundaries and the slippery identity of the marketing object. **Marketing Theory**, v. 10, n. 3, p. 237-251, 2010.

FLIGSTEIN, Neil. **The Architecture of Markets**. An Economic Sociology of Twenty-First-Century Capitalist Societies. Princeton, NJ: Princeton University Press. 2001.

FOLHA DE S. PAULO. Deputado do PSL quer proibir termos como 'carne de soja' em produtos. Painel S.A. 16 de maio de 2019. Disponível em: <<https://www1.folha.uol.com.br/colunas/painelsa/2019/05/deputado-do-psl-quer-proibir-terminos-como-carne-de-soja-e-hamburguer-vegetariano-em-produtos.shtml>>.

FUENTES, Christian; FUENTES, Maria. Making a market for alternatives: marketing devices and the qualification of a vegan milk substitute. **Journal of Marketing Management**, v. 33, n. 7-8, p. 529-555, 2017.

GEIGER, Susi; KJELLBERG, Hans; SPENCER, Robert. Shaping exchanges, building markets. **Consumption Markets & Culture**, v. 15, n. 2, p. 133-147, 2012.

GIDDENS, Anthony. **A Política da Mudança Climática**. Zahar. 2010.

GIESLER, Markus; FISCHER, Eileen. Market system dynamics. **Marketing Theory**, v. 17, n. 1, p. 3-8, 2017.

GRANOVETTER, Mark. Economic action and social structure: The problem of embeddedness. **American Journal of Sociology**, v. 91, n. 3, p. 481-510, 1985.

HAGBERG, Johan; KJELLBERG, Hans. Who performs marketing? Dimensions of agential variation in market practice. **Industrial Marketing Management**, v. 39, n. 6, p. 1028-1037, 2010.

IBOPE, Instituto Brasileiro de Opinião Pública e Estatística. **Pesquisa De Opinião Pública sobre Vegetarianismo**. Ibope Inteligência. 2018. Disponível em:

<http://www.svb.org.br/images/Documentos/JOB_0416_VEGETARIANISMO.pdf>

KJELDGAARD, Dannie et al. Consumers' collective action in market system dynamics: A case of beer. **Marketing Theory**, v. 17, n. 1, p. 51-70, 2017.

LATOUR, Bruno. 2005. **Reassembling the Social: An Introduction to Actor-Network Theory**. Oxford: Oxford University Press.

LAZARIN, Lucas. INFLUÊNCIAS SOBRE A INSTAURAÇÃO DE PADRÕES VEGANOS DE CONSUMO ALIMENTAR. Dissertação de Mestrado - Programa de Pós-Graduação em Administração da Universidade Federal do Rio Grande do Sul. 171f. 2018.

MARQUES, Flávia Charão; CONTERATO, Marcelo Antonio; SCHNEIDER, Sergio (Ed.). **Construção de mercados e agricultura familiar: desafios para o desenvolvimento rural**. UFRGS Editora, 2016.

MARTIN, Diane M.; SCHOUTEN, John W. Consumption-driven market emergence. **Journal of Consumer Research**, v. 40, n. 5, p. 855-870, 2014.

QUARTZ, Lab-grown meat is about to go global, and one firm is feverishly paving the way. ON THE GLOBAL MENU. Chase Purdy. 11 de abril de 2017. Disponível em:

<<https://qz.com/955724/the-good-food-institute-is-taking-lab-grown-and-plant-based-meat-international-to-china-brazil-taiwan/>>.

SCARBOROUGH, Peter et al. Dietary greenhouse gas emissions of meat-eaters, fish-eaters, vegetarians and vegans in the UK. **Climatic Change**, v. 125, n. 2, p. 179-192, 2014.

SLATER, Don. Marketing as a monstrosity: The impossible place between culture and economy. n: **Inside Marketing: practices, ideologies, devices**, ZWICK, Detlev; CAYLA, Julien (Ed.). Oxford University Press, 2011.

START SE. Burger King e Nestlé apostam em hambúrguer de origem vegetal. 11 de abril de 2019. Disponível em: <<https://www.startse.com/noticia/nova-economia/62957/burger-king-e-nestle-apostam-em-hamburgueres-criados-com-plantas>>.

THE DAILY CALIFORNIAN. Vegan option to be offered at California hospitals, prisons. 25 de setembro de 2018. Disponível em: <<http://www.dailycal.org/2018/09/24/vegan-option-to-be-offered-at-california-hospitals-prisons/>>.

THE GUARDIAN. Burger King launches plant-based Whopper: 'Nobody can tell the difference'. 2 de abril de 2019. Disponível em: <<https://www.theguardian.com/business/2019/apr/02/burger-king-vegan-whopper-meat-free-impossible-launch>>.

THOMPSON, Craig J.; ARNOULD, Eric; GIESLER, Markus. Discursivity, difference, and disruption: Genealogical reflections on the consumer culture theory heteroglossia. **Marketing Theory**, v. 13, n. 2, p. 149-174, 2013.

TILMAN, David; CLARK, Michael. Global diets link environmental sustainability and human

ⁱ For example: using a more complete calculation method with updated information, researchers show now that emissions from cattle are 11% higher than previously estimated (WOLF, ASRAR, WEST, 2017), inducing the Intergovernmental Panel on Climate Change (IPCC) to reinforced that methane emissions from livestock are a priority issue in climate change mitigation.

ⁱⁱ Behind JBS and ahead of Cargill, Smithfield Foods and Brasil Foods, which form the group of the world's top 5 largest meat processors in the last years.

ⁱⁱⁱ Callon et al. (2007, p. 2) explain that notion of 'device' to deal with market and marketing objects is useful: "With this notion, objects can be brought inside sociological analysis. Moreover, these objects can be considered as objects with agency: whether they might just help (...) devices do things. They articulate actions; they act or they make others act. But the notion of 'device' can also suggest a bifurcation of agency: the person on one side and the machine on the other, the trader on one side and the trading screen on the other."