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Who is in charge of creating a plant-based future?

A case study of how consumers are shaping the market for plant-based meat

Abstract

Increasing concerns about lives of humans, animals and Earth have driven a transition towards an increasing consumption of plant-based foods. As a result, plant-based meat has been brought forward as a possible enabler of this transition. However, agents within the market have opposing views as to how this transition should take place, views that are important to understand to make a meatless future the reality. The purpose of this study is to shed light on the plant-based meat market by uncovering the practices and consequently the shaping forces of consumers and producers that affect the development of the market. By applying theories from social constructivism (science and technology studies), this thesis conducts a case study of the Swedish market based on semi-structured interviews and nethnography. The findings indicate that consumers have powers to shape the market through their actions that will be captured through market representation practices. These representations will be analyzed by companies that will opportunistically explore the trends and drive it further. That implies that consumers' everyday practices have a profound effects on how companies thereafter act in the market.

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TABLE OF CONTENTS

1. INTRODUCTION

As a source of nutrients, food provides human bodies with the essential fuel that keeps the system working. However, amidst a growing concern over the environmental, health and ethical consequences, food has also become a vehicle for change. While an understanding of the global effects of food consumption has increased, policy makers and organizations are encouraging a shift in consumer habits, and advocate for a move towards more plant-based meals (European Commission 2020; IPCC 2019; WWF 2019). Additionally, the ongoing Covid-19 pandemic has strengthened critical voices towards current land-use and animal livestock production (IPBES, 2020). In many developed countries, plant-based diets are therefore gaining popularity among consumers, and both established and niche producers are now stepping in to provide consumers with products that help them reduce or exclude animal-based products from their diets. Many players within the food industry are introducing plant-based alternatives that aim to resemble traditional meat to make the societal transition easier. Previously, niche players were the primary drivers, but more traditional food companies are now making a move into the market for plant-based meat. Most recently, McDonalds announced that the development of their own plant-based meat, McPlant, is currently underway (CNBC, 2020).

The growing interest and controversies within this emerging market have resulted in academic interest, and researchers study the phenomena from various points of view across different disciplines. A vast amount of food-science related literature examines the production processes, structural, nutritional and other material attributes of plant-based products, and comparative studies regarding animal meat and the health effects of such products (Curtain et al., 2018; Gorissen & Witard, 2018; Grafenauer, 2019; Klementova et al., 2019; Kyriakopoulou et al., 2019; Ferysiuk & Wójciak, 2020; Lee et al., 2020). Social science and business studies have mostly focused on sustainability communication and marketing of meat alternatives (Rödl, 2018; Vainio et al., 2018; Broad, 2020), or on consumers' current and changing associations, attitudes, preferences, habits and experiences towards such products (Shouteten et al., 2016; Slade, 2018; Bryand et al., 2019; Graça, 2019; He et al., 2020; Lang, 2020; Michel et al., 2020).

Under the assumption that plant-based meat products are the next societal macro-trend, consumers play a vital role in making a transition possible. While academic papers mentioned above examine the specific phenomena, this thesis aims to add to the growing body of literature. Specifically, it aims to capture a more holistic picture of the market due to its continuous formation and seemingly unclear category boundaries, making it challenging to grasp and define. The purpose of this study is therefore to elucidate on the environment with a focus on the plant-based meat consumers and producers, their practices and consequently the shaping forces that affect the market development. With this aim, a markets-as-practices perspective with the methodological approach of an instrumental case study was chosen as the primary analytical tool.

1.1. PURPOSE AND RESEARCH QUESTIONS

The ongoing formation of the market for plant-based meat and seemingly unclear category boundaries could, on a regulatory level, be seen most recently in an attempt to prohibit non-animal products to be labeled the same way as animal products (European Parliament, 2020). Even though the proposal was not approved, the situation points to ongoing controversies that seem to occur in the market. The regulatory vote can hereafter act as guidance in establishing a code of conduct, but if this development appeared now on a regulatory level, an interesting aspect would be to investigate how the development is currently taking place on a consumer level. Could there be that this nascent market displays other ongoing controversies and non-established ways of doing things also on a consumer level? Under the initial assumption that this is the case, the purpose of this study is to shed light on the environment by uncovering the practices and consequently the shaping forces of consumers and producers that affect the development of the market for plant-based meat. The market-as-practices perspective provides particularly useful concepts to understand a market in ongoing formation and to capture the influence of user practices. Furthermore, by highlighting different practices, the perspective can provide valuable insights and explanations for the ongoing contentions in the market for plant-based meat.

In accordance with the markets-as-practices approach, this thesis is adopting a constructivist view of the market where markets are shaped by the purposive social

practices of various actors (Nenonen et al., 2018). These actors do not only respond to each other's actions, but they also seek to interpret and influence how others understand the practices in which they are jointly engaged in. Markets are thus important sites for generating shared meanings and understandings that are governing the narratives of market transactions (Smith, 2007).

To provide further context, much of previous marketing literature predominantly viewed the markets from the companies' perspective. This phenomenon can be illustrated by the Porterian notion of competition where the market is rather one-sided and success lies mostly in companies' conduct (Porter, 1998), or the post-structuralist and neo-Marxist critical theorists such Thorstein Veblen or the representatives of the Frankfurt School who argue for structural imbalances that are constituted by market domination and passively receptive consumers (Peñaloza & Price, 1993). With the beginning of the 21st century and the development of modern communication technologies, a branch of scholars argue for the shift of power from producers to consumers[1] (Samli, 2001; Wright & Pires et al., 2006). This discourse is manifested in writings of management and organizational scholars for example on the theories of service-dominant logic (Vargo, Lush, 2008), co-creation and lead users (Payne et al., 2008; Vargo et al., 2008; Von Hippel et al., 2011), or the concepts of ethical and political consumers who consciously and deliberately support or reject companies by buycotting or boycotting their goods and services (Wright et al., 2006; Clarke, 2008).

The same trajectory may be observed in the market-as-practices approach where the seminal writings were initially focused on companies' as the central unit of analysis (Callon, 1998; Kjellberg & Helgesson, 2006) and later extended by the inclusion of consumers as change-makers (Martin & Schouten, 2014; Kjellberg & Harrison, 2016; Kjeldgaard et al., 2017). Nevertheless, further empirical evidence from various markets is needed to deepen the understanding of consumer roles from markets-as-practices perspective.

Whilst there are many various actors that come into the market, the central focus of this thesis are consumers and the mapping of the different modes of influence these consumers have, uncovering their agential power in market shaping. Companies will

[1] This notion may be challenged, for example from the Foucauldian perspective where power is omnipresent and inscribed in our existence, thus the notion of consumer empowerment is only a product of such system (Wrightet al., 2006).

be explored in terms of their application of market devices[2] - how they gather and interpret user insights, and how is this information being translated into strategy and product offering modifications. They may be viewed as a sounding board of the consumers. Their mutual influence and shaping processes between producers and consumers will thus be an important part of the study, nonetheless. All in all, three main actors come into play: consumers, producers and plant-based meat products. Other actors will be accounted for to a lesser extent.

The following research questions were put forward based on the preliminary research and research approach:

Research question 1: How do consumers shape the plant-based meat market?

Research question 2: How do companies shape the plant-based meat market?

Research question 3: How do companies and consumer co-shape the plant-based meat market?

Sub-research question: How do companies invite consumers to co-create the plant-based meat market?

Sub-research question: What are the tensions between consumers' and companies' shaping constituted of?

1.2. DELIMITATIONS

While the current study is focused on the food industry, it only explores the market for, and practices related to the production of, plant-based meat. This delimitation is argued for by the described contentions and the growing interest for this specific topic in the industry. Many producers operate in the market which leads to a variety of plant-based products, and plant-based meat. The study is therefore further narrowed down to plant-based *meat* products only, which could be specified as products on a spectrum from resembling minced meat to imitating whole muscle meat. Furthermore, the study is geographically delimited to Sweden, and all commercialized products of actors were available to consumers in the Swedish market.

[2] The material and discursive assemblage that intervene in the construction of markets, (Muniesa et al., 2007), for instance market research techniques, analytical techniques, merchandizing tools or pricing mechanisms.

Due to the scope of this study, the main study could not cover all relevant players in the Swedish market for plant-based meat, which further poses a delimitation of the study. However, as will be elaborated on, the breadth and depth of companies involved is expected to provide a nuanced picture of the explored market.

The theoretical framework provides an additional delimitation of the current study as it has been selected to provide guidance in answering the proposed research questions, while being suitable for the scope of the study. For this study, the Kjellberg, Harrison (2016) framework was adopted as the primary model for analyzing the market, where five market shaping processes are presented.

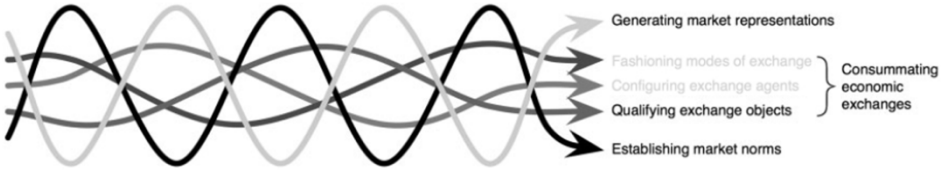

Figure 1. Market shaping conceptualized as five intertwined processes (Kjellberg & Harrison (2016).

This model will be elaborated further in following chapters of this thesis, nevertheless it should be noted in advance that two forces are being examined to a lesser extent - *fashioning modes of exchange* due to the relative rigidity of transactional infrastructure in the food industry which was confirmed both in the conducted pre-study and company interviews and *configuring exchange agents* due to the limited effect users appeared to have in mobilizing other users in this process in the pre-study.

Lastly, Kjellberg & Harrison (2016) proposes a more nuanced view on different actors and separate *users* and *customers* as different agential categories. While such configuration could apply to the plant-based meat market[3] and arguments may be found for both sides, this thesis for the scope and simplicity of the analysis assumes the overlap of these categories and applies the term *consumer*. Consumer is understood, but not limited to, someone who thought or talked about the product and purchase, made the purchase or used the product.

[3] For example, when a parent buys food for their family (customer) whilst the rest of the family consumes the already-bought food (users).

1.3. THESIS STRUCTURE

The thesis is separated into seven parts: *introduction, empirical background, literature review and theoretical framework, research design and methodology, empirical findings, discussion and conclusion*.

Introduction introduces the reader with the topic of plant-based meat, focus, research positioning, research questions and scope of the thesis is put forward.

Empirical background present information from various secondary sources regarding the industry and plant-based products to familiarize the reader with the industry and anchor this market as a reference point for otherwise abstract theoretical concepts.

Literature review and theoretical framework briefly introduces the reader to the study of markets and then reviews the markets-as-practices approach in more detail with existing academic literature. Seminal papers of Latour (1987), Callon (1998) and Callon et al. (2002) with central concepts such as market *shaping, framing, externalities* and *overflows, singularization of products*, *product attachment* and *detachment* are reviewed and defined. The works of Kjellberg, Helgesson (2006, 2007) follows with the description of three market practices: *representation*, *normalizing* and *exchange* practices. Finally, the paper on shaping from consumers' perspective by Kjellberg, Harrison (2016) is reviewed which builds upon Kjellberg, Helgesson (2006, 2007) and which is the main theoretical framework in this thesis. Supporting consumer theories are put forward in order to operationalize the concepts.

Research design and methodology argues for the choice of research method of case study and the methodological fit with the proposed topic and research questions. The choice of semi-structured interviews in combination with netnography is also argued for.

Empirical findings present the data in the form of company and influencer interviews and consumers interactions on social media through a netnography.

Discussion connects empirical findings to the theoretical framework, and discusses how the concepts can be used to explain the gathered empirical data.

Conclusion addresses whether the thesis meets its set purpose, potential shortcomings of the study and theoretical as well as managerial contributions. Lastly, direction for future research is proposed based on important findings.

2. EMPIRICAL BACKGROUND

To provide a background for the plant-based meat market, the following section examines (2.1) Meatless product categories, (2.2) Market growth and key actors, (2.3) Key concerns driving a meatless shift and (2.4) Global consumer (un)acceptance.

Animal-free diets have long been part of human lives, and the consumption of plant-based protein trace back to ancient civilizations. However, it is not until the past decade that the demand has grown significantly, and in turn also the availability of animal-free meat and dairy alternatives. Animal-free meat has risen in popularity amidst growing concern about the environment, health, and ethical aspects of conventional farming. To meet the growing demand, the food industry is looking to introduce meat alternatives produced by nonanimal proteins with similar characteristics as traditional meat (Kumar et al., 2017; Malav et al., 2015). There are currently two major meat analogues that the research community is focusing on, culture-based meat, which is produced through tissue engineering techniques (Bhat & Fayaz, 2011; Hocquette, 2016; Bhat & Bhat, 2011; Noor et al., 2016) and plant-based meat, constructed from plant proteins. Fungi- and insect-based meat analogues have also been commercialized but have not yet been subject to extensive research.

2.1. MEATLESS CATEGORIES

The structuring and formation of plant-based meat is created by the extrusion process[4]. As of now, there are two dominant types of plant-based meat products (The Good Food Institute, 2019).

(1) Restructured. Resemble ground or shredded meat and can be formed into nuggets, patties, balls or sausages. They may also include coating or breading.

(2) Whole muscle plant-based meat products. Products, that resemble traditional whole-muscle meat products. Visible fibrous texture is displayed where such products try to resemble properties of a chicken breast, pork chop or a steak.

[4] *A technology platform that transforms native ingredient biopolymers (inputs) into a semi-solid continuous fluid (output) using heat, shear, pressure, and moisture. Extrusion is a common technology used in the commercial production of cereal, puffed snacks, and pastas, among other foods* (The Good Food Institute, 2019).

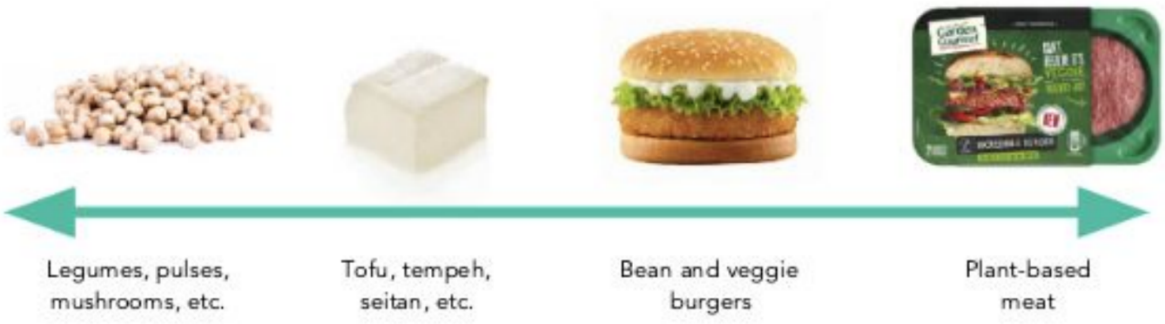

Figure 2. *Alternative protein products spectrum* (The Good Food Institute, 2019)

The market for plant-based meat includes chilled, frozen and ambient products, with frozen alternatives being the largest product category.

2.2. MARKET GROWTH AND KEY ACTORS

The market for plant-based meat globally is growing substantially and in total, the global market is estimated to be worth €11BN (Statista, 2018). Among the Nordic countries, Sweden is the biggest meat substitute market, with a total market size of €78,4 million and annual growth rate of 15,8% for the years 2014-2019. During these years, the chilled product category grew substantially, with an average of 40,6% per year (Euromonitor, 2019).

The Swedish market also holds the largest number of brands and currently has three strong players who together capture > 50% of brand share. The other half of the market is highly fragmented, with a large number of medium and small sized players fighting for their share (Euromonitor, 2019). Furthermore, the products in the Swedish markets are rather homogenous in terms of their protein sources where 60% of all products are derived from soy protein (Mintel, 2020). The homogeneity in protein sources can partially be traced to the maturity of the acceptability and availability of these ingredients. Certain plant-based meat product types, such as those made of soy, wheat, nuts and pulses are more widely accepted across Europe than those made of for example oats, pea and niche grains. Lastly, reports show that sources such as seaweed and algae are still struggling to become accepted by consumers (ING, 2020).

2.3. KEY CONCERNS DRIVING MEATLESS SHIFT

Three reoccurring concerns have led to the increased attention for plant-based meat, and consequently pushed for a shift from traditional meat. These concerns include sustainability (Hu et al., 2019; Smetana et al., 2015), health (Neacsu et al., 2017; Sadler, 2004) and animal welfare concerns (Joshi & Kumar, 2015; Tziva et al., 2019).

Despite technological achievements, traditional meat production is still less energy efficient than growing and harvesting plants (Pimentel & Pimentel, 2003; Reijnders & Soret, 2003). Beef has been found to require the most resources and is the animal product that makes the largest contribution to global warming (de Vries & de Boer, 2010). Additional research comparing the greenhouse gas (GHG) emissions from plant-based and animal-based foods have outlined that legume production, compared to production of for example beef or lamb, causes 250 times less emissions (Tilman & Clark, 2014). The environmental impact of traditional meat has also pushed policy makers to call for a dietary shift (European Commission, 2020) given the reduction of GHG emissions that can be achieved (Carlsson-Kanyama & Gonzalez, 2009). For example, a 5% (25% to 55%) reduction of GHG emissions and 15% (50% to 60%) reduction in land use can be achieved by only partially replacing meat with plant-based food (numbers accomplished by following a vegan diet) (Hallström et al., 2015). Despite strong evidence, a study of consumers in the Netherlands and US pointed to a low awareness of the effectiveness of eating less meat for achieving a low carbon society. This was partially explained by the complexities surrounding the links between meat eating and climate change. To be noted is that as the perceived effectiveness increased, so did the willingness to adopt a diet with less meat (de Boer et al., 2015).

From a health concern, traditional meat has been tied to increased risks of cancer (Bouvard et al., 2015; Godfray et al., 2018) and a recent small study comparing the health effects of animal and plant-based foods, pointed to an improvement in several cardiovascular disease risk factors when participants swapped meat for plant-based meat (Crimarco et al., 2020). Important to point out is that literature on comparisons of health effects of plant-based meat is scarce and the previously mentioned study was partially funded by a large producer of plant-based meat. The ongoing Covid-19 pandemic brings out a worrying example of an additional, previously less prioritized focus area related to health concerns, namely the risk for meat-borne infections. African swine fever (Zhang et al., 2019; Zhou et al., 2018) and antibiotic resistance

(Bernier-Lachance et al., 2020; Cuny et al., 2019) are two additional examples of how traditional animal farming have the possibility to spread infections between humans and animals. Concerns are increasingly being raised for the way that animals are commonly treated in agriculture, and in Western society it has become one of the key drivers for consumers shifting towards a plant-based diet (Hopwood et al., 2020).

2.4. GLOBAL CONSUMER (UN)ACCEPTANCE

While a growing number of consumers have adopted meat-free diets, they are still a minority in the Western world. Current consumer perceptions, which has been highlighted as a one of the main obstacles in the development of meat analogues (He et al., 2020), has also been a key focus area for researchers (Bryant et al., 2019; Slade, 2018). To meet consumer demands, advanced processes aimed at creating meat-like appearance, flavor and textures are used to produce plant-based meat. Despite advances in these processes, consumers have not been entirely convinced by the new products and attitudes towards them vary. Theoretical experiments show that only 21% of customers would choose plant-based alternatives, even if the price and taste of it was equivalent to that of meat (Slade, 2018). Furthermore, customers feel hindered to choose meat-substitutes depending on for example what type of dish their cooking (Elzerman et al., 2015) and across focus groups in the Netherlands, a study found lack of information on the packaging and prices to be perceived as negative aspects of plant-based meat alternatives (Elzerman et al., 2013). Consumption tests also indicate that consumers' inexperience could be hindering a change in consumption patterns as increased exposure to non-meat meals has been found to decrease preferences for meals including meat (Hoek et al., 2013). To overcome consumer unacceptance, increased social education and guidance has been brought forward as an important enabler for a transition (Vainio et al., 2018).

The motives behind buying plant-based meat among different consumer groups across geographies is important to understand for a transition to take place (Bryant et al., 2019). In Western countries, environmental reasons do not seem to be enough to make consumer make the shift away from meat completely. However, environmental motives do influence consumers to adopt curtailment strategies, such as meat-free days (Sanchez-Sabate & Sabate, 2019). As pointed out, cultural differences vary

greatly between countries, and hence food consumption vary across different geographies (de Boer et al., 2015).

Consumer acceptance and understanding varieties of preferences remains an important topic that will largely determine the future direction of the market for plant-based meat (He et al., 2020). In the market for plant-based meat, understanding consumers and achieving their increased acceptance involves a first step of making sense of consumers as such. In doing this, a variety of activities are carried out by market agents, including both companies and consumers, practices that influence the shaping of the market.

3. THEORETICAL FRAMEWORK

The section introduces the theoretical framework of this study. The theoretical framework consists of four parts, (3.1) an introduction to market-as-practices as a way of looking upon markets, (3.2) the notion of framing as un underlying concept for the market-as practices perspective, (3.3) markets as performative practices and (3.4) the notion of translations.

A markets-as-practices lens was deemed as the most appropriate due to the contentiousness of the market where there are unclear boundaries (further described in chapter *empirical findings*), products (further elaborated on in chapter *qualification of products*) and various stakeholders and opinions that come into place, making the market difficult to define (further elaborated on in following chapters by the notions of *hot situations* and *hybrid forums*). In summary, there might be multiple conflicting definitions of the market represented by multiple actors, which this approach fully acknowledges, therefore this thesis is taking the view of markets-as-practices.

Nevertheless, other approaches need to be acknowledged. The term *market* is an ambiguous theoretical abstraction that may hence be studied from various perspectives. Within the existing literature, there are several views on market theory where some of them for illustration are presented here.

Markets-as-institutions

Markets-as-institutions comes from the research tradition of institutional economics (e.g., Fligstein, 1996; Loasby, 2000; North, 1991). The premise of this perspective is that there cannot be market action in a vacuum; market actors need authoritative guidelines on how to behave where stability is valued. Institutions need to take place as they are viewed as effective means to organize the market where rules and institutionalized risk are necessary for any market formation and evolution to happen. Given the stated purpose of the thesis, this lens was not chosen as it is taking into account firms only. Furthermore, the rules regarding plant-based meat are rather non-existent and still being formalized by legislative bodies, and the analysis would thus reflect the contentious nature of the product only indirectly.

Markets-as-processes

Stemming from the Austrian School of Economics (Kirzner, 1997; Jacobson, 1992; Dickson, 1992) which critically examines the neoclassical economics and its processes,

markets-as-processes views the equilibrating processes of demand as supply as constantly moving where actors are market takers (rather than makers) through inventiveness and constant innovation and imitation of other market actors, adhering to the notion of Schumpeterian *creative destruction*. Taking such perspective, the analysis would focus on knowledge discovery and building of competitive advantage of various companies and entrepreneurs which is not focus of the thesis.

Markets-as-networks

Coming from the tradition of sociology and network analysis (e.g., Granovetter, 1985; Granovetter & McGuire, 1998; Richardson, 1972; Uzzi, 1997), this perspective claims that market action and interactions are seldom in isolation but rather part of a larger interrelated nodes of network. Social and interpersonal relationships are thus embedded in economic action. Market in this sense in formed through these relationships, where partnerships are gradually formed and dissolved. While this perspective could be useful, it is nevertheless only taking into account human actors, which is the strongest shortcoming of such view. Additionally, the network perspective is already partially included in markets-as-practices through the Actor Network Theory, therefore applying markets-as-networks perspective would be rather redundant.

3.1. INTRODUCTION TO MARKETS-AS-PRACTICES

Markets-as-practices stem from the tradition of science and technology studies and the sociological concept of performativity. As Callon (1998) argues, performative science both describes the market while it simultaneously constructs its subject matter (Diaz, Ruiz, 2012). Therefore, the markets-as-practices perspective has the underlying assumption that markets should not be viewed as given, but as constructed.

Market actors do not merely *act* but are involved in market *shaping* with their everyday practices which are defined as human activities which centralize around shared practical understandings. Such notion highlights the large variety of agents, their practices and calculative devices which interact with each other (Callon & Muniesa, 2006, as cited in Diaz & Ruiz, 2012). Market shaping can be constituted by everyday mundane practices. To illustrate that in the food industry, market shaping may be materialized by practices such as:

- categorization of products in the grocery store shelves;
- changing the food recipe;
- sharing food recipes on social media;
- leaving a comment in a debate regarding healthy diet;
- criticizing a use of particular ingredients, e.g., palm oil;
- participating in an online survey;
- reflective thinking about the food product in relation to other products.

The practices approach is based on an important concept from Actor-Network theory (ANT), implying that actors include both human and non-human actors. As both human and non-human have interests that need to be accommodated for, no distinction is made between the two forms and they should be discussed in the same analytical terms (Callon, 1986; Latour, 1987; Law, 1987). This is an important aspect of the practice perspective as it allows for a methodological tool to examine non-human actors as well.

There are additional concepts that the practices perspective uses to explain the processes that underlie markets. As the purpose of this thesis is to understand how these concepts come into play in the market for plant-based meat, the following section will introduce some of these key concepts.

3.2. THE NOTION OF FRAMING

Framing is a key concept in practices, as it functions to bring agents and goods together in the market. Frames as such, could initially be understood as structured understandings of the way aspects of the world function (Goffman, 1974; Fillmore, 1985; Sweetser & Fauconnier 1996).

There are two distinct ways in which the frames take form, namely (a) frames in communication and (b) frames in thought. Frames in communication refers to what actors say whereas frames in thought refers to what actors think. What they have in common is the concern for variations in emphasis or salience and both play an important role and has an effect on the other in a continuously ongoing process (Entman, 1993).

Taking the concept of framing further, it is by Callon defined as *an operation used to define individual agents which are clearly distinct and dissociated from one another* (Callon 1998). This operation is brought forward as what makes relationships between actors come together as it makes the relationships calculable in the first place. Naturally, the concept of frames implies that certain elements are either included or excluded from a frame, and an important aspect of the theory is that these elements might change position over time.

Ultimately, the frames that have been constructed may be inefficient, giving rise to overflows between frames. This phenomenon is referred to as externalities, established consequences or effects that are not taken into account by the parties involved in the exchange, an additional important concept within practices[5]. These consequences of overflows can be seen upon in two ways, either as leaks, or as the norm (Callon, 1998).

Constructivist sociology argues that overflows are common, that framing is difficult to achieve, and if achieved, requires a lot of investments. This is a result of the idea that the elements that help frame the relevant interaction can be the overflowing elements, and certain elements might be part of multiple frames. Hence, the way in which an element exists in one location can have effects on the performance in another location. This dual nature of elements in itself constitutes an externality, and hence sources of overflows are the elements that provide the possibility to establish frames

[5] It is important to note that for externalities to take place, actors affected by overflows must be identified.

in the first place, making frames incomplete by design and subject to overflows. To illustrate with an example, Callon describes a situation where a chemical producer does not account for costs incurred by agents not directly involved in production (the frame), but who still are impacted by the toxic waste that is a biproduct of the production. Such actors, farmers in this case, still must make investments as a countermeasure for the toxic waste. However, they are not able to negotiate compensation for such investments. Such failure gives rise to negative externalities.

Though this might raise questions as to if there is any point in paying attention to these overflows, socio-constructivist scholars would argue that it certainly is. The nature of frames as incomplete and overflows as common makes it increasingly important to identify and measure them, in order to make it possible to reframe the interaction. By identifying and measuring overflows, a relative stability in framing the situation is achieve, making the market stable enough to make transactions (Callon 1998). The situation described just now, where stability has been achieved among players, is referred to as a "cold" situation. In such a situation, an agreement regarding the overflows has been achieved. The opposite state is referred to as a "hot" situation, where everything, including for example agents, intermediaries and the overflows are controversial or unknown. Actors will in hot situations try to influence and negotiate how to characterize the situation (Callon, 1998).

3.3. ECONOMY OF QUALITIES

To further understand the complexities of markets and the ongoing processes that are involved across and between different agents, additional concepts provide useful explanatory value. Assuming that markets are constantly evolving, which as pointed out is one of the underlying assumptions of the markets as practices perspective, goods become an important vehicle to explain how these markets evolve. To understand more, there is a need to make a distinction between a good and a product, concepts which are often used interchangeably. A good emphasizes that the aim of any economic activity is to satisfy a need and implies stabilization of characteristics that are related to that good. This explains why the good is in demand (to satisfy a specific need) and hence why it is traded. Products, on the other hand, are a process rather than a state in the ongoing process that involves continuous adjustments, transformations and definitions of its characteristics by agents. This ongoing process

is referred to as the *qualification of goods* and can briefly be described as the continuous process of qualification-requalification of the qualities of goods (Callon et al., 2002). The aim is to establish and stabilize the qualities that become attached to a product and temporarily transform it into a tradable good in the market. Such stabilization of the associated characteristics is referred to as the *singularization* of the economic good (Callon & Muniesa, 2005). Despite the stabilization being temporary, it fills the important function of allowing the good's *attachment* to a particular consumer. Product attachment means that consumers are familiar with the qualities, and the evaluations they make are stabilized and objectified. However, the *detachment* of the product can also occur as customer are influenced to requalify the products due to, for example, repositioning initiated by rivals in the market. This attachment and detachment cycle are central to competition (Callon et al., 2002).

3.4. MARKETS AS PERFORMATIVE PRACTICES

3.4.1. EXCHANGE PRACTICES

Exchange practices are constituted of everyday activities that related to the consummation of individual economic exchange goods (Kjellberg, Helgesson, 2006) such as product specifications or terms of delivery, and more general activities, including advertising or organization of product distribution. These temporarily stabilize the market conditions in terms of actors, exchange objects, price and term (Kjellberg, Helgesson, 2007).

Exchange practices are further subcategorized into three market shaping processes (Kjellberg, Harrison, 2016) as they all directly contribute to how are economic exchanges realized. *Fashioning modes of exchange* concerns the transactional infrastructure for conducting the exchanges of economic goods and establishing interaction routines. *Configuring exchange agents* concerns the set of heterogenous actors that act in a market situation such as buyers, customers, sellers and suppliers. How these collectives act is also influencing the product qualification which will be described in a separate chapter.

3.4.1.1. QUALIFYING EXCHANGE OBJECTS

Producers devote a considerable number of resources in order to position products in consumers' minds in terms of the product's qualities, the qualities of the brands labeled to the product and the qualities of competing products and brands (Ries, Trout, Kotler, 2001). Economic agents through their active market participation engage in a reflexive activity that progressively (re)defines the (a) product's intrinsic qualities that are embedded, shaped by market devices and determined by the device characteristics in play, and (b) extrinsic qualities, an extension of intrinsic qualities where product characteristics are further dependent on formulation, explanation and preferences of various agents that produce multitude of interpretations (Callon et al., 2002).

Such categorization suggests two types of practices allowing the modification of products (Kjellberg, Harrison, 2016). Modification of (a) intrinsic qualities aims for literal physical modification of the offering which requires access into the inner constitution of the offering, i.e., internal workings of a company and its processes, such as product development. In modifying the (b) extrinsic qualities, such access could be useful but not a necessary precondition; these practices involve finding new methods of probing products in different use contexts.

This process potentially leads to singularization of products, meaning the proposed product offering characteristics match or are nearly identical to consumer expectations and are clearly delineated to characteristics of other existing goods (Callon et al., 2002). Paradoxically, this state is temporary due to the constantly changing market dynamics through substitutable and comparable goods.

3.4.1.2. CONSUMER INVOLVEMENT IN QUALIFYING EXCHANGE OBJECTS

Users may shift from passively accepting the proposed qualification of goods from companies to actively modifying of the offering; producers simultaneously actively pursue such consumer input and participation (Kjellberg, Harisson, 2016) through various means of co-creation.

The paradigm of service-dominant logic (S-D) views products as vehicles of value that is being shaped jointly by consumers and companies (Vargo et al., 2008). The key unit of exchange and source of competitive advantage hence moves from the products to

knowledge. Firm incorporates its knowledge, skills and capabilities (*operant resources*) that are constituted in a product (*operand resources*[6]), where this product merely introduces a value proposition to the customer. This value is captured by consumers that purchase the product (*value-in-exchange*) and is further defined by their application of operant resources through interaction with the product in place (*value-in-use)* (Vargo, Lusch, 2004). As the consumers' perception of value-in-use changes, their willingness to pay changes accordingly (Kjellberg, Helgesson, 2016).

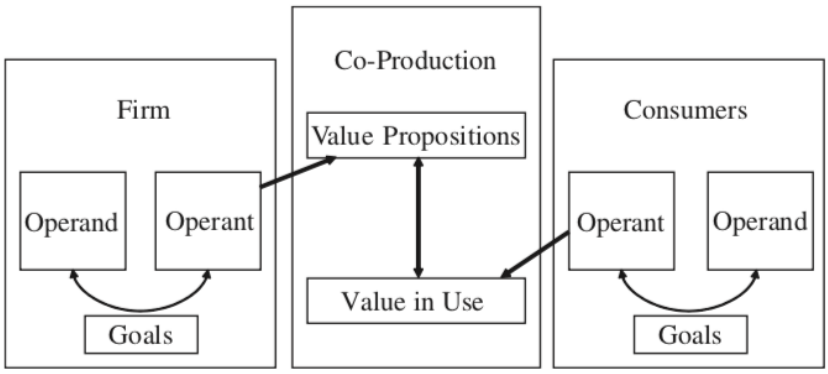

Figure 3. *Firm and consumer interactions of resources and value* (Arnould, 2007).

Co-creation can be then viewed as a forum of various opinions and discussions for individual consumers, collectives and firms (Prahalad, Ramaswamy, 2004), and from the consumers' side can be further constituted in two ways: *relationship experience* and *customer learning* (Payne et al., 2008).

3.4.2. NORMALIZING PRACTICES

Normalizing practices are defined as activities of heterogenous actors that attempt to influence and contribute to the establishment of normative objectives (rules and guidelines) that denote how a market and its actors should behave (Kjellberg, Helgesson, 2007). These practices include a wide arrange of processes, such as the lobbying and attempts to influence market regulations through established institutions, company's objectives in market engagement for example through specific business models, informal norms and shared understanding about markets (Kjellberg, Helgesson, 2016).

[6] Materials that actors act upon (Vargo, Lusch, 2004)

3.4.2.1. CONSUMER INVOLVEMENT IN NORMALIZING PRACTICES

Both companies and consumers possess the agency to promote their values and ideas regarding exchanges and behavioral norms or more formally through consumer organizations and expert committees (Kjellberg, Helgesson, 2016).

Normative messages regarding consumption are produced through commercial media, where consumers from the CCT point of view are conceived as interpretive agents that can be put on a spectrum from embracing these normative images and representations of life-style ideals to consumers that deviate or even resist such ideological constructions (Arnould, Thompson, 2005).

Individual and collectives with important sources of power such as expert power (possessing special knowledge and expertise regarding a certain topic) or referent power (personal identification with the communicator) have the influence to prescribe and legitimize behaviors (Cialdini, 2007). With the emergence of modern networking technologies, peer-to-peer social media allowed individuals to share their notion of norms and be receptive to others' social norms more easily (Lally, 2011) as consumers are heavily influenced by online actions of their surroundings and affects how they think they *should* behave.

Related to the co-creation theory, innovation scholars had been in recent decades focusing on companies and identification of corresponding lead users (Von Hippel, 1986) whose present strong needs in the market will become general in the future months or years. Lead users have a vision of the market or product that is unfulfilled, and a small portion of these users are proactively innovating the products themselves (Von Hippel et al., 2011), hence simultaneously engaging in qualifying products as well.

In terms of their online social network position, lead users were found to be in the center of various networks, acting as bridges between different social groups (Kratzer et al., 2016). Therefore, depending on their vocality, they are prone to be a focal source of normative influence and may be deemed as opinion leaders. Compared to regular users, opinion leaders possess greater media exposure, social participation, social status and greater contact with change agents (Rogers, 2010).

3.4.2.2. NORMALIZING PRACTICES: THE CASE OF PLANT-BASED MEAT

It is likely to be stronger for norms regarding the qualification of exchange objects than for those relating to modes of exchange, unless the market exhibits a strong direct link between exchange and use (Kjellberg, Harrison, 2016).

While plant-based alternatives and protein sources (legumes, fungi, soy) were available for many years, the surge of plant-based meat alternatives and their availability created an institutional vacuum where no specific guidelines are tied to such products (Curtain, Grafenauer, 2019) which creates contentions among animal meat advocates especially considering the dual labelling such as *vegetarian sausage* (The Guardian, 2020).

Even though meat substitutes were first viewed as healthier alternative, the rising concerns for animal welfare and environmental topics raised contestations around meat in the public discourse. Tziva et al. (2020) argue that consumers and institution are the main driving agents towards the transition from traditional protein sources (animal meat) to alternative protein sources (plant-based meat). The study elaborates on the role of *norm-entrepreneurs*[7], in this case vegetarians and vegans, that call attention to the problematics of meat consumption, challenge the appropriateness of the current normative habits while proposing alternative behaviors and norms such as the support for meat substitutes.

3.4.3. REPRESENTATIONAL PRACTICES

Representational practices constitute of activities that help produce images of markets and how they function (Kjellberg & Helgesson, 2006). The intangible nature of markets makes it difficult to depict images of them. This creates the need to engage in an exercise in which individual exchanges can extend across time and space, making it possible to produce images of the markets. Just as exchange practices, representational practices play a central role in shaping markets. By understanding the importance of activities, the concept of *performativity* becomes relevant to address. The concept has its roots in "performative utterances", where speech acts as not only as a tool to describe reality, but to perform reality (Austin, 1962). Since then, performativity has

[7] In political science denotes individuals advocating a minority position to strengthen their position in debates to convince the critical mass to embrace new societal norms (Finnemore & Sikkink, 1998)

been used in different ways across different fields of study, with a central point being that attention is paid to how activities and practices has effects (Mason et al., 2014). Within studies of markets and marketing, the concept of performativity describes how theories, ideas, people, skills and techniques performs, shapes and formats the economy, rather than observe how it functions (Callon, 1998). Hence, the re-presentations made contribute to shape the phenomena they re-present (Latour, 1986). One such example is how firms collect and process data to evaluate, and perhaps alter, the strategies they have in place (Kjellberg & Helgesson 2006).

3.4.3.1. CONSUMER INVOLVEMENT IN REPRESENTATIONAL PRACTICES

Users are involved in helping suppliers in generating images of the market in multiple ways, ranging from high involvements to passive contributions. This includes for example providing input into market analyses through loyalty programs or panels, or more subtle traces of user behavior such as the ones left when accepting cookies to their browsers. The ability to gather and aggregate user data into market images has a great effect on the degree of consumer involvement in representational practices (Kjellberg & Harrison 2016). Data is utilized by companies of varying sizes in different forms with varying potential to support decisions related to marketing (Wedel & Kannan, 2016). Using Big Data to generate consumer insights has enabled increasingly detailed consumer analytics and transformed the ways in which marketing practitioners can view consumers. However, the process of converting data to insights, and developing competitive advantages based on those insights is a complex and difficult exercise (Ervelles, 2016) and companies find it especially challenging to obtain data of sufficient quality and to use it for improved decision making (Vidgen et al., 2017).

Users can also be involved in communities or organizations that provide alternative images of market arrangements, by for example criticizing or repositioning it. Such activities can be combined with focused attempts to alter market norms (Kjellberg & Harrison 2016). With the rise of the internet, social media provide a space for communities to develop around topics or events of social interest (Papadopoulos et al., 2012). Such communities enable consumption-related peer communication, which has been found to significantly influence product attitudes. Online peer

communication also drives consumer behavior through pressures of conformity and by facilitating information sharing about products (Wang et al, 2012).

The influence of user involvement in representational practices is, as with the other subprocesses, likely to vary between different markets. As such, the effect is likely to be dependent on three important factors. Firstly, how the market recognizes and employs user-related indicators. Secondly, whether users have the power to produce and disseminate market images to relevant other people's norms. Thirdly, the ability to gather and aggregate user data into market images influences the degree of consumer involvement in representational practices (Kjellberg & Harrison 2016).

3.4.3.2. REPRESENTATIONAL PRACTICES AND PLANT-BASED MEAT

As mentioned, the literature of plant-based meat from practices perspective is scarce. However, looking at plant-based meat literature from adjacent fields, we can identify examples of representational practices at play. One such example includes the way vegetarians and vegans at an early stage were criticizing the meat market, hence providing images of the emerging plant-based meat market as cruelty free (Tziva 2019). Returning to the case of lead users, their insights and alternative images of the market can be captured by companies. This technique proves to be more valuable than traditional market research techniques in innovative product development, especially in turbulent technological industries (Von Hippel, 1986).

There are opposing view as to how the market recognizes and employs user-related indicators, and the lack of concrete guidelines for how to implement consumer-led food product development in industry practices has been brought forward as an important blocker (Costa & Jongen 2006). Also, the lack of integration between marketing and R&D activities has been found to limit such practices (Costa & Jongen 2006, Sarkar & Costa 2008). However, in recent years companies in food product development have adopted innovation models, pointing to an increased recognition of user-related indicators (Khan et al., 2013).

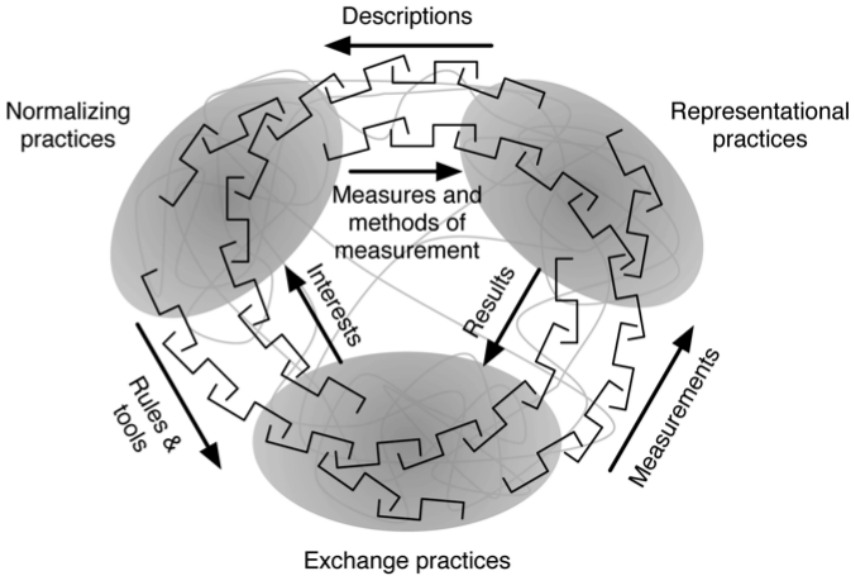

Figure 4. *Translations and intermediaries in market practice* (Kjellberg & Helgesson, 2007).

3.4.4. INFLUENCERS ROLE IN SHAPING MARKETS

Though influencers will not be the primary focus of the present study, it is important to briefly account for the role they play through user involvement. In configuring exchange agents, influencers can act as a mean for heterogenous collectives, and can provide support or guidance to this assembled collective of users. Users are thereby providing influencers with for example the recognition needed for them to act as a spokesperson for this collective. Mediated by social media, an informal channel of communication, the influencers can channel know-how transmitted by users to potential new customers (Kjellberg & Harrisson, 2012). The role of influencers is rather extensive, and not only celebrities, but also less prominent social media users with high topic affinity are considered more novel and have become increasingly influential in certain topics. This is partly explained by the ability for such users to gradually increase their relevance by acquiring influential abilities in relation to additional topics, referred to as hustling (Carter, 2016). Finding the relevant influencers can be difficult, and variables such as post frequency, subject and topic related posts, among other things have been found to influence the fit between influencers and brands (Booth & Matic, 2011). Furthermore, interaction and engagement between influencers and followers has been found to depend on

motivational factors including entertainment, conversation, opportunity seeking, investigation and brand affiliation. Understanding such consumer drivers are also important to ensure a fit between relevant influencers and brands (Enginkaya & Yilmaz, 2014).

4. PRE-STUDY

Following the literature review, initial research questions were formed. The questions can be divided into five sub-questions as seen in figure 5.

Research question	How is consumer market-shaping from the practice perspective materialized in the plant-based meat market?
Sub-question 1	What is the perceived notion of plant-based meat products (qualities such as form, taste, color, nutrition) and how are they perceived in comparison to other products?
Sub-question 2	How do (would) consumers use plant-based meat?
Sub-question 3	How do consumers relate their dietary preferences to their identity and to their peers?
Sub-question 4	What is the (perceived) customer journey process related to plant-based meat?
Sub-question 5	How do consumers engage with the food industry and content (e.g., news outlets, social media)?

Figure 5. Pre-study research question and sub-questions

Given the complexity and serendipity of the topic, to facilitate high-quality future data collection, a pre-study was conducted with a diverse panel of eight interviewees with various dietary habits aged 22-30. Such demographic was chosen due to its swift availability, higher awareness and knowledge of these recently developed products, and simultaneous control over their grocery expenditure, thus assurance of the role of consumers and users merging within this panel.

The pre-study took a form of semi-structured interviews where questions were constructed based on the Kjellberg, Harrison (2016) article on user shaping, where specific sub-questions were clustered around the five practices presented in the article (Figure 1).

The foci of the pre-study were manifold. Firstly, to explore the topic from the chosen theoretical perspective and identify which market-shaping themes are materialized to a higher or lower degree. As Kjellberg, Harrison (2016) suggests, consumers' agential capacities vary depending on the specific market. Market-shaping roles and their degree are thus not pre-defined nor identical in every market.

Academic contribution and practical feasibility were evaluated based on the pre-study answers due to the scarce number of empirical studies and thus limited understanding of how certain practices could be manifested in the plant-based meat market.

4.1. PRE-STUDY FINDINGS

Interviewees referred to the consumption of plant-based meat in two distinct ways: as a way of maintaining good health and as means of getting the right nutrition, and as a statement against environmental degradation or animal cruelty. This represents the competing ontological duality of consumption of plant-based meat as a personal dietary choice and as a political statement.

While people categorize other people in terms of their food consumption, they are less prone to use these categorizations on themselves (unless being carnivorous or omnivorous) as that would entrench them into a specific dietary obstruction that they are not willing to fully commit to. Therefore, a majority referred to these dietary preferences rather as a scale on which they placed themselves. If they used a specific label, they would often add dietary or situational exceptions. For instance, those who referred to themselves as vegetarians or vegans added instances where they would eat meat or other animal products on celebratory or other special occasions.

Such notion implies that while consumers feel like they are following a particular diet, such as vegetarian, vegan or pescatarian, these dietary terms and preferences are simultaneously implying a zero-sum thinking where one either is or is not a vegetarian (or other dietary inclination). Not strictly following such diets while proactively identifying with them seems to be followed by social stigmatization which could be connected either with a perceived lack of integrity or questionable conviction. To work around such stigmatization, a minority of the interviewees would go as far as to alter their dietary preferences depending on in what social constellations the subject was brought up. Amongst people who were familiar with or followed a similar diet to the interviewee, the social cost of being true to dietary preferences appeared lower and the willingness to commit to it stronger.

Engagement with food content was rather passive through following food and culinary accounts mostly to gain inspiration for their recipes. Those who decided to opt for alternative non-meat protein sources seemed more prone to follow such content and educate themselves on the respective diets.

5. METHODOLOGY

The aim of this section is to provide an understanding for the methodological approach used, its structure and the steps conducted in the qualitative study as well as address possible shortcomings to these results. In this chapter, we elaborate on the choice of conducting a qualitative study to investigate the power of consumers in shaping the market for plant-based meat. Furthermore, we argue for an inductive approach in the process of data collection and analysis and our choice of data collection method. Lastly, we describe how all data was collected, including the interview sample, interview design and data processing method chosen.

5.1. MAIN STUDY DESIGN AND APPROACH

5.1.1. METHODOLOGICAL FIT

For the purpose of this study, to shed light on the environment by uncovering the practices and consequently the shaping forces of consumers and producers that affect the development of the market for plant-based meat, a dual methodological approach was deemed appropriate. Since the purpose implies a need to uncover both the practices companies have in place, as well as different consumer behaviors and views, a qualitative approach was developed. Furthermore, from the pre-study, it was evident that consumers were primarily involved with products of plant-based meat through purchases and social interactions. Hence, the design of the main study was constructed to capture not only the interaction between consumers and companies, but also the interplay occurring between consumers. From the pre-study, it also became clear that there were ongoing contradictions with regards to how, why and for whom plant-based meat was to consider and a plethora of views contributing to the establishment of market norms. The pre-study pointed to three of the five market shaping processes (Kjellberg & Harrisson, 2012) as having a higher relevance for investigating how user shaping is occurring in the market for plant-based meat. To understand these subprocesses, the main study was designed to focus on these three primary processes: *Generating market representations, qualifying exchange objects* and *establishing market norms.* Firstly, the process in which consumer involvement occurred across relevant industry actors would be established by conducting in-depth interviews with industry actors. Secondly, a deeper understanding of consumers and their views of plant-based meat would be investigated through a netnography.

As previously mentioned, the shaping of the market for plant-based meat includes complex interactions between actors of human and non-human nature. Given the multitude of forces at play, and that the relations between actors are to be assessed, qualitative research has been deemed a highly relevant approach (Flick, 2014). The chosen theoretical framework draws on extensive theory of the market-as-practices perspective and the notion of framing, as well as translation, as there is a need to understand the development of non-human actors, such as plant-based meat and how they relate to human actors, such as users or producers of the products. The explorative nature of this study aims to untangle the complex relationships that underlie the phenomena of user-focused market shaping. A qualitative study based on semi-structured expert interviews was ultimately chosen to analyze the phenomena of market shaping of plant-based meat from a markets-as-practices point of view. The choice of a qualitative method was also defended by the lack of prior research within the subject area, as it provides an appropriate way to collect detailed data with increasing explanatory potential (Rubin and Rubin, 2012).

Furthermore, the aim is to, with the aid of already existing theory, understand the chosen phenomena across its complexities. The instrumental case study as a research choice is argued for given its supportive role in providing real-world insights into the issue of interest (Stake, 2010). The use of such case study depicts the occurrence of the phenomenon in a variation of situational contexts, which may enhance the reliability of the interpretations made related to the topic of research (Stake, 2010). By combining the markets-as-practices perspective, framing theory and translation theory, with a case study research approach, the aim is to provide empirical evidence for how complex forces come into play and shapes the market for plant-based meat.

5.1.2. RESEARCH APPROACH

As the purpose of this study is to uncover the practices for consumer involvement in the plant-based meat industry, our research approach involves using existing theory to find answers to our research questions. An inductive approach involves a reasoning process going from the specific to the general (Christensen et al. 2015). During this study, the initial steps of this process included the identification of relevant theoretical concepts and the formation of a theoretical framework. Thereafter, a pre-study was

constructed to gain a deeper understanding of the research area. After the pre-study, the main study was designed to collect data through semi-structured interviews given the possibility to extract in-depth information about user involvement in practices within the market for plant-based meat. Interviewees were chosen based on their connection and experience from relevant practices in the company. An interview guide was developed to explore the phenomenon of user involvement and to find themes related to theoretical framework and markets-as-practices. By applying the theoretical framework to conducted interviews, an empirical case of how consumers shape the market for plant-based meat could be developed.

5.2. MAIN STUDY

The main study consisted of semi-structured interviews with experts, aimed at collecting the main body of empirical research data. Secondary sources were used for validation of empirical findings.

5.2.1. INTERVIEW SAMPLE

The selection process for the case study was conducted in accordance with the phases outlined for instrumental case study design (Stake, 2010). Firstly, the population of hypothetical cases was established by consulting industry reports, prior research, and secondary data on existing commercialized products. The population was defined as all producers of plant-based meat. The scope was narrowed to only include cases of plant-based meat alternatives with the ambition to fully resemble meat, and exclude cases where high-protein meat replacements such as products based on tofu/tempeh and bean and veggie burgers, as such products are expected to prove a significantly different case for investigation. Secondly, accessible cases were identified to create a sub-population within this population. In this part of the research, the sub-population was gradually identified using secondary data in the form of industry reports and information on commercialized products, as well as referrals from interviewees. Multiple interviewees provided contacts to professionals in the area of plant-based meat. Lastly, the selection of cases for the study was based on the possibility to offer a balance of companies and opinion leaders of different sizes, backgrounds, behavior and communication strategies given that it provides a better opportunity for an extensive covering of the research issue.

Both larger and established, as well as start-ups and more niche players were included in the study. The interviewees were selected to represent the breadth and depth of different actors within the plant-based meat market. Actors of different sizes are expected to have differing practices in place, and hence have different possible channels where the users come into play. A diversified sample also ensures a higher degree of validation for the analysis across company sizes. Given the scope of this thesis, the roles of interviewees were chosen to represent actors with direct insights into either customer insight processes, product development processes, or both. Hence, titles included CEOs, Founders, Marketing Managers, Innovation Managers, Product Developers, Influencers, etc. A complete list of companies researched and potentially interviewed can be found in Appendix 3. Given that internal processes and know-how is a strong source for competitive advantage, all interviewees have remained anonymous.

5.2.2. INTERVIEW DESIGN

For the main study, qualitative interviews were considered the most suitable method for data collection as it allows for interviewees to provide insights seen as relevant and important, while answers can be detailed and well elaborated on (Bryman, 2012). The qualitative interviews were semi-structured, an approach that is argued for given the possibility to obtain comparable answers, while giving room for exploration. To ensure the comparability of answers, all interviewees were asked a similar set of predefined open-ended questions. Depending on how the conversations developed, the semi-structured design allowed the interviewers to alter the order in which questions were asked. This also allowed for further probing and in-depth questions resulting in richer details and more specific descriptions of experiences provided by the interviewees (Taylor et al., 2016). A semi-structure also allowed for slight alterations of questions for interviewees with different professional backgrounds, making sure they were adapted to their specific experiences. The full question-set was carefully designed to ensure the use of non-leading formulations (Bryman, 2012).

All interview questions were based on reviewed theory and formulated with the aim of answering the research questions presented in this study. The interview guide contained 11 questions in total, which can be found in Appendix 2 along with the subprocesses investigated. The guide included two introductory questions aimed at

making the interviewees open up, before questions related to the three subprocesses chosen as the primary framework for the study were asked. Within each subprocess, questions were aimed at uncovering previous and current practices aimed to either understand or involve customers directly and indirectly in the development of the market.

6.2.2.1. PURPOSIVE INTERVIEW SAMPLING

All participants of the study were purposively sampled (Christensen et al., 2015) based on their professional experience and current positions. All participants worked either directly or indirectly with marketing and/or product development. Hence, all participants were involved in processes related to gathering or translating consumer insights and with experience from the more extensive processes that companies could have in place.

Among the companies brought forward in the pre-study and found through secondary research, firms of varying size and product offerings were included in the survey to enable insights across plant-based meat offerings in the market. Unfortunately, the large interest in food producing companies in general made interviews difficult to schedule, and companies with headquarters outside of Sweden were especially difficult to get ahold of. Fortunately, email, LinkedIn and referrals from interviewees provided enough contacts to achieve the 14 conducted interviews. The number of interviews were considered sufficient as it allowed for a coverage of the variety of players involved in the market, including companies primarily focused on plant-based meat as a part of their meat-focused portfolio of products, as well as companies solely focused on plant-based meat.

5.2.3. NETHNOGRAPHY DESIGN

To capture the plurality of views and potential areas of controversy, netnography was chosen as a complement to the in-depth interviews. Given the ongoing covid-19 pandemic hindering physical data collection, and the difficulty in achieving breadth and depth in respondents of a questionnaire, nethnography was deemed a more suitable method. Additionally, the internet enables actors to interact and answer to each other, further strengthening the choice of such method to capture how different actors perceive and act in shaping the market for plant-based meat.

Nethnography, or ethnography over the internet, is a qualitative research methodology that aims to study the cultures and communities emerging in computer-mediated channels (Kozinets, 2002). As opposed to traditional ethnography, nethnography enables the researcher to in an unobtrusive manner observe consumers in a non-fabricated context. Such context can therefore provide insights into behaviors and interactions that occur naturally and a possibility to capture real-time trends (Puri, 2007). As the aim was to understand current societal norms related to the market for plant-based meat, and how users of differing view are trying to influence each other, a nethnography was considered an appropriate approach. While the above contributed to the choice of nethnography as a research method, there are important shortcomings of the method that need to be addressed as well. Firstly, online communities exclude non-internet users from being included in the study (Kozinets, 2002). As Sweden was chosen as the geographical area of the nethnography, a country in which 94% of the population (WorldBank, 2019) use the internet, the possibility to capture a sufficient sample of different respondents was considered high. Secondly, the nature of nethnography puts a lot of pressure on the researchers' interpretive capabilities (Kozinets, 2002). Lastly, the generalizability of the method outside of the online community is limited (Kozinets, 2002).

5.2.3.1. NETNOGRAPHY SAMPLING

The sampling of forums for nethnography was primarily based on the possibility to capture statements and interactions from people with differing views. With this in mind, a key determinant for the choice of forum was the ability for people of opposing views to find and simultaneously comment on content. To avoid echo chambers, Facebook and Instagram pages of companies producing or selling plant-based meat

were deemed appropriate. Such pages are public, and reactions/comments can be seen by other members than those interaction with the pages and therefore interactions can occur. Furthermore, Facebook is the largest social network in Sweden (Statista, 2020) and therefore expected to provide the largest variety of respondents. Instagram was also chosen for the nethnography as it was one of the primary communication channels for the chosen companies. Furthermore, Instagram has similar characteristics to Facebook, enabling different consumers to interact through comments and reactions. A timeframe of 6 months was chosen to investigate the current views as a certain saturation was achieved during the process of gathering comments and interactions.

5.2.4. DATA COLLECTION AND ANALYSIS

The 14 conducted interviews were all held via Microsoft Teams and Zoom, with a duration of 30-60 minutes. The ongoing Covid-19 pandemic, where most companies contacted had applied a work-from-home policy, resulted in a difficulty in conducting any of the interviews face to face. As the majority of interviews were conducted using a video function, the possibility to notice details such as body language and facial expressions is increased compared to phone interviews. However, given the shortcomings of a virtual method, such details could not be fully taken into consideration. Before all interviews, participants were informed that all material would be kept confidential in order to increase the likelihood of honest responses. Interviewees were informed that their company name would not be included, and that no quotes would be linked back to specific companies.

All interviews were transcribed, and thereafter analyzed by coding and categorizing based on the market shaping subprocesses (Harrison & Kjellberg, 2016). The coding process was conducted using an inductive approach using the Gioia methodology framework (Gioia et al., 2012), which clusters codes under first, second and third order themes and categories. Firstly, the transcripts were carefully examined of the data, and important passages or phrases highlighted. Thereafter, these highlighted parts of similar meaning were categorized under conceptual labels. Next, the conceptual labels were examined and paired into higher level categories (Symon & Casell, 2012). Throughout the process, close attention was paid to theoretical concepts, especially the subprocesses in which user shaping takes place. The same approach was used for

the nethnography, with the exception being that comments first had to be translated from Swedish to English before the coding process.

As coding is usually conducted as a solitary act, the method of team coding needs to be addressed (Saldana, 2013). Though the act of coding in a team can result in difficulties in harmonization and coordination, coding collaboratively can be considered enriching as it allows multiple minds to bring out various ways of analyzing and interpreting the data (Saldana, 2013). As there are only two authors to this study, the risk for substantial difficulties in coordinating the analysis was not deemed to have an impact on the quality. Furthermore, careful discussion between both authors ensured transparency and clarity in logic during the phase of coding and analysis.

6. EMPIRICAL FINDINGS

The analysis is structured around three focal themes, which will be presented in the following sections. These themes emerged through the structuring of data by the Gioia methodology (Gioia et al., 2012) utilizing open and axial coding as described in the methods part. They are thus a product of aggregated sub-themes identified in the conducted interviews and digital ethnography. To provide a better understanding of the topic, the themes are supplemented with quotes from respective actors. Unless stated otherwise, presented quotes are reported by interviewed companies.

Chapter 5.1. describes the view of various actors upon the trend of plant-based meat; chapter 5.2. describes the different processes of product commercialization for plant-based meat; chapter 5.3. examines the plurality of consumer views upon plant-based meat; chapter 5.4. examines how producers have approached the plant-based met trend; chapter 5.5. and 5.6. analyzes the industry network relationships, first looking at the competitive forces, and then cooperation among industry actors.

6.1. PLANT-BASED MEAT AS A SURGING CONSUMPTION TREND

As the literature review suggested, the popularity of animal-free products have risen significantly. It is debatable whether companies or consumers started the trend; nevertheless, the Swedish plant-based meat market was influenced and inspired by various forces, from foreign markets (e.g., American, East-Asian) to culturally different cuisines (e.g., Indian) where culinary ideas and alternative protein forms emerged first and later were transported onto the Swedish market.

> *"We were cold-smoking water and oil, that's something that no one else is doing* [...] *we have seen it when we were out traveling and we thought oh, it could be something to have in Sweden."*

Drivers behind this trend were clustered under larger societal discourses which are increased consumer savviness, and connected to that environmental consciousness, health awareness and lastly animal cruelty. Nonetheless, some consumers and industry actors referred to plant-based meat as a transitionary trend where plant-based meat either (a) facilitates an easier change from traditional meat-based diet to plant-based diet as plant-based meat is not deemed necessary for vegetarian and

vegan cuisine where other protein-rich products come into place such as tofu, tempeh or legumes; or (b) trend that will be sooner or later replaced by lab-grown animal tissue meat as plant-based meat from this group of actors will never achieve the standard of animal meat.

> Consumer commentary
>
> *"Waiting for the day you have a vegan cheese* [not only meat] *and a little more fun stuff than egg-less mayo to have on everything! Good development yet, but there is room, and a growing market!"*
>
> Influencer responses
>
> *"Because this is a transition, and it's very important to realize that it's not going to be this 600-million-dollar business of meat that simply, overnight, is not going to dissipate."*

Therefore, some Swedish consumers are expecting a further future development of plant-based products, while proliferation of entrepreneurs, small to medium companies and established incumbents that are stepping into the market, implies the opportunistic behavior based on the identified trend and increased demand across various data points.

6.2. COMMERCIALIZATION OF PLANT-BASED MEAT

From an inspiration and idea of a plant-based meat product to a product launch, producers undertake various activities where multiple actors come into play. They are being approached differently depending on the operating business model, size of the enterprise and thus available network and resources.

Before deciding on a new activity (market entry, new product development, product innovations), some producers rely on a large amount of data points that are gathered through market research agencies in order to assess the potential and return on investment. These data include customer and shopper insights or industry reports that benchmark sales figures and competitor market shares.

> *"A main part of that process is of course to identify the demand for the new products, and for that we are using different sources of data.* [...] *Here we buy tailormade reports for-for- to discover or learn more about shopper trends."*

> "[...] *data is king, and you have all of these data from both customers but also global data from things that have been tested."*

These data are discussed and may be further expanded by additional market research undertaken independently by the companies that address the respective product in question. These producers are complementing the process with internally conducted primary research in forms of consumer surveys or focus groups, where these data come into a formalized decision-making process.

Some producers nevertheless rely more on their own market research. These data points are less structured. Such research includes product trials on culinary events, taste tests in an informal setting with follow-up questions, or articles that are shared by producers' network on social media and deemed interesting to explore further.

> *"Sometimes it's just friends and friends' friends. We take a group of people through our marketing department who find some different people, and we test our products and other products."*

These data come into play during various stages of the product development, from idea generation and conceptualization to prototyping and final product launch. After that, market data gathering process is repeated to monitor sales, validate targets and propose new product strategies, demonstrating the cyclical nature of these processes.

6.3. PLANT-BASED MEAT POSITIONING

Plant-based meat products have been on the Swedish market for several years and had the possibility to establish and position themselves in consumers' minds, as an entity of its own but also in comparison to other product categories through continuous visibility, product trials and product usage.

First category of material properties that consumers associate to plant-based meat are the product's material properties, namely taste, form, color, texture, use cases and lastly nutritional value together with health effects. These properties are evaluated based on how similar they are or behave compared to animal meat counterparts which are viewed as the natural benchmark owing to the established name of the category plant-based *meat*[8] and further advertising of these products as meat alternatives.

[8] In Swedish translated equivalents such as *växtbaserad kött*, *plantbaserat kott* or *vegoköttet*.

Consumer commentary

"They are super good!! Well-seasoned, great firm texture when I fried them!"

"I'm not a vegetarian / vegan either but you have to try this sausage! Awesome good!!! (tastes like sausage with meat)"

"Too bad it is so incredibly low in protein"

"Tested your plant beef twice. The one that should not be distinguishable from meat. Gaaaa. It tastes like sponge. Am a vegetarian, but that one is not edible."

Furthermore, some consumers inspect the ingredients in terms of their properties and health effects, but also where they have been sourced. Ingredient sourcing becomes a contentious issue that bridges onto another category of immaterial properties of plant-based products that are connected to environmental friendliness, sustainability and support of local production. The problematic of sustainability became integrally associated with the plant-based products and are a highly discussed issue where consumers on social media invite producers to discuss and justify their conduct and choices.

Consumer commentary

"You use bamboo fiber. Imported from where?"

"Soy from Europe and the USA seems good, but I think that you as an actor should also stand behind the Soy Dialogue, when your products are based on soy."

"Is it only Swedish raw materials in plant beef and Swedish soy in your products?"

"Coconut milk imported from Southeast Asia I do not think it sounds so environmentally friendly and sustainable"

Lastly, these immaterial properties in certain consumers may spill over to political issues. In such cases, plant-based meat products are viewed as tools of usually left-wing-associated agenda that is challenging the dominant social worldview which in current Swedish discourse indicate meat consumption. While some consumers do not view it this way while supporting the environmental and cruelty-free cause, consumers opposing the view reject the fundamental essence of plant-based products.

Consumer commentary

"Vegans are idiots. Let them take over Max so they can sit there and drink their [...] *soy soup with paper straws that become soft and fluffy. There are plenty of other places that are normal …"*

"The vegan trend is the biggest food scam of our time. Nothing natural can be vegan [...]"

"Vegan? With a taste of celery or what?"

6.4. PRODUCERS' MARKET APPROACHES

Many players have stepped into the market, although their motivation and market entry approach and reasoning may vastly differ. While market opportunity and profit-seeking play a role, these actors frame their conduct in different ways.

Plant-based producers were identified and categorized on two scales, where producers frame their initiative either as

(1) reactive to a current trend, or
(2) proactive trendsetting.

Producers closer to the former end of the spectrum view the plant-based meat market as the next strategic opportunity in order to diversify their product portfolio and meet this, comparatively to their other products, low but steadily increasing demand. These producers act based on previously materialized market ideas, in our case alternative proteins and plant-based meat. This approach is especially noticeable within companies that previously produced solely traditional meat products.

"[...] *as a company we're always interested in earning money, so if we can see that we are meeting a consumer demand for a new type of product category, we are interested and will be there."*

"[producer] *bought* [plant-based meat brand] *about 5-6 years ago, and we bought it as the trends were more vegan, so we had to come with more vegan products and it's not that easy for a "meaty" company."*

Such companies, especially incumbents, rely on their current complementary assets in terms of their production capacities, established business network or consumer brand positioning, where new product development is initiated based on opportunities that are within the reach, hence perceived closeness between the current products and plant-based products being under development. The plant-based market is perceived as an investment decision that bears certain risk and thus needs to be approached with tactfulness backed by appropriate data before full-fledge product development and commercialization.

> *"Part of the new product development process* […] *we need to go through the production capabilities, the profitability,* [...] *which brand we should use – a new brand or existing brand, and so forth."*

On the latter end of the spectrum are producers that have a strong vision and values underpinning their activities. They associate their market entry and conduct in the plant-based meat market with the Schumpeterian notion of entrepreneurial market disruption as challengers (plant-based meat) of the incumbents (animal meat) and the established market structures.

> *"Our vision is actually to remove all [animal-based products] from the food industry, so there won't be any living [animal] creatures involved in the industry at all. And that is like what we strive for, impossible to reach but that is our guiding star."*

These producers have strong personal affiliation towards the products and personal transformative experiences that convinced them to enter the Swedish market as there was a substantial gap for a particular consumer group. These producers believe they are part of such group, or even being their spokespeople who are the consumers' voice by taking the initiative to produce alternative products tailored to them.

> Interviewer*: "Why did you decide to develop plant-based meat products?"*
> Interviewee*: "Well, quite simple, because I don't eat meat and I wanted to have a good alternative to eat* […]*"*

Lastly, given the scale, there are also producers in-between the two ends which are medium to large producers that, while more prone to be demand and market trend driven, they are also characterized by prior established environmental agenda to which their product offering was adapted. To such companies, plant-based meat is a

logical business progression that is perceived as less risky due to the natural adherence to the values connected to environmental friendliness and sustainability.

> "[...] *the sustainability agenda is so integrated within the whole company. We have two people* [...] *who have sustainability in their working title.* [...] *when we went from one [plant-based product] to five, it was a big statement.*"

Depicted market approaches illustrate producers' reasoning behind operating on the plant-based meat market. While one approach has started as a reaction to a market trend represented by the intersection of various consumer movements and increased demand, the other approach highlights the contribution of personal experience and consumer affiliation as catalysts of entrepreneurial activity.

6.5. INDUSTRY COMPETITION

Sweden is the biggest market for meat substitutes in the Nordics and has the highest number of brands (Euromonitor, 2019) which was perpetuated in the findings from the responses of various companies. Especially small and mid-sized companies raised concern regarding the market entry of various larger multinational corporations such as Unilever or Nestlé. Swedish largest retailers ICA, Hemköp or Coop that connect producers with consumers require producers to reach certain production capacity for subsequent distribution to other regional stores. Furthermore, these retailers introduced plant-based products under their own private labels.

> "[...] *we are quite small so it's a little bit expensive and now ICA* [...] *want us to make some new products because they are making it [the same product] in their own brand, and they have the half of the price."*

This leads companies to protect their intellectual property such as the recipe or production process. While product development process is accompanied with various consumer tests and research, some of them such as taste tests are approached with greater caution as each producers' products possess different properties that attract various consumer segments.

> *"We do not want to specify the complete spice composition so as not to make it too easy for our competitors to copy our products."*

"[...] *we have realized how many players that are out there, so that we really need to deliver on our USP in order to be unique."*

Based on these findings, bigger producers have a more favorable position when entering the market as with their large production capacities, and thus lower the costs owing to economies of scales, together with an established market network are able to introduce plant-based products on the market with greater ease. Smaller players, before reaching bigger consumer mass, must resolve to smaller retailers or reach consumers through alternative channels.

6.6. INDUSTRY PARTNERSHIPS

Despite the increased competition over the last several years, due to the complex nature of the product in terms of complex product development, limited amount of research done, contentious consumer opinions and rigid retail distribution network, plant-based meat producers are at the same time reliant on several partners.

First group of partners comprises of retailers who are in power of various online and offline distribution channels. With up to four launch windows that allow producers to introduce new products, and they need to justify that they will meet future consumer demand. Producers that would like to successfully launch their products through these channels have to stay close to decision makers within these launch windows in order to uncover what kind of products they would deem as potentially profitable which is influenced by seasonality and forecasted consumer trends. Producers that introduce products in these channels bear a first-mover advantage as retailers would prefer to have a diverse assortment given the limited on-shelf space.

"We also talk a lot to these ICA and Coop, and the Axfood in Sweden, so we have to know that they are on [...]"

"They [ICA] *said 'no, we can't take it because there's some other actor that have this product and there's not room for us'. And then we still have this product, well the recipe and everything, and now they think it might be very successful, maybe we need more about this kind of product.* [...] *it's very important what the ICA and Coop are saying."*

Alternative distribution networks comprise of restaurants and food chains that are further working with plant-based meat in their on-menu recipes. Such partnerships

can be undertaken as a diversification strategy that complements traditional retail distribution, or solely distributing through these channels. In such cases, it is central to create a plant-based meat offer that meets the demand of consumers of these different restaurants. The hybrid model was undertaken by American-based companies such as Impossible Foods (2020) or Beyond Meat (2020).

> *"Impossible [Foods]* [...], *what happened was that they went to burger king, and burger king took all the volume. So, all the volume for these restaurants that had helped them, to help impossible build their brand."*

The next group of partners includes research bodies such as agencies and universities. These institutions conduct industry analyses and research in the fields of food science or health. They are at the forefront of knowledge production where these data are valuable in multiple organizational activities, including new product development, justification of product introduction, public affairs and stakeholder management. Several producers are engaged in industry associations that are collaboratively discussing and actively advocating for plant-based alternatives where these data points are necessary for further legitimizing the industry.

> *"We are involved in Livsmedelsverket [Swedish Food Agency]* [...] *We are working with a lot and we are also involved in universities and these kind of research projects* […]."

> *"We also invest in some of these projects. We are also involved in SLU [Swedish University of Agricultural Sciences], for the sourcing of different ingredients and so on."*

The last group of partners identified are influencers, where the interviewed participants view themselves both as spokespeople of the consumers as they are inspiring their audience towards a more plant-based diet and lifestyle through veganism, they are also the voice of the companies as they represent both a source of revenue and available content for their respective media channels, for example Instagram, blog, or printed magazine. These influencers thus showcase multiple plant-based brands and products to offer their audience wider perspective upon the market options while educating them on the matter of product use such as new recipe inspiration.

Influencer responses

"Most people are not either good at cooking or interested in cooking. So, you need to give people the tools to do this, but in such an easy way that it's almost fool proof. The recipes are a good way to do that."

"[...] *if there's no good vegan cheese, the availability is zero, but now that there's actually a decent vegan cheese, and I can show you where it is, then the availability is there. So that's what I'm trying to do for the consumers."*

"We want people both to get inspired by famous people because people never seem to get tired of that, but also producers or dieticians, talking about the environment, or climate or whatever, so all reasons to try plant-based food I'm trying to showcase [...]"

7. DISCUSSION

This section analyzes the empirical findings through the theoretical perspective of markets-as-practices where relevant theories from this approach were described in the theoretical framework. The analysis aims to illuminate the forces that take place on the market within the plant-based meat industry with a special focus on the power of consumers. The analysis is structured around the lifecycle of products: during the product development process, and after successful launch and commercialization of the product. Models of these two phases were constructed for easier understanding of the influence of market actors.

7.1. HOW IS CONSUMER SHAPING CONSTITUTED DURING THE PRODUCT DEVELOPMENT PROCESS?

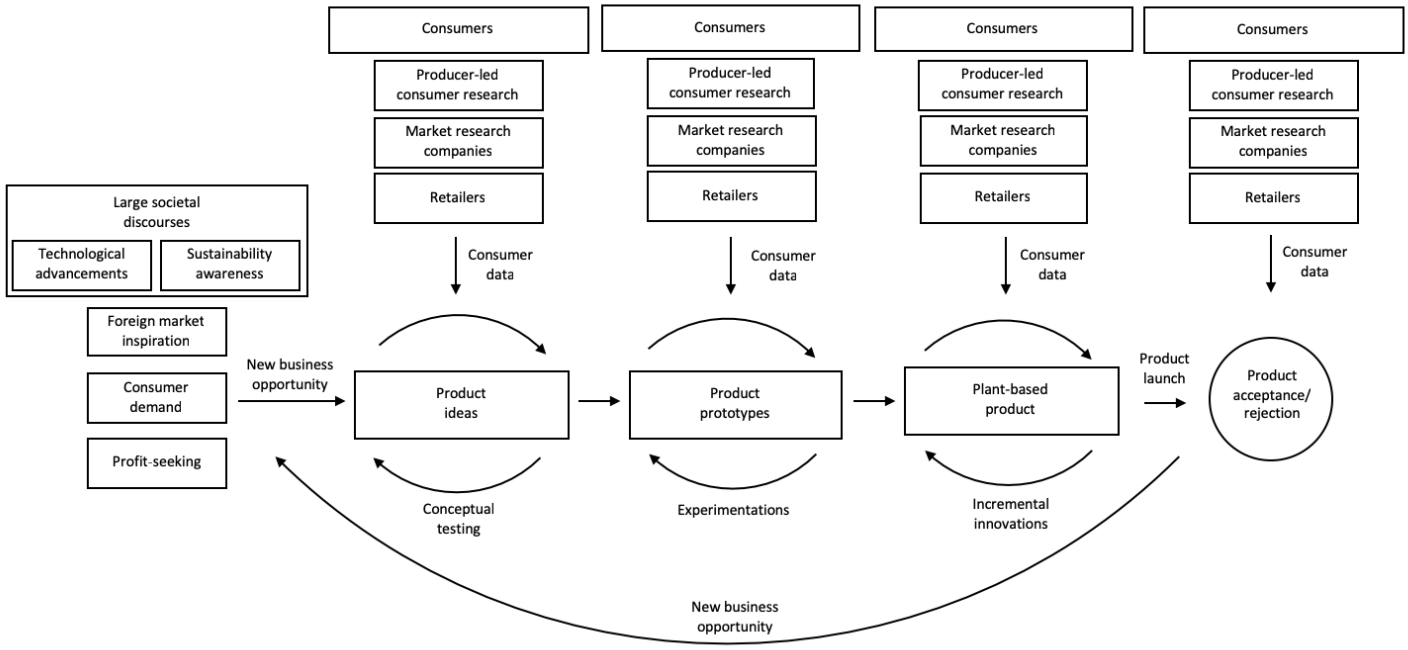

Figure 6. Product development process of plant-based meat. It is a cyclical process where consumers come into each stage through numerous actors.

7.1.1. MARKET TREND AS CONSUMER-LED MOVEMENT

The emergence of plant-based meat was possible due to larger societal movements such as advancements in communication and food technology, and higher environmental consciousness of the average consumer. Sustainability gained traction over the last decades amidst the general population which started to demand such responsibility and consciousness from companies as well. Such trend is visible through increased activism of consumers through boycotting or conscious buycotting of products, while communication technologies amplified voices of these consumers that previously would not have access to the airtime in traditional media.

From the other side, we may observe incumbents and entrepreneurs who identify these trends through data. These include increasing consumer demand in industry reports, shopper behavior changes in consumer insights or success of businesses on other markets. Businesses are thus exposed to consumer market practices that were translated into market representations in the forms of statistics and insights. These translated practices include both the exchange practices as consumer alter their shopping behavior and buying products that align with their changing worldview, and normative practices where consumers are disseminating scenarios of the ideal market.

Even though the trend at the beginning could be perceived as small or slow, such minor changes in representational practices open a new window for inventive entre- and intrapreneurs that are willing to capitalize on these, at first, market niches which creates a subsequent chain reaction due to consumers reacting to the new market offerings. These reactions are later captured and attract more businesses as the trend grows.

7.1.2. PRODUCT DEVELOPMENT STAGES AS NEGOTIATION ARENAS

Once a market opportunity is identified, producers undergo several stages of product development until the new product introduction and launch. First stage revolves around ideas where producers think about the potential products that could be introduced onto the market. The second stage involves the materialization of feasible ideas into prototypes that could become part of the product offering. Last stage

describes the situation where the plant-based meat product is essentially finished and ready to be launched through respective retailers.

During each of these stages, various negotiations come into play. Negotiations in this sense are identified as the reflexive and calculative activities of market actors where they attempt to affect established market rules, meaning they contemplate about a particular issue presented to them and use available market devices in order to make a decision.

Such negotiation process may be demonstrated in the first stage of product development, ideation. Producers create new theories regarding a potential product that may in the future change the current market establishment, but to make sure this idea is feasible they validate it with various data points and invite diverse stakeholders before making a calculated decision. These stakeholders include market research agencies, research institutions, retailers and consumers themselves where each will have a different opinion on the matter. Such discussions are nevertheless centered either around consumer market representations, thus secondary research such as consumer insights that back up the reasoning of these stakeholders, or around the responses of consumers themselves when conducting primary research. This negotiation process repeats at all the stages of product development until product launch. As described by Kjellberg, Helgesson (2007), creators of these market representations subconsciously become the spokespeople and representatives of respective customer groups and act as advocates for their interests.

A slightly different situation arises when the entrepreneur fully identifies themselves as part of the consumer group, such individuals consider themselves as the representative voice of the consumers. This finding was observed through several interviews where the producers took the proactive stance of trying out new recipes and inspiring themselves through other producers and markets in order to set a new trend on the market through the new products. The market and consumer potential are hence validated by the practices and opinions of a handful of individuals.

The subsequent section describes the final part of the model consisting of product launch and commercialization and demonstrates the repetitive nature of these processes.

7.2. HOW IS CONSUMER SHAPING MATERIALIZED AFTER THE PRODUCT LAUNCH?

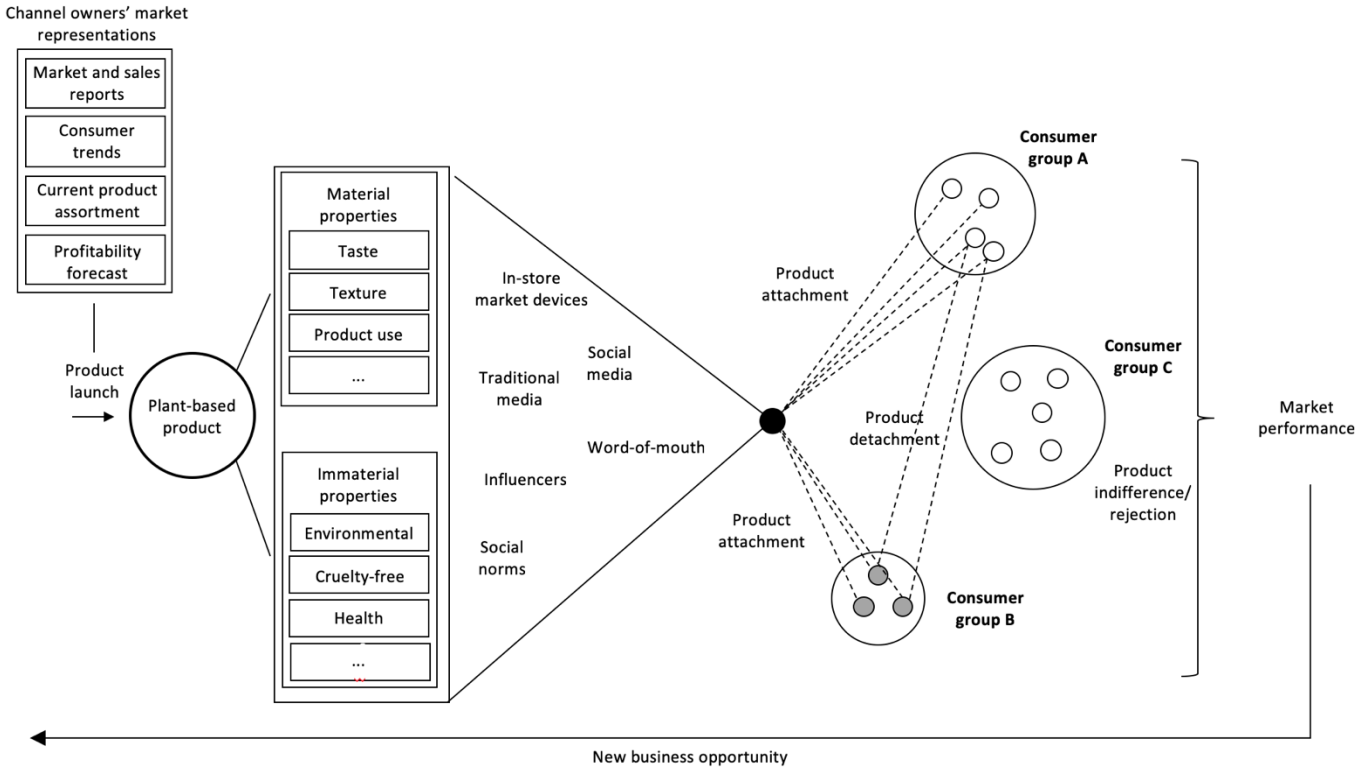

Figure 7. The process of launching a product and subsequent attachment, detachment, or indifference of consumers towards the launched product. Such process creates new market representations for future conduct.

7.2.1. RETAILERS AS KEY DECISION-MAKERS AND ENABLERS OF CONSUMER INVOLVEMENT

Once the producers establish all the properties of a product through multiple negotiation processes and deem it as ready to be commercialized, the channels through which producers could sell these products are limited: retailers (ICA, Coop, Axfood), online shops or restaurants. In order to connect the product to consumers, producers need to rationalize, legitimize and justify that the new plant-based meat product is going to create or meet the necessary demand, thus further negotiations take place.

Owners of these channels have the ability to approve the product and establish rules of the market (normative practices), in which case they enable shaping activities to

continue through the consumers' side by displaying these products to their current customers, who will in result be given the possibility to further engage in qualification of the plant-based product and further participate in determining its properties. On the other hand, if the product gets rejected, other products are introduced on the market and thus limit the shaping of plant-based meat.

These retailers, especially grocery stores and chains, have a profound effect of qualifying the products in terms of their in-store market devices, denoting shelve assortment and placement of plant-based products, that consequently shape the consumer positioning of such products. Consumers that would find plant-based meat next to animal meat products will perceive these products differently than if they were placed next to other plant-based products such as tofu.

7.2.2. CONSUMER CONTENTIONS AND CONSUMER ATTACHMENT AND DETACHMENT AS MARKET SHAPING MECHANISMS

The last part of the model discusses a plant-based product after a successful launch through the corresponding channels. Under the assumption that the product was successfully launched and commercialized, the product has been singularized and therefore its properties proposed are established. As Callon et al. (2002) argue, products are configured in two ways: material and immaterial. They are influenced by multiple forces such as influencers, social media, peer recommendations or overarching social norms. These two types of coexisting properties that were discussed in chapter 5 are the focal points of contentions and debates among consumers.

7.2.2.1. MATERIAL PRODUCT PROPERTIES

The material properties are often compared to the properties of animal meat that is viewed as the benchmark. That creates a conflict between consumers such as beginning flexitarians, who are actively seeking replacement for animal products in their dishes, and vegetarians or vegans, who do not necessarily miss or seek the taste of animal meat. To such plant-based products, they assign different properties and qualify it differently given their varying operant resources meaning the knowledge they approach the product with. The former group (e.g., beginning flexitarians) is

perhaps not as versed in plant-based cuisine and recipes, thus expect certain parts of a dish to take place, for instance carbs in form of rice or potatoes and proteins in form of meat. This group hence welcomes products that can be prepared the same or similar way as the product they were used to work with (meat). The knowledge of the latter (e.g., experienced vegans) is on the other hand more extensive, and they possess the knowledge of a diverse portfolio of recipes that does not follow a singular template. Their use, and therefore expectations, of the plant-based product thus vastly differs. Universal contentions that may arise among all consumer groups are the inability of plant-based meat to fully imitate these properties of conventional meat products. That qualifies the product as secondary in some groups of consumers.

7.2.2.2. IMMATERIAL PRODUCT PROPERTIES

The immaterial properties are another set of properties that cause contentions among consumers. Consumers that are more experienced within the product category and are thus consistent consumers are also savvier and more knowledgeable when it comes to different ingredients and sourcing of such ingredients used in the recipe, and subsequently their environmental impact or health effects. These factors may be questioned by the consumers when presented through market devices such as product packaging and invite producers for justification or clarification. In such case, consumers raise their concern and potentially state their preferred state. An example would be a consumer outraged by the use of soy products that were imported from a foreign distant country where farming these crops causes land degradation. They would rather like to see soy sourced from a local producer or producer that is confirmed to be environmentally more sustainable.

Those who are less acquainted with plant-based products come to question the ingredients and credibility of the sustainability statements, although form a different point of view. Taking the same example of sourcing soy from a foreign distant country, this group of consumers questions the sustainability of these alternatives compared to locally sourced animal products, where a Swedish-cultivated cow is more sensible than foreign soy. Both groups compare one frame to another frame, nevertheless the former questions the approach of assembling the plant-based product, while the latter questions the whole idea of plant-based alternatives.

7.2.2.3. PRODUCT ATTACHMENT AND DETACHMENT

The next step to product singularization is product attachment or detachment. Attachment of goods implies the acceptance of consumers of the singularized good and its properties, while detachment of goods occurs when the new offering is presented, and consumers rethink (re-qualify) the offerings that were offered to them and accepted in the past. These are the central competitive processes occurring from the markets-as-practices perspective.

In order for attachment to occur, the consumer must accept both the material and immaterial properties of the proposed good. They are further negotiated and affected through various actors and processes. As illustrated in the model, those might be in-store market devices (placement in a store), social media (public commentary on a Facebook, Instagram, Twitter, etc. post), traditional media (lifestyle magazines, TV news), social norms (more liberal social setting), word-of-mouth (peer recommendation), and lastly influencers (bloggers, YouTubers). These actors have the power to influence the qualification process by confirming or rejecting preconceived notions of consumers, educating them on the plant-based meat products in terms of their properties and use, or establishing expectations of the products in question.

Different consumers are more or less prone to become attached, depending on their individual experiences. This thesis proposes that consumers who identify with the flexitarian, pescatarian, vegetarian or vegan diet is more likely to be attached to a product, thus in the future prone to be detached from the same product once a new plant-based meat product is introduced from another producer (group A, B; as illustrated in figure 7). On the other hand, consumers who identify with omnivorous diet are more likely to reject the product configuration, either by ignoring it or going actively against it (group C; as illustrated in figure 7).

Consumers thus either accept or reject the proposed frame or singularization of goods (plant-based meat properties). This acceptance or rejection is projected in product sales where some consumers become habitual consumer. These sales are later captured by producers, retailers and market research agencies which creates a new market representation of market performance. This representation presents a new business opportunity to producers, entrepreneurs and other companies that are interested in the market development. From this point, the model goes back to the

beginning of figure 7, where the market processes repeat until a larger market disruption.

8. CONCLUSION

The following chapter emphasizes the conclusions of the thesis and addresses the fulfillment of answering the posed research questions. Furthermore, theoretical contributions, managerial implications and limitations of the study are presented and discussed. Lastly, proposed subjects for future research are delineated.

The introduction of plant-based meat products in the market is continuing and different players within the market are aiming to shape it in favorable ways. In the midst of it all stand the consumers, with the power to increase or stall the ongoing transition towards plant-based meals. As can be seen, the number of paths is manifold and the possibility for them to somewhat converge at the end is difficult to understand. Using the markets-as-practices theory in order to shed light on the current role of the consumer might increase the understanding as to how industry players can speed up this transition, and what key challenges lies ahead.

The primary research question that this study aimed to answer was *how do consumers shape the plant-based meat market?* Initially, a pre-study was conducted to identify the focal ways in which consumers engage with and around food. The key subprocesses in which consumer shaping was most apparent for the market of plant-based meat, namely *generating market representations, qualifying exchange objects* and *establishing market norms* were chosen as the focus areas for further study. The main study, consisting of qualitative company interviews as well as a nethnography, uncovered the ongoing practices in which consumers directly or indirectly influence both industry players, but also other consumers, and hence shape the market. By understanding the key influential forces that consumers stand for in the market for plant-based meat, the plurality of consumer views was uncovered. Hence, the study achieved its purpose to understand how consumers shape the market for plant-based meat, and further highlighted how consumers could potentially have a bigger impact.

As the thesis results show, consumers are in the product development stage involved rather formally and indirectly through market representations such as industry reports that aggregate consumer behavior to depict the market. They may get involved more directly when producers invite them for their internally conducted research; in such cases consumers may directly shape the inner configuration of the product. During the post-launch phase, consumers are able to shape the market more informally through questioning the product configuration and ultimately accepting

or rejecting it. This process leads to consumers purchasing or ignoring the product leading to a renewed market representation that may be acted upon by various industry players, from which point the shaping cycle repeats.

In conclusion, the results indicate that consumers have powers to shape the market through their actions that will be captured through market representation practices. These representations will be analyzed by companies that will opportunistically explore the trend and drive it further. That implies that consumers' everyday practices and actions which will be later aggregated into reports and insights have a profound effect on if new players enter the market and how companies will act on the market in the future, either abstaining from the trend or sustaining the trend.

8.1. THEORETICAL CONTRIBUTION

The theoretical contributions of this study are multifold. Firstly, the study provides an insightful case study, applying the market-as-practices perspective, where the relatively novel approach on the theory by Kjellberg, Harrison (2016) with focus on the role of consumer in shaping markets can bring depth to the analysis of markets in the making. By accounting for the user, the study illuminates on the ways in which consumers affect and collaborate with various actors across the market.

8.2. MANAGERIAL IMPLICATIONS

In more uncertain markets, companies should apply the effectual approach in their business practice, taking the initiative to stay close by directly communicating with consumer, not only understanding consumers through industry reports and co-create a value proposition that is certainly going to resonate with a specific group of consumers, as at the moment it is rather difficult to capture a larger share of the market given the contentiousness of plant-based meat. This argument could be further strengthened by the fact that product attachment and detachment happen continuously which calls for higher emphasis of both understanding these changes and adjusting the offerings in a timely manner based on these competitive forces.

8.3. LIMITATIONS

The present study is not without limitations and addressing the most important limitations sheds light on the potential generalizability of the study. Firstly, as the nature of the study is exploratory, it is not possible generalize the findings from the study of the plant-based meat market to the market for other products, or the food industry in general. While the results provide important insights, additional research would have to be conducted to understand differences between types of products, and especially different types of consumer shaping forces in these respective product categories. Secondly, the geographical scope of the study was Sweden. While this provides a coherent analysis and increased accuracy, it is important to understand that other geographical markets may use processes differently. Hence, the study would have to be replicated to capture regional consumer views, company practices and societal norms. Lastly, the choice of participating interviewees as well as forums for digital ethnography must be addressed. While the firms were approached based on their relative market shares, while ensuring a coverage of firms of different sizes and focus areas, other results could have been achieved by including other companies, products or categories. Also, including a wider array of interviewees could have resulted in additional findings. The forum for nethnography and the limited time frame investigated provides an additional limitation for the study. By investigating additional forums, or applying a more interactive methodology, richer findings in terms of consumer motivations and views could have been achieved.

8.4. FUTURE RESEARCH

The current study opens up for future research in several ways. As the current study explores the practices in which user shaping takes place in the market for plant-based meat, the study brings forward the applicability of the theoretical framework. Hence, the current study can inspire to do a similar study of either greater scope or to study a different market in a similar manner.

Also, studying the market for plant-based meat at an early stage of the market formation can provide an inspiration for further longitudinal studies that aim to investigate the shifting roles of consumers in shaping the market. Such study could also be conducted by extending the time frame of the nethnography.

The empirical findings also propose a difference in approaches between companies of varying sizes and focus aside of plant-based meat, which opens for further studies on differences between these companies. Also, a greater understanding of the role of retailers and their practices could provide important insights into the ability for users to shape the market for plant-based meat.

Lastly, the findings have only touched upon how consumers perceive the plant-based meat market. Future studies should therefore aim to uncover more depth in how consumers reason around different product aspects and such implications for the market.

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10. LIST OF APPENDICES

Appendix 1: List of brands for meat substitutes

The companies below were found during the preparation of the pre-study and are not necessarily the same companies that were interviewed for the main study.

- Anamma
- Astrid och Aporna
- Beyond Meat
- Coop
- Ekko Gourmet
- Felix
- Findus
- Garant
- Hälsans Kök
- Hooked Seafood
- ICA
- ICA Gott Liv
- Kung Markatta
- Mifú
- Oumph!
- Peas of Heaven
- Pärsons
- Quorn
- Risenta
- TZAY
- Urtekram
- Valio
- Veggi
- VegMe

Appendix 2: Sample interview guide and subprocesses covered

	Question	Subprocess
1.	What is your role in [company]?	*N/A - Introduction*
2.	What does [company] do?	
3.	Why did [company] decide to develop [plant-based meat product(s)]?	*Qualifying exchange objects*
4.	Can you walk us through the [plant-based meat product(s)] development process until now [step-by-step until how the product is commercialized today]?	
5.	How were consumers involved in this [plant-based meat product] development process?	*Qualifying exchange objects & Generating market representations*
6.	How have you conducted market research in the past?	*Generating market representations*
7.	How was this [market research process] translated into your strategy?	
8.	How have you previously been involved in public debate regarding PBM?	*Establishing market norms*
9.	What is [company] vision for [company's plant-based meat product(s)]?	
10.	What has [company] done to fulfill this vision?	
11.	What are believed to be the biggest difficulties in achieving this vision?	*Establishing market norms & Generating market representations*

Appendix 3: List of interviewees

Interviewee	Company Role	Brand size/company type	Date	Brand orientation	Location
1.	Head of Business Development and Consumer Insights	Medium	October 28, 2020	Meat focused	Sweden
2.	Product Development Manager	Small	October 29, 2020	Plant-based	Sweden
3.	CEO/Founder	Start-up	October 29, 2020	Plant-based	Sweden
4.	Gastronomic Developer	Large	November 5, 2020	Plant-based	Sweden
5.	CEO/Founder	Start-up	November 10, 2020	Plant-based	Austria
6.	Head of Innovation	Small	November 11, 2020	Meat focused	Sweden
7.	Founder	Medium	November 11, 2020	Plant-based	Sweden
8.	Product Developer	Large	November 14, 2020	Plant-based	Sweden
9.	Influencer	N/A	November 16, 2020	Plant-based	Sweden
10.	Influencer	N/A	November 16, 2020	Plant-based	Sweden
11.	Marketing Manager	Medium	November 17, 2020	Meat focused	Sweden
12.	Product Development Manager	Large	November 24, 2020	Plant-based	Austria
13.	Brand Manager	Large	November 25, 2020	Plant-based	Sweden
14.	Innovation Manager	Large	December 1, 2020	Plant-based	N/A