

Got Milk?

Sustainability transitions in culturally embedded institutions

Ludwig Bengtsson Sonesson

Abstract

How to sustainably feed the world amounts to one of our biggest contemporary challenges. In Sweden, the environmental footprint of the dairy industry has caused a lively debate which culminated in a law-suit between LRF Mjölök and Oatly over the use of marketing phrases such as “Wow No Cow” and “No Soy. No Milk. No Badness”. Even though Oatly lost, their development was not hampered; thus, this thesis attempts to understand why that is. To accomplish this, a theoretical framework is created based on transition theory and institutional theory which explains how milk as a technological institution has become embedded in Swedish society. A discourse analysis of material published by LRF Mjölök and Oatly subsequently shows that sustainability discourses and a changed organizational landscape have put pressure on the dairy industry. This has opened a window of opportunity for change and by mimicking the central themes of the discourse; sustainability, health and nation, Oatly creates a competing narrative, the power of which is explained by its interdiscursivity and intertextuality.

Key words: Transition Theory, Institutionalization, Oatly, Milk, LRF Mjölök
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1 Introduction

Today, societies across the globe face major ecological, economic and social challenges caused by climate change. For the human population to continue to prosper, these challenges must be resolved and societies must move towards a more sustainable configuration. Essential to this transition is the development of sustainable technologies, which will require changes to both the technologies themselves, but also to the societal structures which currently reinforce polluting behavior. Technology is highly political, the technological choices made by consumers, industries and nations are political statements which project values and have implications for a global population.

It is therefore imperative that the social sciences, political science in particular, understands how technological transitions occur, something that until recently has been largely overlooked in the literature. For the past twenty years, scholars from innovation studies, evolutionary economics, sociology and political science have developed the concept of transition theory to explain how technological transitions occur. According to the theory, transitions occur when technological novelties gain momentum in protective spaces, in the literature called niches, and then challenge the incumbent polluting regime and establish a new, sustainable regime to replace it. However, due to the nature of radical innovations as unstable and risky, their development is often an uphill battle since change within a technological system tends to be incremental and follow the path set out by the dominant structure, henceforth referred to as the incumbent regime (Smith et al. 2010, p. 440). For example, marginal improvements in the fuel efficiency of cars is easier to implement than switching to a fully electric vehicle fleet since the structure of the system favors the incumbent regime, here traditional car manufacturers, and not the technological nice, here electric car manufacturers.

This in turn leads to the normative issue of how to facilitate the development of such sustainable alternatives and prevent lock-in and path-dependence in polluting industries. To address these issues on a policy level, it is crucial to understand the complexities of socio-technical systems themselves. Technologies do not develop in a vacuum where rationality prevails, their development is acutely dependent on social structures and norms. In some cases, technology is also the catalyst for societal change and subsequently impacts the societal structures that created them. This dynamic interplay between material and social structures is often evident in the narratives that surround technologies, the stories we tell in support of or in opposition to technologies affect their rise and fall.

However, all stories are not created equal. If a story is reiterated throughout societal structures, over time it gains strength and conflicting stories are to a large extent seen as alien. And it is through language that these stories are told which in

turn construct the reality of their senders and receivers (Berger & Luckmann, 1991). It is in understanding how these stories affect structure that political science plays a vital role and can contribute to the literature on technological transitions. By using concepts from institutional theory, the way these stories are embedded in societal structures can be better understood and through discourse analysis, the subsequent uprooting of those structures can be described.

In this thesis, the focus will be on a technological system with deep cultural ties and a powerful story, Swedish Dairy, and how recent events have come to question the status of traditional industrialized dairy farming as a dominant practice.

1.1 The lawsuit

If one travelled back in time seventy years, no one would believe that cows would go from being the poster-girls of picturesque agriculture to being in the controversial position they are now. More and more research shows the adverse effect of cattle on the global climate and the debate concerning the be-or-not-to-be of the meat and dairy industry has intensified, what we eat and how it is produced have become increasingly political (Vaughan 2013).

In Sweden, these tensions have culminated in what is most appropriately described as a war of words between the Swedish dairy industry and its opponents. The biggest battle yet has been between LRF Mjölkk, the industry organization that represents Swedish dairy producers, and Oatly, a producer of oat-based dairy alternatives. On Oatly's packaging you could often read provocative statements such as "Wow no cow" and "No Milk. No Soy. No Badness" which were accompanied by texts describing the environmental impacts of dairy while promoting their own products. This did not sit well with the dairy industry, who subsequently sued Oatly over the use of slogans such as the ones previously mentioned in addition to any statements which give the impression that dairy products are bad for humans (Marknadsdomstolen 2015: C 23/14). Oatly lost the court case and several of their slogans were banned (Kvist 2015). But in a larger war, this was but one battle; what it did do was give the parties involved an arena in which to articulate their differences.

Although Oatly lost in court, the conflict rather boosted their development; for a political scientist, this continued success is puzzling. A historically and culturally embedded dominant actor battles a radical innovation and wins, yet the niche continues to develop and prosper. While the discipline of political science is adept at explaining inertia and the status quo maintained by the actors in power, it has trouble explaining why and when that status quo is toppled (Lowndes 2010, p. 74). On the other hand, transition theory has received critique for its inability to adequately operationalize the regime concept; previous research has failed to describe the complexity and cohesion of socio-technical regimes which could

provide meaningful insight into how they fall and the dynamics of transition (Fuenschilling & Truffer 2014, p. 775).

By combining insights from both disciplines, this thesis seeks to amend these shortcomings and explain the dynamics of the system in which both the dairy industry and Oatly operate.

1.2 Previous Research

The cultural importance of dairy in Swedish society was examined extensively in Håkan Jönsson's 2005 dissertation *Mjölk, en kulturanalys av mejeridiskens nya ekonomi*. It is an excellent description of the historical embeddedness of dairy in Sweden and its ability to adapt to changing cultural patterns but fails to address the environmental pressures currently facing it. By now, it is also quite dated which justifies an updated look at the industry.

The intersection between institutional theory and transition theory was elaborated upon by Fuenschilling & Truffer in their analysis of Australian water management (2014). This thesis will build upon their work in operationalizing regime structure as institutionalization by further focusing on the pressures which cause deinstitutionalization and how these affect discourse.

There have been several studies of Oatly's marketing, although only on a bachelor thesis level. Bergholm & Knape (2015) focused on the rhetoric of the marketing used on Oatly's packaging and Blomqvist & Ekberg (2016) examined how the conflict between Oatly and LRF Mjölk impacted Oatly's brand image. However, while these texts have similar subject matter they limit themselves to the discipline of communication and fail to analyze the discursive conflict's impact on broader societal and political structures.

1.3 Aim and Research Question

Thus, the aim of this thesis is to expand the scope of transition theory by adding elements from institutional theory to its toolkit. By exploring how incumbents and niches act and react to discursive conflict, this thesis will aid in deconstructing the 'monolithic' description of regimes (Smith et al. 2005). By applying it to the Swedish oat-based drink niche and the corresponding socio-technical system of dairy-farming, new empirical data is contributed, something that the field is in dire need of (Smith et al. 2010). This will be done in two parts;

1. The structuration of the socio-technical system of Swedish dairy-farming will be described by measuring the degree to which certain structures and discourses are institutionalized.

2. The Swedish discourse on dairy will be deconstructed and analyzed in the context of the lawsuit between LRF Mjök and Oatly.

By doing this, the thesis will answer the following research question:

How can we understand the development of oat-based dairy alternatives in the context of the discursive conflict between LRF Mjök and Oatly?

1.4 Disposition

Chapter two will focus on describing important aspects of transition theory (see 2.1), institutional theory (see 2.2) and discourse analysis (see 2.3). Chapter three will describe the methods used to answer our research question and address any potential issue of validity or reliability in the analysis. In chapter four, the socio-technical system of dairy-farming will be described by a multi-level analysis (see 4.1) and then the discursive space will be constructed and analyzed (see 4.2). In chapter five the results will be discussed and put in a broader societal perspective. Chapter six concludes the thesis, summarizing its findings and proposing further research topics.

2 Theoretical Framework

2.1 Socio-technical transitions

To gain a broad perspective on the transformation of the Swedish dairy industry, this thesis will utilize the multi-level perspective on socio-technical transitions as an analytical heuristic. In this context, transitions are understood as a shift in how societal functions like mobility, energy generation or food production are provided (Geels 2002, p. 1257). The technological transition studied in this thesis deals with how a nutritious liquid, traditionally milk, should be provided.

The theory posits that the structures which govern these transitions can be categorized into three levels; landscapes, regimes and niches (Geels & Schot 2007, Geels 2002). These levels are nested, meaning that regimes are embedded in the overarching landscape and the niches within the regimes which in turn means that they are internally dependent on each other (Geels 2002).

The core idea is that radical innovations (ideas and solutions that are fundamentally different from those of the incumbent regime (Dewar 1986)), form in niches which serve as protective spaces for the development of the innovation. Protective spaces should be understood as structures such as subsidies or changed consumption patterns which shield the innovation from regime pressures (Fuenfschilling & Truffer 2014, p. 775). By themselves, radical innovations will have a hard time gaining wide-spread acceptance since changes to the regime tend to be 'incremental and path-dependent' due to the high alignment of regime structures (Smith et al. 2010, p. 440). But if internal or external pressures, often stemming from the political landscape, cause a destabilization of the regime, a window of opportunity can appear, allowing radical novelties to break through and establish a new regime (Geels 2004, p. 914). These landscape forces are defined as slow-changing structures such as cultural values, ideologies or even climate change (Fuenfschilling & Truffer 2014, p. 773).

Early iterations of the multi-level perspective focused mainly on the production side of technological systems, neglecting users and the diffusion of technologies into broader society (Geels 2004, p. 900). But since then, scholars have expanded the scope of analysis, arguing that transitions occur through a co-evolution of both material and social structures (Fuenfschilling & Truffer 2014, p. 773).

2.2 Institutionalization

Traditional institutionalist views used to dominate political science and the scope of analysis was limited to government structures and legal frameworks (Lowndes 2010, p. 60). However, institutions have come back in style and the term ‘institution’ have come to refer to ‘stable, recurring patterns of behavior’ (Goodin 1998, p. 22) instead of political organizations (Lowndes 2010, p. 60). By embodying frames of meaning institutions provide narratives that are used to ‘explain, deliberate or legitimize political action’ (Lowndes 2010, p. 77). New institutionalists have also expanded the units of analysis from individual organizations to organizational fields which are defined by DiMaggio and Powell as “those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services and products” (1983, p. 148). It is within these organizational fields that institutions are created, reinforced and transformed. In this thesis, the unit of analysis will be the organizational field of dairy-farming which according to the previous definition also includes organizations that produce similar services, in this case Oatly.

How participants in the organizational field are guided by the stories mentioned in the introduction can be aptly described by the concept of field logics. They are defined as ‘shared conceptual frameworks that provide guidelines for the behavior of field participants’ (Scott 2014, p. 225) or more precisely as ‘socially constructed, historical patterns of cultural symbols and material practices, (..), by which individuals and organizations provide meaning to their daily activity, organize time and space, and reproduce their lives and experiences’ (Thornton & Ocasio 2008, p. 101). A certain organizational field can contain several, competing field logics and it is the struggle over which logic should guide regulation and structure behavior which is central to most conflicts within the field (Friedland & Alford 1991, p. 256).

Measuring how *institutionalized* the competing logics in a specific field are allow researchers to determine the structure of the field. In transition theory, the boundaries between niches and regimes are measured by their degree of structuration, or their potential to influence actors (Fuenfschilling & Truffer 2014, p. 776). Furthermore, theoretical work on institutions have shown that the two processes, institutionalization and structuration, can be seen as one and the same and the terms used interchangeably (Fuenfschilling & Truffer 2014, p.777). This means that by measuring field institutionalization, the structure of the field (i.e. niches and incumbent regimes) can be identified. Seeing as one of the most prevalent criticisms against transition theory has been the lack of operationalization of the concept of structuration, this is a step in the right direction (Fuenfschilling & Truffer 2014, p.777).

To accomplish this, Fuenfschilling & Truffer defines a high degree of institutionalization of a structure as indicated by the following factors; “*the scale and scope of diffusion* (e.g. use or implementation), *duration of existence* (e.g. path dependency, historical embedding), *invulnerability to social intervention* (e.g. resistance regarding innovations or counter movements), *starkness* (e.g. low dissent and controversy) or *coherence* (e.g. embeddedness in an institutional framework, good match with surrounding structures)” (2014, p. 775).

Furthermore, the process of institutionalization is characterized by three phases outlined in figure 1.

Phase	Definition	Indicators
<i>Habitualization</i>	An innovation is created by a small number of actors, action is largely uncoordinated.	Few actors, no consensus or shared knowledge base.
<i>Objectification</i>	There is consensus among decision makers concerning the value of the structure, followed by extensive adoption by different actors.	Problem and solution framing, theorizing, making alliances, mobilizing resources, heterogeneous actors and high discourse.
<i>Sedimentation</i>	Complete spread of structures across appropriate actors, survival across generations and has experienced historical continuity.	Low amount of discourse, functionality is not questioned, failures are rare, actors have vested interests.

Figure 1 Adapted from Fuentschilling & Truffer 2014; Tolbert & Zucker 1996

The act of *theorizing* warrants a more in depth explanation, in the literature it is defined as “the development and specification of abstract categories, and the formulation of patterned relationships such as chains of cause and effect” (Strang & Mayer 1993, p. 492). Thus, theorizing can be stood as the justification of why and how the innovation is effective (Scott 2014, p. 148). Furthermore, sedimentation should not be understood as a permanent state, if the structure is questioned it might have to *re-theorize* in order to maintain its status.

2.2.1 Deinstitutionalization

While the previous section focused on the structuration or institutionalization of field logics, institutional theory can also contribute to the understanding of *deinstitutionalization*. While incumbents are by nature characterized by inertia, the persistence of their beliefs and practices cannot be presumed (Scott 2014, p. 166).

The literature on transition theory cites the ‘political landscape’ as the source of pressures on the regime; be it from increased awareness of climate change or the Fukushima-accident, changes in deep cultural structure influence the incumbent regime. While the literature gives many examples, as with the structuration of the regime, there is a lack of operationalization and categorization. By drawing on the literature on deinstitutionalization, this thesis will attempt to amend that.

Pressures on the regime can be categorized as either *functional*, *political* or *social* (Oliver 1992). *Functional pressures* are considerations that “raise doubts

about the instrumental value of an institutionalized practice”, whereby it is called into question whether the practice provides any value beyond its technical requirements (Oliver 1992, p. 571). *Political pressures* question the essential utility or legitimacy of the practice itself, often stemming from an increase in political constituents who oppose the status quo (Oliver 1992, p. 568). Lastly, *social pressures* can be described as the ‘fragmentation of normative consensus’, often stemming from a change in organizational membership or the structure of the organizational environment (Scott 2014, p. 169; Oliver 1992, p. 575).

By creating a heuristic through which landscape pressures can be categorized, the way they affect the system can be more accurately described. It is possible that pressures create different responses depending on their character and putting them all in the same category creates an over-simplified model of transitions.

2.3 Critical Discourse Analysis

After having established a framework that describes how certain ideas and narratives become common-place and institutionalized, the question becomes how to measure it.

The social constructionist idea which posits that reality is constructed and can't be objectively measured is central to institutional theory. Furthermore, language is a crucial tool used by actors in constructing that reality (Berger & Luckmann 1991). In their seminal work on the relationship between discourse and institutions, Phillips et al. propose that institutions can be understood as ‘products of the discursive activity that influence actors’ and that ‘language is fundamental to institutionalization’ (2004, p. 635). The meaning of ‘discourse’ and ‘discourse analysis’ is different depending on which literature you consult; in this thesis, discourse is defined as “a particular way of talking and understanding the world” (Jørgensen & Phillips 2002, p. 11) which “‘rules in’ certain ways of talking about a topic, defining an acceptable and intelligible way to talk, write or conduct oneself” and also “‘rules out’, limits and restricts other ways of talking, of conducting ourselves in relation to the topic or constructing knowledge about it” (Hall 2001, p. 72). Furthermore, Barthes’ notion that people are ‘both masters and slaves of language’ is central to the idea of discourses as always being the subject of some degree of struggle which means that actors have the option to influence them through the production of texts (Jørgensen & Phillips 2002, p. 17 & 26; Phillips et al. 2004, p. 644).

However, texts cannot be examined in isolation since it is only through discursive and social practice that they embody meaning (Jørgensen & Phillips 2002). Their relation to other texts, their *intertextuality*, contribute to their ability to influence discourse and their relation to other discourses, their *interdiscursivity*, contribute to the legitimacy and meaning of the text (Phillips et al. 2004, p. 644). Furthermore, creative discursive practices, when different orders of discourse are combined into a communicative event, can be seen as an impetus for social change (Jørgensen & Phillips 2002, p. 67). This, Fairclough posits, is contrasted

by the reproduction of discourses where no new elements are added and the discursive space remains unchanged (Jørgensen & Phillips 2002, p. 15).

Two grammatical tendencies will prove especially important in the analysis; transitivity and modality. Jørgensen & Phillips define transitivity as “how events and processes are connected (or not connected) with subjects and objects” (2002, p. 80) and modality as “the speaker’s degree of affinity with or affiliation to her or his statement” (2002, p. 80). By analyzing how different actors describe for instance milk, cows or oats it is possible to discern what consequences this has for their construction of knowledge and social relations (Jørgensen & Phillips 2002, p. 80).

2.4 Towards an analytical framework

To conclude this chapter, the three theoretical strands used in the thesis will be connected. It is through the multi-level perspective on technological transitions that the socio-technical system is organized and categorized. The core idea, presented in 2.1, where a co-evolution of material and social structures results in a transition given the presence of a window of opportunity is the mechanism through which transitions are understood.

It would be easy to assume the structure of the system in question, instinctively one would recognize the dairy industry as the incumbent regime and the alternatives to it as niches. However, the outcome of the lawsuit signals that the system is more complex and that such a simplistic assumption is inadequate and might be misrepresentative. This is where the concepts of institutionalization and deinstitutionalization provides tools for operationalizing the borders between regimes and niches to provide a more nuanced description of the system.

Finally, discourse analysis is the method by which the institutional change will be traced. Specifically, Fairclough’s notion of intertextuality as a sign of social change will guide the analysis and by identifying the connections between different discourses and how they are used to provide meaning to behavior, signs of change are identified.

3 Methods and Material

3.1 Methods

This essay will use two modes of analysis to answer the research question. First, a broader analysis of the socio-technical system in which both the dairy industry and the dairy-substitute industry operate will be conducted. Specifically, signs of institutionalization or de-institutionalization will be identified through an operationalization based on the contributing factors previously stated (see section 2.2). The analysis will specifically focus on factors identified by previous research on institutionalization, namely changes in regulation, technology, actor structure, consumer behavior and policy (Fuenfschilling & Truffer 2014, p. 777). This first step is essential in providing context for the subsequent discourse analysis.

Secondly, a discourse analysis will be conducted to construct the discursive space, identify the prevalence of the field logics and to which degree they are institutionalized. Based on previous work on field logics, institutionalization as a variable is assumed to increase with “scale and scope of diffusion, duration of existence, starkness, invulnerability to social intervention, internal coherence and embeddedness” (Fuenfschilling & Truffer 2014, p. 777). The analysis will be based on Fairclough’s three-dimensional model; firstly, the text itself will be examined, secondly, the discursive practice in which it is included and thirdly, the social practice it embodies (Jørgensen & Phillips 2002, p. 69). To analyze the material, a coding scheme was developed based on the previous section which categorized the material into three themes; *sustainability*, *health* and *nation*. Appendix 1 provides an example of how the texts were categorized.

3.1.1 Methodological considerations

In taking a social constructionist approach, as is necessary when working with discourse analysis, it is essential to acknowledge that the research produced is itself affected by discourse and in turn affects it (Jørgensen & Phillips 2002, p. 30). It is in the nature of both institutionalized logics and dominant discourses to become taken for granted, which means that the researcher might not see that the discourses in fact could have been different (Jørgensen & Phillips 2002, p. 28). In contrast to positivist approaches, knowledge is here seen as *productive* and not a reflection of an objective reality. This means that the empiricist ideal of

intersubjectivity, that the same results will be achieved by another researcher, is in principal unattainable (Bergström & Boreus 2012, p. 43). However, by reflexively analyzing the production of knowledge itself in addition to supporting conclusions with quotes and references to the material, the transparency and reliability of the research is improved (Jørgensen & Phillips 2002, p. 110; Bergström & Boreus 2012, p. 43).

Additionally, it should be noted that the original language of the source material is predominantly Swedish and that any translation made by the author will inevitably alter the use of language and will therefore be avoided as much as possible. It is also important to acknowledge that the studied topic is in no way a closed chapter which impacts the researcher's ability to make decisive conclusions since the final outcome is unknown. However, since sustainable transitions are a relatively new phenomenon and due to their implications for the future of human wellbeing, it seems out of the question for researchers to wait and see whether polluting structures persist or perish before studying them.

3.2 Material

The two studies warrant two different sets of material. The analysis of the dairy industry uses historical accounts such as newspaper articles and industry reports as its main source material in addition to Jönsson's dissertation. Wherever possible, Scott's four criteria for utilizing a document were followed; ensuring its *authenticity* (whether it is genuine), *credibility* (whether it is accurate), *representativeness* (whether it is typical for the situation) and *meaning* (understanding the political context within which it was produced) (Vromen 2010, p. 262). However, as Vromen points out, *accessibility* is an issue when conducting historical research, especially when studying events that occurred before digitalization (Vromen 2010, p. 262.). It should also be noted that the source of information about an industry is often the industry itself, as is the case with some of the information on both Oatly and the dairy industry; to ensure its credibility several sources were consulted to corroborate the information.

The material used in the discourse analysis was chosen to aptly construct the discursive conflict between LRF Mjölök and Oatly. The point of view of LRF Mjölök was reflected in material published on their campaign site *mjolk.se*, which collects facts and information related to milk, and educational material produced by LRF Mjölök intended for middle school children. Promotional material from the organization *Mjlkpropagandan* will also be analyzed. The competing discourse was constructed based on a full-page advertisement from Oatly which was published the day before the end of the trial in addition to material published on their website *oatly.com*.

As for the justification of the case itself, to study the effects of a discursive conflict, it is necessary to ensure that the studied material actually affected the discourse, in the words of Taylor and Van Every; "A text that is not read, cited or used, is not yet a text" (2000, p. 92). Uncontroversial actions with limited

consequences for the actors involved are unlikely to affect discourse since they don't require actors to go through a process of *sensemaking* (Phillips et al. 2004, p. 640). As further analysis will show, the lawsuit was a culmination of long-term tensions between the regime and the niche, the outcomes of which would have major implications for the legitimacy of the actors involved. Therefore, the texts produced in conjunction with the lawsuit hold substantial discursive power and their examination is justified (Phillips et al. 2004, p. 642).

4 Results

4.1 Historical analysis of the Swedish Dairy Industry

4.1.1 The Glory Days of Dairy

Institutionalized organizational behaviors have been defined as stable, repetitive and enduring activities that become 'infused with value beyond the technical requirements of the task at hand' (Selznick 1957, p. 17).

Dairy farming has a long history in Sweden. Traditionally, the consumption of milk had been considered uneconomical and unhealthy due to its ability to transfer bacterial diseases such as tuberculosis; in common tongue, it was even referred to as “the white poison” (Jönsson 2005, p. 30). But two important technological advances altered the image and development of dairy-farming, the cream-milk separator and pasteurization (Jönsson 2005, p. 27; Isaksson 2013). The ability to easily separate cream from milk and increased possibilities for transportation allowed dairy farmers to sell fresh milk to the growing Swedish cities. But the dairy revolution cannot be explained solely by technological advances. New research on the importance of vitamins and proteins for human health in the early 1900s contributed to the growth of the dairy industry as milk was an easy solution to the problem of malnutrition in poorer communities (Jönsson 2005).

The conception of the Dairy industry was not only driven by technological advances but also by social movements such as the establishment of the organization *Mjölkkpropagandan* which produced informational leaflets, films and organized special ‘milk-themed’ events which all celebrated the importance of dairy for a healthier society (Jönsson 2005, p. 32). They focused heavily on schools, a tradition that has endured in the Swedish dairy industry, by organizing special lessons on the importance of milk and establishing free milk as the beverage of choice during school lunches (Jönsson 2005, p. 33). The organization’s membership was diverse and included politicians, farmers and doctors and was funded in large part by farmers but also by government (Jönsson 2005, p. 34.). At the time, this fact was uncontroversial since milk fit the surrounding political structures propagated by the two dominant political parties; the farmer’s federation and the social democratic party. The farmers saw milk as an agrarian business that could help a struggling farming sector while the social democrats supported the idea of milk as an integral part of their mission to build a welfare state and empower poorer communities (Jönsson 2005, p. 35). This shows how dairy became increasingly institutionalized by mobilizing resources from several societal sectors, forging alliances with heterogeneous actors and framing dairy as the solution to societal problems (see schematic in section 2.3).

In the wake of the great depression and the economic turmoil that followed, Swedish dairy farmers sought stability and pushed through a controversial proposal which meant that the market would be regulated by a national dairy organization, Svenska Mejeriernas Riksförbund (which changed its name in 1998 to Svensk Mjök and again in 2013 to LRF Mjök) (Isaksson 2013, p. 7; Jönsson 2005, p. 29). In addition, SMR was also given a monopoly on the export of butter which prompted almost all Swedish dairies to join the organization (Jönsson 2005, p. 30). This unusually close relationship between the state and the industry organization meant that future dairy-policy was developed in cooperation between the state and the dairy-industry in an almost corporative manner (Jönsson 2006). For forty years, this system endured and the dairy institution reached sedimentation, discourse was low and diffusion was high which means that, according to our model, structuration was high and that farm-driven dairy could be seen as the incumbent regime.

4.1.2 From protectionism to international markets

While Swedish dairy policy up until now could be described as protectionistic, change was coming. In the 70s, the Swedish government allowed milk farmers to raise their prices to incentivize increased milk production which sparked massive outrage in the form of protests and milk-boycotts organized by 'skärholmsfruarna', a group of women outraged by high food prices (Isaksson 2013, p. 9; Arla 2). The protests and subsequent drop in milk sales forced government to impose a price ceiling on milk which shows the strength of the dairy institution and its ability to resist counter movements. This is a central theme in the history of dairy, for instance, in the 1970s, new findings caused the department of health to change its view on fats; instead of being the answer to issues of malnutrition, they were increasingly seen as a public health problem (Jönsson 2005, p. 128). By creating low-fat 'mini'-products designed to complement traditional milk, the dairy industry co-opted the criticism while maintaining its institutional status. However, the popularity of milk was waning and in 1989, the milk subsidies were removed; a highly contentious decision which received bi-partisan critique and both left and right-wing politicians participated in a marketing campaign which involved them jumping from the benches of parliament, their lips covered in sour milk with the message "Milk gives strong bones" (Arla 3). The removal of subsidies also coincided with deregulation in preparation for a Swedish entry into the European Union which would mean that Sweden was incorporated into the common agricultural policy, removing many of the tools classically used to support the Swedish dairy industry.

The end of milk subsidies and the entry into competitive markets marked the beginning of a new era for dairy farming best described as 'a struggle for survival'. Competition meant lower prices which in turn meant that dairy-farming became financially unviable for many small-scale farmers. Between 2005 and 2015, the number of dairy producers halved and the amount of milk produced

dropped (Ministry of Agriculture 2016, p. 16-17). The social pressure caused by a change in the selection environment meant that Swedish dairy moved to larger facilities and organizations; for example, in 2015 Arla Foods controlled sixty-nine percent of the market (Ministry of Agriculture 2016, p. 16). Another impactful decision contained in the ‘struggle for survival narrative’ was the removal of milk-quotas by the European Union in 2015. Previously, an EU-country could only produce dairy products up to a certain allotted level but now that the limit was lifted, experts predict that production will be located in fewer regions but operate on a larger scale with lower prices as a result (Ström Melin 2015; Ministry of Agriculture 2016, p. 9). However, to support Swedish dairy farmers, the EU issued subsidies to a value of sixty-five million SEK directly to Swedish dairy farmers in 2017; a decision which signals that while the organizational environment might be changing, the dairy industry are still embedded in important institutions both nationally and internationally.

Nevertheless, milk is still highly institutionalized and diffusion is still high, especially in educational institutions. For a long time, the Swedish government subsidized milk during school lunch, a practice that the EU continues with today, and everyday school children walk up to the big logo of the regional milk company and pour themselves a glass (Ministry of Agriculture 1). And the subsidy is not limited to just milk, on the list of products that qualify, one can find everything from parmesan cheese to chocolate milk (EU-Commission 2008). This is especially odd since the Swedish educational system has traditionally had an adverse view on commercial marketing in school environments; allowing Nestlé to have big posters explaining the benefits of KitKat would be out of the question while promotional material involving the cartoon cow Kalvin from Skånemejerier gets a pass (Jönsson 2005, p. 29).

4.1.3 Technological Artefacts

“We organize our material world in accordance with our mental categories, and the two become self-reinforcing” (Scott 2014, p. 149)

So far, the focus has been on the social and political structures built around the dairy-industry. To understand the inertia and stability of the system, it is also critical to examine how the technology itself has been embedded in infrastructure and social structure; in institutional terms, how physical artifacts have contributed to structuration (Scott 2014, p. 177).

For milk to be available at all times there needs to be a constant flow of production which involves a plethora of actors and industrial processes. In the previous section, the development of pasteurization and the milk separator were cited as driving forces behind the institutionalization of dairy. Today, pasteurization, vitamization, homogenization and packaging are large scale industrial processes performed by actors with vested interests, the most symbolic example of which is the connection between packaging giant Tetra Pak and the dairy industry. Tetra Pak started its business in the dairy sector and today it still accounts for two thirds of its revenue (Tetra Pak 2013). Products like the tetraeder

shaped cream container and the brick-like milk carton have become synonymous with the dairy industry and by providing machines for both the production and packaging of dairy-products Tetra Pak has contributed to the diffusion of dairy technology and the heterogeneity of actors within the system (see section 2.2).

4.1.4 Oatly

The history of Swedish Oat-based drinks goes all the way back to the 1960s when Swedish researcher Arne Dahlqvist discovered the mechanisms that cause lactose intolerance. Researchers then tasked themselves with developing an alternative to milk for those who were not able to consume it which led to the invention of an enzyme-driven production process for creating oat milk by Rickard Öste at Lund University in 1990 (Byttner 2015).

The process was patented and the company that would later change its name to Oatly was created as an offshoot to the university. For the next fifteen years, oat-milk became increasingly institutionalized as Oatly expanded to new markets in China and the UK and built their own factory outside of Landskrona. But it remained a niche product, focusing on selling a product to the limited population that could not consume milk, a market that was unavailable to the dairy industry (ATL 2014).

A major change in trajectory occurred in 2013 when the board appointed Toni Petterson as CEO. Previously, their main focus had been on technical development but the new leadership took another path and set out to create a ‘life-style brand’ (Sjögren 2015). In an interview from 2014, Petterson emphasizes that Oatly is a value-driven company; an idea which was reflected in several changes to strategy that followed (Livsmedelsakademin 2014). With marketing phrases such as “Wow, no cow” and “No Soy. No Milk. No Badness”, Oatly firmly placed themselves in opposition to the dairy industry.

The transition to a value-based approach heightened the discourse but also led to new alliances. In 2015, the Swedish music festival Way Out West announced a partnership with Oatly which meant that they would stop serving milk products and replace them with oat-based equivalents (Ljung 2015). Arla, who had previously awarded Way Out West with an award for their sustainability work called “the golden cow”, were outraged by the decision and ran an advertisement on the city’s buses that read “Forbidden milk tastes the best. Enjoy the festival” (author’s translation) (Olsson 2015a). Karin Hallgren, communications director at LRF Mjölk, commented on the matter arguing that their sustainability-argument was “bullshit” and that milk does contribute to ecological, social and economic sustainability (Olsson 2015b).

In summary, this historical analysis shows that Oatly is still in the objectification phase of institutionalization. The shift to a ‘life-style brand’ allowed extensive theorization, problem and solution framing and resource mobilization. However, the reaction to Way Out West’s decision to switch to

Oatly shows that it is still a controversial technology and while sales have been on the rise it is still only a drop in a milk-filled ocean (ATL 2014).

4.1.5 Concluding remarks

The historical analysis has described the institutional landscape; the dairy institution is still sedimented in Swedish society although exogenous pressures have caused an uprooting of structures and a weakening of its institutions. At the same time, Oatly has made waves as an alternative to dairy and in its interactions with the incumbent structures have actualized many tensions within it. It is these tensions that will be examined in the discourse analysis that follows.

4.2 Dairy Discourse

The previous section outlined the material and political developments within the system, but transitions are here seen as a co-evolution of material *and* social structures (see section 2.1). How reality is constructed by those who act within the system and what frames of meaning are embodied in their activities is essential to understanding when and if transition occurs. Three main narratives were identified in the material; sustainability, health and nation and will be presented in that order.

4.2.1 Sustainability

Political pressure on the dairy industry increased during the two-thousands because of increased awareness of climate change and the publication of new findings showing the environmental impacts of livestock (Steinfeld et al. 2006). While the brunt of the attention was directed at meat-consumption, livestock in general became increasingly controversial. The implication that the dairy industry might contribute negatively to society is a core element in the discursive conflict between LRF Mjölks and Oatly.

In a full-page ad issued in the biggest Swedish newspapers the day before the trial, Oatly points to the fact that if all Swedes were to switch the milk in their coffee to oat-based milk, it would decrease emissions equivalent to 328 286 flights to Thailand, ending with the phrase “think about how much fun we could have!” (Author’s translation) (See Appendix 1). This statement is interesting in three distinct ways; Firstly, the flight metaphor ties into earlier texts which connect the act of a vacation to Thailand with something distinctly Swedish. Secondly, the entire paragraph cites ‘we’ as the actor which includes the reader in a collective unit; if ‘we’ buy Oatly, ‘we’ get to go on a fun vacation *and* lower our emissions. Thirdly, and maybe most importantly, it ties into a broader discourse on the need for a more sustainable society; this interdiscursivity, where different

discourses and genres are combined in ‘discursive mixes’ can be seen as an indicator of change (see section 2.3).

As described earlier, discourses define an ‘acceptable and intelligible way to talk, write or conduct oneself’ on a given topic. By combining discursive elements into creative communicative events and repeatedly connecting the object, milk, to a process, climate change, regime-exogenous actors *changed* how dairy was discussed.

The functional pressures on the dairy institution caused by new knowledge on its environmental impacts, the political pressures onset by a need for politicians to find ways to cut greenhouse gas emissions and the social pressures caused by a more globalized dairy industry and the end of a normative consensus on the virtues of milk forced the dairy industry to adapt its arguments.

These increased exogenous pressures forced the dairy industry to *re-theorize*; new chains of cause and effect needed to be considered, namely that between livestock’s methane-emissions and global warming, which heightened the discourse around the technology and impacted the cohesion of its institutions (see section 2.2). This process led to new ways of justifying the need for dairy in a sustainable world, subsequently two main narratives emerged which framed milk as essential for environmental sustainability; animal grazing’s contribution to biodiversity and milk’s “nutritional sustainability”.

In a lesson plan designed by LRF Mjölks for middle school children, cows are framed as part of a “natural cycle” where grazing creates open spaces, which are essential for bio-diversity (see Appendix 2). The use of the word *natural* is key, it evokes an image of animals, slowly pacing in open spaces, tranquil and at ease. Thus, it is in stark contrast to footage of dairy cows shackled up in tight spaces in big, industrial complexes which creates a dichotomy where the reader chooses which reality to believe in. By drawing on previous texts which depict picturesque Swedish landscapes where the fields are filled with cows, the author increases the discursive power of the text. An example of such a scene is a string of commercials for Bregott, an Arla butter brand, called *Bregottfabriken* which have aired on and off for over twenty years and have served to create a vivid image of the life of Swedish dairy cows (Färlin 2016; Jönsson 2005, p. 78). This is embodied further by the illustration in the lesson plan which depicts a cow and a farmer looking endearingly at each other, signaling that their relationship is a symbiotic one, not an exploitive one. These narratives also often reference two Swedish environmental goals as a basis for legitimacy; “A rich plant- and animal life” and “A rich farming landscape” which note the importance of maintaining grazing areas (Appendix 2; Swedish Environmental Protection Agency 1 & 2). Together they form a compelling narrative which draws on reader’s nostalgic recollection of open Swedish landscapes to create an idea of dairy as a vehicle for sustainability.

The second narrative, nutritional sustainability, reframes food sustainability as a question of how much nutrition is in a product in relation to its environmental impact, not merely its net effects on the environment. As part of their campaign “Hjärta Mjölks”, LRF Mjölks published an article arguing that, from this perspective, regular milk is eight times more sustainable than oat-milk (Smedman

2014). This is based on a 2010 study conducted by members of LRF Mjölks R&D department, the methods of which have been questioned (Smedman et al. 2010; Scarborough & Rayner 2010). By re-defining sustainability as an activity relative to its instrumental value, LRF Mjölks has tried to shift discourse away from its absolute emissions. The issue is evidently a discursive hotspot since Oatly dedicated an entire paragraph in their previously mentioned full-page ad to rebutting their claims and questioning the legitimacy of the research by citing that the model also shows that Swedish tap water is horrible from a sustainability perspective (Appendix 1).

The power in this narrative comes, once again, from its *interdiscursivity* and *intertextuality*. As described in previous sections, the nutritional virtues of dairy-products have been at the center of their *raison d'être* ever since the days of Mjölkspropagandan, by recalling this fact, LRF Mjölks connects to the prolific body of text on the subject that has been produced over the years. It also connects to discourses on the need to eat healthy and wholesome food which are central in times of fitness and fad diets.

4.2.2 Health

However, the dairy industry has come under pressure in the health sector as well. In 2014, a longitudinal study was published which claimed that milk might not only be less healthy than previously thought but even contribute to a shorter life span (Michaëlsson et al. 2014; Paulsson 2014). The actual science behind the study is outside the scope of this thesis, however its release did question the oldest argument for dairy, its health benefits.

Its implications for discourse are in the act of *questioning* a causal chain that has been repeated throughout history; in questioning the nutritional properties of dairy, one questions all the previous texts claiming the opposite. As mentioned in section 2.3, a text's *intertextuality* refers to the influence of history on a text and contributes to its potential to affect discourse. And the intertextual chain promoting dairy's health benefits can be traced back to the early 20th century; in an advertisement from Mjölkspropagandan from 1934, milk, butter and cheese are described as the cheapest and most nutritious food that animals produce (Jönsson 2005, p. 34). The ad also includes a rhyme which claims that if you eat a cheese sandwich and drink milk you get the power to swing a sledge hammer and do whatever you want. The same rhetoric was used in their attempt to get consumers to switch from coffee to milk during breakfast; in two posters from 1927, images of "the coffee boy" and "the milk boy" can be observed. The milk drinker, a blonde boy performing some sort of physical activity, is contrasted by a dark-haired boy, crouched at a table and looking frail in comparison (Jönsson 2005, p. 38).

While the dairy industry's health claims are less theatrical today, they are still a large part of the dairy brand; on LRF Mjölks page "Hjärta mjölks", there are at the time of writing seventy-seven articles concerning health with headlines such as "Milk protein lowers blood pressure", "Milk *does not* affect life duration" and

“Scientifically proven: Milk contributes to public health” (Author’s translations) (Lindmark Månsson 2017a; 2017b; 2017c). What’s remarkable is the modality of the statements, by using definitive wording the sender indicates that the statement is decisively true. As Jönsson points out, the Swedish dairy industry is, unlike other food manufacturers, seen as a credible source of nutritional information, almost akin to the Swedish department of health (2005, p. 113).

Today, that legitimacy is maintained by repeatedly referencing science as the source of information. By constructing language so that it is “researchers” or “scientists” who are the senders, the statements are portrayed as objective facts and as a part of a larger quest to obtain the truth.

The same pattern can be observed in texts produced by Oatly, in their previously mentioned advertisement, they describe their product as ‘perfectly balanced’ with the right amount of protein, fats and carbohydrates (See Appendix 1). They also try to differentiate themselves from dairy by pointing to the fact that their product contains beta-glucans, a high source of fiber which, according to Oatly, is good for your heart. And as part of their co-operation with Way Out West, Oatly recruited two prominent media-figures to their campaign “Googla Mjök”, the goal of which was to get people to google milk in combination with words such as “health” and “environment” (Oatly 1). The sharp dichotomy where milk is either described as a catch-all solution for human prosperity or not even fitting for human consumption can be seen as another social pressure on the dairy institution and a break-up of the normative consensus.

In conclusion, health continues to be a central aspect of the discourse on dairy, however regime-exogenous actors are questioning the legitimacy of the arguments that milk is healthy which creates two competing discourses with opposing claims.

4.2.3 Nation

This final section will examine how discourses on dairy and nationalistic ideas of ‘Swedishness’ interact. Two main themes have been identified in the material; the idea of Swedish moral and technical supremacy, and the notion of milk-drinking as a characteristically Swedish phenomenon.

As described in section 4.1, Swedish dairy farmers are struggling financially due to price drops caused by an entry to competitive markets. Thus, the idea of ‘supporting’ Swedish dairy production became an essential part of the dairy discourse. In an article on *mjolk.se*, one can read about how emissions per liter of milk from Swedish dairy farming have decreased since 1990 while the total emissions associated with food consumption have increased. The article cites increased milk imports as the cause and urges Swedish consumers and politicians to “stand up” for “our” milk industry (Ehde 2016). In another article on the same website, one can read that emissions per liter of milk produced is half as high compared to the global average due to how the Swedish environment is naturally well-suited for milk production and since Swedish cows are healthier and therefore have higher yields (Ehde 2015). These statements construct a scenario

where the subject is told to connect Swedishness with quality and where the rest of the world is constructed as an *other*, a less developed civilization, which transitively connects the act of buying Swedish milk to discourses about Swedish supremacy.

That image is supported by the discursive myth of milk as a part of the Nordic heritage. The fact that Swedes developed a genetic mutation that allows the consumption of dairy without stomach issues is explained as a natural development since, unlike other countries, the Swedish climate made food production difficult for large parts of the year (Nordström 2016a; Norström 2016b). The article, titled “why do we drink milk in Sweden?”, explains how milk is still a large part of *our* food culture and how for over 5000 years, milk has contributed to healthy people in *our part of the world*. Again, history is used to create a divide between Swedes and the rest of the world.

On the other side of the aisle, Oatly also uses the Swedish archetype to connect to nationalistic discourses. The fact that the oats are grown in Sweden is a central part of their marketing, at the top of their webpage titled “The Oatly Way”, the phrase “It’s Swedish!” is brandished in large letters and below they explain how the Nordic climate allows the oats to grow “strong and tall” and on another that “many of the nasty pesticides that are used on oats in the rest of Europe are totally forbidden in Sweden” (Oatly 2; Oatly 3) This connects to the same notion of Swedish supremacy as in the earlier section. On the same page, they also describe how their company is distinctly Swedish; “somewhat boring, super practical, painfully honest, notoriously hardworking and independent (..)” (Oatly 3). These statements connect to the previous discourse by creating a discursive mix wherein recognizable themes of nationalism are spun in favor of oat milk.

4.2.4 Concluding remarks

Discourse, as defined in section 2.3, “rules in” certain ways of talking about a subject and “rules out” others. What the previous section shows is that the traditional discourse on dairy seems to be largely intact but rivalled by an opposing discourse which co-opts many of its central themes to instead argue for alternatives to dairy. Exogenous pressures concerning sustainability, health and nation have created tensions in the discourse and subsequently the institution. The legal suit between LRF Mjök and Oatly created an arena where these tensions were exposed and their articulation widely publicized.

The intertextuality and interdiscursivity which is associated with the discussion of a culturally embedded practice such as dairy farming serves a dual purpose; texts on the subject hold discursive power but the beliefs of the receivers are manifested in physical and social artifacts which creates mental inertia.

5 Discussion

As detailed in earlier sections, this thesis attempted to build upon Fuenfschilling and Truffer's merger of transition theory with institutional theory (2014). It does so successfully by introducing two new modes of analysis; landscape pressures categorized as either functional, political or social and the impact of the intertextuality of texts on dominant discourse.

Categorization is important in in order to provide better analytical accuracy to transition theory, since intuitively the character of the window of opportunity should affect the potential of niche transition. However, the potential for generalization based on the findings laid out here is hampered by the difficulty in finding a causal link between a certain pressure and deinstitutionalization. Often, as in the case with climate change, several pressures coincide and it is difficult to differentiate the effects. The fact that livestock emit methane puts functional pressure on the regime to lessen those emissions at the same time as it can be used to argue that dairy as an industry ought not to exist anymore, questioning its legitimacy as an institution.

What the material does show is that the pressure created a window of opportunity which allowed the oat-based drink niche to challenge the regime. This ties into the earlier critique of political science's inadequacy in explaining how and when sustainable change occurs. Based on these findings transition involves a combination of destabilizing pressures and a niche that is ready to accommodate for those pressures. Furthermore, the analysis gives merit to Giddens notion of the duality of structure, that actors can choose to interact with structures and are not merely destined to a certain behavior; while Oatly exists within a structure where dairy is the dominant logic, they can choose to oppose it and interact with the structure, thereby changing it (Sewell Jr 1992, p. 4).

The most interesting finding in the study is perhaps the fact that the discourses articulated by the two actors are so similar yet fundamentally oppose each other. In mimicking the central themes of the dairy discourse, health and nation, the niche creates a familiar discourse with a high degree of intertextuality at the same time as it incorporates a new environmentalist logic into the discourse. This thesis tentatively suggests that it is this fact which has given enough discursive power to the Oatly narrative to warrant such a reaction from the incumbent.

While a quantitative overview of the system would crown dairy as its definite incumbent, the analysis of deinstitutionalizing processes paints a more complex picture. This is the value of institutional theory to transition analysis; it allows researchers to see the internal tensions which niches can utilize to transition, in our case the increased pressure from competitive markets and the destabilizing effects of new findings on the impacts of dairy on health and the environment.

In the broader context of society's ability to transition to a more sustainable configuration, this analysis shows that the sustainability discourse has been embedded within dairy discourse. However, that does not necessarily ensure any concrete steps will be taken by the incumbent regime towards sustainability or that the niches which challenge it will be more sustainable. It does however create an environment where sustainable innovations are increasingly seen as an opportunity and not as an oddity. And if society's goal is to combat climate change, which the signing of the Paris agreement indicates, that is a desirable outcome.

6 Conclusion

This thesis has shown that dairy as a structure has been increasingly institutionalized in Sweden following technological advances, integration into political institutions and extensive lobbying. However, demands for more sustainable practices and new research on the health benefits of dairy products have put pressure on the regime which has initiated a process of deinstitutionalization and destabilization.

This has created a window of opportunity for Oatly which allowed them to construct an alternative narrative on dairy and develop a proto-regime which challenges the status quo. The discourse analysis shows that Oatly gains discursive power by mimicking conventional dairy discourse and placing themselves firmly in opposition to the incumbent. It also shows that the discourse places special emphasis on issues of sustainability, health and nation and that the lawsuit, itself a sign of conflict, provided an arena where the opposing discourses could be articulated.

However, the dairy industry should still be seen as the incumbent regime; its technical artefacts, its market share and its diffusion in institutions show that it is still deeply embedded in Swedish society. The increasing institutionalization of the logic represented by Oatly does however signal that the organizational landscape is changing, the trajectory of the change and how it affects Oatly's development remains to be seen.

6.1 Further Research

The area of sustainable transitions, and the transition of food systems in particular, is ripe for further study. Future studies should widen the scope of analysis to other actors in the system for a more holistic approach, in the Swedish context mainly producers of soy-based alternatives. They should also examine the role of experts in the institutionalization of the dairy industry to understand how its lobbying organizations gained legitimacy akin to that of a government agency. On a related topic, the role of social movements as a protective space in the story of Oatly could provide useful insight into the early stages of niche formation.

In terms of institutional theory, the literature on strategic responses as championed by Christine Oliver could provide further insight into why different landscape pressures warrants different institutional responses. Additionally, future research should utilize Geels's transition pathways framework to understand the way the incumbent regime has reacted to pressures for reform (Geels et al. 2016).

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8 Appendixes

8.1 Appendix 1

MJÖLKLOBBYEN vs OATLY

the final countdown

Idag dröbar lobbyorganisationen Svensk MJÖlk samman med Oatly i Marknadsdomstolen. En på ytan ganska lättan tillställning, som ska avgöra om vi får fortsätta sälja saker som

IT'S LIKE MILK BUT MADE FOR HUMANS och **NO MILK. NO SOY. NO BADNESS.**

Men bakom stämningen ligger en betydligt mörkare verklighet. En historia om hur en pressad stor-industri till varje pris vill förhindra en öppen diskussion om hälsa, hållbarhet och miljö.

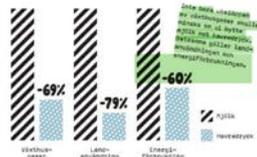
För sanningen är att vi kunnat löst det här över en knapp vecka (utan mjölk) redan för ett år sedan. Det skulle sparat både oss och de redan hårt pressade svenska mjölkbönderna otäckliga kronor. Men grejen är att då hade diskussionen förmodligen stannat vid användandet av just de där formuleringarna.

Nu försöker man istället stoppa allt som kan "ge intryck av att havresbaserade livsmedel är ett klokt val än mjölkprodukter" och "formuleringar som ger intryck av att mjölkprodukter, till skillnad från havresbaserade livsmedel, är onöderna".

Det är faktiskt inte särskilt konstigt. Den senaste forskningen pekar nämligen åt ett håll som inte tjänar mjölkindustrins intressen och som man nog gärna skulle vilja hålla borta från

allmänheten. Detsamma gäller hårda fakta om miljö och klimatet. Men än så länge får vi ju lov att sälja vad vi vill, så till i dig!

Idag står kött- och mjölkindustrin för 14,95 av världens totala utsläpp av växthusgaserna. Det är lika mycket som alla transportmedel tillsammans - bil, flygplan, tåg och båt. Om vi bara gjorde en så enkel sak som att byta ut mjölkens i kaffet mot havresdryck kunde ett år skulle överlagra växtgasutsläpp minska med 100 449 ton. Det motsvarar 328 286 flygresor till Thailand. Tänk vad kul vi kunde ha!



Nu sätter nog en och annan mjölklobbyist latten i nalsen. De brukar nämligen hänvisa till en studie (gjord av några anställda på LRF MJÖlk) om miljöövningen i förhållande till näringsämnehåll. Och enligt den är konmjölk åtta gånger

bättre än havresdryck. Ett inte helt oväntat utfall, eftersom de jämfört beskivad mjölk med obesad havresdryck. Vad de inte talar lika högt om är att deras modell också visar att svenskt kravvatten är något av det mest miljövådiga du kan dricka.



Allt står häcken bättre: Fördel svenska mjölk: 58 ton CO2e/100 ml mot 1000 ml havresmjölk: 112 ton CO2e/100 ml

Men mjölklobbyn har det tufft. Varför skulle de annars kalla en ifrågasatt dansk läkare som expertutittne till Marknadsdomstolen? En man som påstår att mjölk förebygger allt från cancer till fetma och vars forskning "bevisar" att snabbmat och läsk inte är den primära orsaken till övervikt (en rapport som en amerikansk dryckstillverkare betalade 33 miljoner för). Gick det verkligen inte att hitta någon annan?

En sak är i alla fall säker. Om våra vänner på Svensk MJÖlk läst de nordiska köttrekommandationerna, hade de vetat hur en perfekt balanserad dryck med lagom mängd fett, protein

och kolhydrater ska se ut: Som en havresdryck. Med tillägget att den innehåller naturliga fibrer som skiljas betaglukaner och som bevisligen är bra för hjärtat.

Strunt samma egentligen. För medan vi köbblar rinner tiden iväg. Och verken klimatet, vår hälsa eller våra svenska mjölkbönder kan vänta särskilt mycket längre. Vi behöver såå våra kloka huvuden ihop och fundera över hur vi på allvar kan anpassa oss till en ny verklighet.

Hur utvecklar vi ett livskraftigt svenskt jordbruk utan att tunna på djurens läna?

Hur håller vi våra landskan öppna och garanterar den biologiska mångfalden? Men framförallt: Hur ser vi till att ha en sund planet att lämna över till våra barn?

Vi har några idéer som vi gärna delar med oss av när allt det här är över. Tillä dess får du hålla tillgodo med vad vi och mjölklobbyn säger i Marknadsdomstolen. På OATLY.COM/DALIGSTÄMMNINGKYLOSKEN kan du följa utvecklingen och spara in alla fakta i miliet. Hålligt rolig läsning faktiskt, om man är på det humöret.



Appendix 1 Full-page advertisement published by Oatly in Swedish newspapers DN, Dagens Industri and Sydsvenskan the day before the trial (2015-10-06).

The highlighted sections show the codification of the text; green sections refer to the sustainability theme, yellow refers to the health theme and blue to the nation theme.

8.2 Appendix 2

Educational material intended for children ages four to six provided by LRF Mjolk. As only pages two and three were relevant for analysis, only those were included, however for full transparency, the material can be downloaded at: <http://www.mjolk.se/#!/nytt/lektioner-for-arskurs-4-6/> [Downloaded 2017-05-01].

Mjölken & biologisk mångfald | sida 2

Det naturliga kretsloppet

Kor äter gräs och omvandlar det till ett näringsrikt livsmedel, nämligen mjölk. Kon ger även gödsel (kobajs) som kan användas som näring till nya grödor och till biogas. På detta sätt ingår kon i ett naturligt kretslopp.

På sommaren går svenska mjölkkor på bete och under vintern äter de mest gräs (ensilage) som odlats på den egna gården. Bete är ett svenskt mjölkors bidrag till biologiska mångfalden. Vi får även ett topet och variationsrikt landskap vilket många växt- och djurarter är beroende av och många människor tycker är vackert.

Kor räpar en gas som heter metan som bidrar till växthuseffekten. Världen står inför stora utmaningar för att minska utsläppen av växthusgaserna. En möjlig lösning är att öka produktionen av biogas som kan användas som bränsle i exempelvis bilar och järnvagnar. Klimatet påverkas negativt om vi använder fossila bränslen.

MILJÖKVALITETSMÅL
I Sverige har Riksdagen beslutat om 16 miljökvalitetsmål som beskriver hur miljön ska se ut år 2020. Ett av målen är att vi ska ha god hälsa och ett bra miljö- och klimatläge. Ett av de fem miljökvalitetsmålen är att det ska finnas mjölkkor i Sverige.

BIOLOGISK MÅNGFALD
Biologisk mångfald är ett mått på hur många arter av växter och djur som finns.

FOSSILA BRÄNSLEN
Fossila bränslen är till exempel olja och kol. Dessa bildades för mycket länge sedan av döda växter och djurkroppar. Fossila bränslen bidrar till att klimatet på jorden förändras, den så kallade växthuseffekten. Fossila bränslen är inte förnybara, vilket innebär att det är en resurs som kommer att ta slut.



Illustration: Helena Lindholm

Mjölken & biologisk mångfald | sida 3

För eleverna

Titta på filmen fram till två minuter.

I den här uppgiften får ni beskriva på vilka sätt kon är med och bidrar till en hållbar utveckling och en bättre miljö. Ta hjälp av bildrutorna och använd ledtrådarna nedanför för att lösa uppgiften.



Leitrådarna: Öppna landskap, biologisk mångfald, svensk lag.

Illustration: Helena Lindholm
