# A Socio-Material Perspective on Challenges in Bakery Food Innovation

## How to overcome barriers of new product acceptance in work context

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**ABSTRACT**

Changes implemented by businesses often encounter resistance from the change receiver. Many change models can be found in the change management literature that appoint possible factors and barriers for resistance to change. Yet, despite the evidence that technology has recently acquired a substantial role in change management and organizational studies, scarce research on change processes has explored how technology itself could be a crucial factor for resistance to change. Therefore, a sociomaterial perspective accounting for the role of technology has been adopted in this thesis to help explain barriers during change processes, focused on new product acceptance in a business-to-business environment. 15 interviews with Dutch bakers were conducted to gather new and in-depth insights regarding resistance to change. In line with the business-to-consumer literature, eight 'resistance to change' barriers, which could also be applied to the business-to-business environment, were found, including a novel factor, namely *time.* Findings suggest that technology does not play a leading role in the bakery sector, perhaps due to the fact the participants were from a generation using less technology (generation X) and the bakery sector has in general, until now, a limited adoption of technology. Future research with a similar focus could investigate whether these results can be corroborated or confuted among other business-to-business sectors.

**Keywords**
Sociomateriality, Resistance to Change, New Product Acceptance, Barriers, Technology, Business-to-business

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# 1. Introduction

Businesses are innovative, move with the time and aim to stay ahead of their competition. Therefore, change is necessary (Stouten, Rousseau, & De Cremer, 2018). However, change does not come with much ease, but often encounters resistance from employees or people involved in the change process. For instance, around 70 percent of all change initiatives fail to succeed due to resistance among employees or lack of management support (Sturdy & Grey, 2003). Even two third of all failures are due to lack of attention to the contributor of resistance (Meaney & Pung, 2008). Similarly, Al-haddad and Kotnour (2015) state that less than 30 percent of companies succeed in a change initiative. In one of the first papers exploring resistance to change, Coch and French (1948) examined resistance to change in a factory setting, building further on Kurt Lewin's research (1947). According to Coch and French (1948), resistance to change arises when people see themself losing status quo. This means, people do not have a grip anymore on the existing state of affairs. In their seminal work, Kotter and Schlesinger (1979) also state that there are four main reasons people resist change. These four reasons are: (1) a desire not to lose something of value, (2) a misunderstanding of the change and its implications, (3) a belief that the change does not make sense for the company, (4) and a low tolerance for change (Kotter & Schlesinger, 1979). Hence, the resistance itself must be understood properly to successfully continue with the change process (Canning & Found, 2015). This understanding is the art to overcome resistance to change.

There are many different change models that appoint possible factors and barriers for resistance to change. Stouten, Rousseau and Cremer (2018) analyzed and discussed the most widely used change models. However, not one change model takes into account the perspective that technology itself could be a factor for resistance to change (Beer, Eisenstart, & Spector 1990; Cooperrider & Srivastva, 1987; Hiatt, 2006; Kanter, Stein & Jick, 1992; Kotter, 2007; Lewin, 1947; Judson as cited in Stouten et al., 2018). Even more recent articles about change management do not take into account the technology perspective (see: Oreg, Bartunek, Lee, & Do, 2016; Srivastava & Thakur, 2018). According to Leonardi and Barley (2008), studies that research how technologies could change organizations are quite under-investigated. Besides, Olikowski and Scott (2008) state that, despite the evidence that technology has a substantial role in organizations, technologies remain understudied in organizational research. A reason could be that these articles are relatively old, and in that time technology did not play such a big role as it does nowadays. Indeed, more than 95 percent of all articles published in top management do not take into account technology, they take it for granted (Olikowski & Scott, 2008). Besides, Leonardi (2012) notes that the technologies that are under study in organizational studies are not described.

This refers to the remark that there is an imbalance between social versus material treatment in organizational studies (Leonardi, 2012). This can also be seen in the studies of Vargo and Lusch (2004) and Macdonald, Wilson, Martinez and Toossi (2011). Both studies focus on the assessment of value-in-use, in other words the usage processes, and have accounted for sociomateriality. However, the understanding of the relationship between human and materiality may be revised, since the focus is not the value-in-use, but is about the practice, environment and interactions people have with the material.

Sociomateriality considers both technology and organization as two components of one underlying phenomenon, and it offers a way to overcome established opposition between social and material determinism (Leonardi, 2008). Since a gap is seen in the imbalance between social versus material treatment in several studies, the lens of sociomateriality is used to identify factors that create resistance to change and its influence on the change-process. Sociomateriality is a theory that explains the entanglement of social practices and materiality within an organization (Orlikowski & Scott, 2008). Hence, sociomateriality helps understanding how the entanglement of human and non-human produce changes. Non-human, also called materiality, does not have to be a physical object and could refer to for example technology, machines or checklists (Moura & Bispo, 2018). In the existing literature, factors that arise due to resistance to change in the technology industry as well as articles about resistance to change when an innovative technological innovation arises are described (Hoque & Sorwar, 2017; Kruse et al., 2016; Markus, 2004). However, since limited research has been conducted regarding the way technology can influence a change process in a business-to-business setting, in this thesis a sociomateriality perspective is adopted to bridge this gap. It should be noted that sociomateriality is about the practice itself. Hence this perspective covers, in a more holistic sense, factors and processes at both the team and organisational level. However, due to time available for this research, the focus is more at the individual level.

## 1.1. Situation and complication

The organization in which this research takes place is a business-to-business company that supplies dairy products in, among others, the Netherlands. In this study the company is called ‘Premium Foods’, this name is invented by the author of this paper. Premium Foods planned to commercialize a new dairy product in the Netherlands, which could be used in pies, cakes or desserts. However, the company notices that there is resistance among their buyers concerning the adoption of this new product. Hence, exploring factors, among which technology, that could influence resistance to change in a business-to-business setting and understanding how to overcome these challenges to successfully market a product is of great importance to address the gaps in the current literature as well as to offer practical insights for this company. Hence, the socio-material constellation of target customers when examining new product adoption will be tackled.

## 1.2. Relevance

Thus, the theoretical and practical contributions of this thesis to the change management literature in a business-to-business environment is threefold.

Firstly, by integrating a sociomaterial perspective into change management processes, this thesis thus aims to explore how technological influences may hinder or, vice versa, facilitate the adoption of new products.

Secondly, the majority of the papers regarding resistance to change take place in a business-to-consumer setting or within a company (see: Beer et al., 1990; Canning & Found, 2015; Coch & French, 1948; Cooperrider & Srivastva, 1987; Kotter, 2007). However, it seems that there is a lack of research regarding resistance to change in the business-to-business environment. Therefore, this thesis also takes the business-to-business environment into consideration. Hence, this thesis contributes to the limited research regarding resistance to change in different settings.

Thirdly, in terms of practical implications, on the basis of this study, suggestions on how to overcome the challenges with regards to resistance to change and technology will be described. Indeed, since the product is innovative, it is important to identify the marketplace feedback in order to learn how to improve the company's portfolio to customers and to improve the company's performance. Besides, this study highlights barriers of new product acceptance offering advice on preventing, responding and tackling resistance to change. Thus, this study helps, on the one hand, to enlarge awareness and comprehension of how to react to resistance to change; and, on the other hand, to provide companies with handles and directions in order to successfully market a new product.

## 1.3. Research goal

The aim of this study is thus two-fold: (1) to explore the factors influencing resistance to change in a business-to-business setting to include technology through the lens of sociomateriality and (2) to understand how to overcome these challenges to successfully market a product from a marketing perspective.

## 1.4. Research question

In line with the above research goal, the following research question is formed:

*“How can a socio-material perspective help explain barriers of new product acceptance?”*

To properly answer the research question, three sub-questions are formulated:
1. What barriers can be identified which causes resistance to change?

2. How can technology, as a novel factor, influence resistance to change in a business-to-business setting?

3. What are the implications for marketing practices?

## 1.5. Outline of the thesis

This thesis is built up out of five parts. The five parts together will set the ground for answering the above (sub)research questions. In chapter 2, a theoretical framework based on previous research will be described. Chapter 3 will elaborate on the methodology that will be used for this study. In chapter 4, the results exposed during the interviews will be described. In chapter 5, the results will be discussed and in chapter 6 a conclusion is written.

# 2. Theory

This chapter describes and analyzes the required literature that aids the process of reaching the desired research goal. Section 2.1. will explain the theoretical perspectives with regards to resistance to change. Section 2.2. will describe possible factors for resistance to change in an organizational context as well as from a marketing perspective, related to the existing literature. In section 2.3., a deeper understanding from the socio-material perspective will be described, as well as an explanation on how this contributes to overcoming resistance to change within this research.

## 2.1. Resistance to change

Companies have dealt with industry growth, technological changes and change in supply and demand over the last decades (Rosenberg & Joseph, 2011). Even if companies were forced to change, in order to survive, only a small percent of all change programs have succeeded (Sturdy & Grey, 2003). In the existing literature, resistance to change is mainly discussed one sided, i.e., from the change maker's perspective. The change maker, also called the one who wants to make the change happen, aims usually to do what (s)he thinks is the right thing that is best for the company. However, there is also another perspective. The change receiver, also called the one who needs to change, is standing in the way and unreasonably hindering the change process (Ford, Ford, & D'Amelio, 2008). This can also be seen in the definition of resistance to change by Smollan (2011, p. 829), as "resistance is seen as an inherent aspect of organizational life as employees seek to test and negate the power and control of owners and their delegates, managers".

However, resistance to change is two sided. Both the change maker as well as the change receiver need to engage in sensemaking (Ford et al., 2008). According to Ford et al. (2008), the change maker tries to contrive how the change can be accomplished and the employee tries to determine what will happen to them. By combining the definitions of Ford et al. (2008) and Smollan (2011), in this thesis, the following definition for resistance to change will be used: "On the one hand the act of struggling with contriving the accomplishment of change, which applies for the change maker, and on the other hand an act that serves to protect status quo, which applies for the change receiver".

Past research also shows that authors do not agree upon which kind of resistance exists. Kotter and Schlesinger (1979) say there is a difference between passive and aggressive resistance while others suggest there is a difference between resistance to change and being open to change (Wanberg & Banas, 2000). Chawla and Kelloway (2004) state that resistance to change has two components; attitudinal and behavioral. Despite the disagreement on which kind of resistance exists and thereby the existence of different change models, most authors do agree upon how important it is to overcome resistance to change.

## 2.2. Possible factors influencing resistance to change

The literature identifies many different possible factors that can trigger resistance to change. Rosenberg and Mosca (2011) state that there are twenty possible factors. Table 1 reports these major factors. Factors 1 till 8 refer to personal factors for resistance, factors 9 till 18 to organizational factors and 19 till 20 depict factors to the change programme itself. Factors 1 till 8 focus on the change receiver when the change is taking place and identify different individual factors that can contribute to resistance to change. Examples of these factors are behaviors towards change, fear of the unknown and a disruption of routines (Rosenberg & Mosca, 2011). Factors 9 till 18 focus on those organizational characteristics that could also be a cause for resistance to change. For instance, when there is poor leadership, lack of trust between the change maker and change receiver or poor performance, the organization could be the cause for resistance to change (Rosenberg & Mosca, 2011). Factors 19 till 20 focus on the change itself, which could cause resistance to change. According to Rosenberg and Mosca (2011), this could be due to, for example, poor implementation planning or communication about the relevance of the change.

Within this thesis, the personal factors, also called individual-level factors, will be the focal point of analysis, since, in line with Ford and colleagues (2008), our interest is to explore resistance to change from the receiver's perspective. It is known that sociomateriality has a more holistic approach and looks at the whole context. However, due to available time for this thesis, it is more reasonable to focus on the individual, instead of looking at the whole process. Besides the individual-level factors, the organizational factors and the change programme will not be disregarded, since the business-to-business setting is of great interest and the inclusion of these two dimensions prevents potential biases. Indeed, potential biases could arise when not all aspects of resistance to change are considered. Therefore, the main focus is on the individual dimensions and the dimensions organization and change programme will be kept in mind as background elements of this thesis.

| | |
|---|---|
| 1 | Employees’ attitude/disposition toward change |
| 2 | Fear of the unknown (uncertainty) |
| 3 | Lack of understanding of the firm’s intentions |
| 4 | Fear of failure |

| | |
|---|---|
| 5 | Disruption of routine |
| 6 | Increased workload (due to downsizing or employees leaving voluntarily/involuntarily) |
| 7 | Lack of rewards for implementing change |
| 8 | Perceived loss of control, security, or status |
| 9 | Poor leadership |
| 10 | Dysfunctional organizational culture |
| 11 | Organizational size and rigidity |
| 12 | Lack of management support for the change (organizational commitment) |
| 13 | Lack of trust between management and employees |
| 14 | Inability or unwillingness of management to deal with resistance |
| 15 | Lack of participation due to top-down steering |
| 16 | Organizational politics/conflict |
| 17 | Internal conflict of resources |
| 18 | Lack of consequences for inadequate or poor performance |
| 19 | The content of the change (an ill-conceived change/relevance of the goals of change) |
| 20 | Poor implementation planning |

*Table 1: Reasoning for Resistance to Organizational Change (Rosenberg & Mosca, 2011)*

### 2.2.1. A marketing perspective

As described above, Rosenberg and Mosca (2011) discussed twenty possible factors for resistance to change, grounded in the major reasons mentioned in the existing literature. However, since customers' adoption also plays a great role in this research, factors for resistance to change from a marketing perspective, especially within the new service dominant logic, have been searched.

Over the past decades, marketing has changed from a goods-dominant logic (G-D logic) towards a service-dominant logic (S-D logic) that focuses on operant resources, such as knowledge and skills (Vargo & Lusch, 2006). A service could be defined as the practice of operant resources through deeds, processes and performances for the benefit of a customer (Vargo & Lusch, 2006). Introducing a new service can either positively or negatively influence a company's performance. On the one hand, a new service can provide high revenues and create an outstanding market position; on the other hand, it could lead to unexpected low revenues and damage the brand image (Joachim, Spieth, & Heidenreich, 2017). To mitigate failure, value co-creation between the organization and customer is important (Fernandes, 2015). Within S-D logic, this value is perceived by the consumer based on the 'value in use' (Vargo & Lusch, 2004). Value in use means that there is not only an interpretation of the utility created by marketing, but that value is added in the whole process, through a marketing interpretation (Vargo & Lusch, 2004). Most innovative services or products tend to fail due to customers' rejection (Laukkanen, Sinkkonen, & Laukkanen, 2008). To understand the reasons why customers reject adopting a new product, Talke and Heidenreich (2014) formulated seventeen individual-level barriers that could cause resistance among consumers. These barriers have also been tested by Joachim et al. (2017) in their empirical study which demonstrated that these seventeen barriers could be the primary reasons for product rejection. The seventeen barriers are divided into functional barriers and psychological barriers, as can be seen in Figure 1.

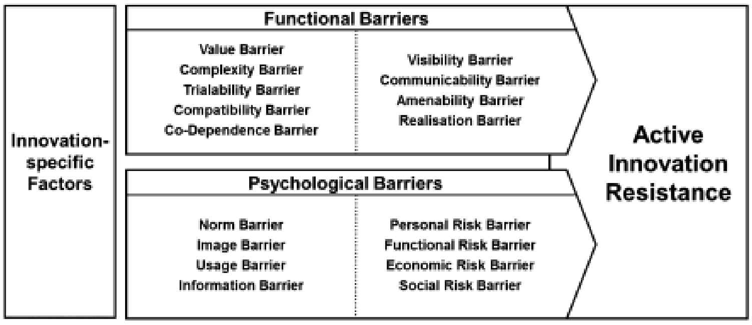


*Figure 1. Sources of Active Innovation Resistance (Talke & Heidenreich, 2014)*

Functional barriers arise when customers find the new product dysfunctional to their needs and when the product is different from their usage expectations (Talke & Heidenreich, 2014). Within this broad category, the authors report nine sub-barriers, namely: value barriers emerge when customers see a lack of advantage in comparison with other existing alternatives; complexity barriers occur when a new product is difficult in use or it is difficult to understand; trialability barriers refer to a perceived difficulty in testing the new product, before the adoption; compatibility barriers relate to a not fitting new product, in relation to the existing and past products; co-dependence barriers occur when consumers find the new product too heavily depending on an existing product; visibility barriers emerge when customers see others having difficulties using the product; communicability barriers occur when customers perceive ineffectiveness when the new product is described; amenability barriers reflect on the feeling the new product has limited potential to be adjusted to the customer needs; and realization barriers arise when the benefits that customers need to experience takes too long (Talke & Heidenreich, 2014).

Psychological barriers instead occur when the new product is in conflict with the customers' usage patterns, norms and values, or when adopting the new product is found to be too risky. Within this category, eight sub-barriers are described, namely: norm barriers refer to the violation of social norms, family values or traditions; image barriers emerge when customers have a negative association with for example the brand or country the brand is operating in; usage barriers occur when customers perceive to have an undesirable disruption of workflows or routines; information barriers relate to the perception of asymmetries in information, which causes uncertainty among consumers; personal risk barriers emerge when consumers have the feeling the new product is dangerous and could harm their physical or it could harm their property; functional risk barriers arise when the new product is perceived to work unreliable or improperly; economic risk barriers occur when consumers perceive that the new product costs are too high; and social risk barriers emerge when the consumer will perceive disapproval from social groups when adopting the new product (Talke & Heidenreich, 2014).

These barriers, stemming from the marketing literature, will now be combined in the section below with the factors previously mentioned from the change management scholarship to offer a comprehensive understanding of what we know so far about resistance to change.

### 2.2.2. Factors for resistance to change combined in a marketing perspective

When looking at the eight personal factors for resistance to change described in 2.2. and 2.2.1., differences and similarities with the aforementioned seventeen barriers can be seen. First of all, factors 1 till 8 described by Rosenberg and Mosca (2011) focus on the individual level. The barriers described by Talke and Heidenreich (2014) also focus on the customer's individual level. When looking deeper, the factors could go hand in hand each one with specific, or multiple barriers. For instance, the factors "lack of understanding of the firm's intentions" and "increased workload" could be classified in the functional barriers, since these factors show a customers' misunderstanding in usage perception and a dysfunctionality to the needs. The factors "employees' attitude/disposition toward change", "fear of unknown/uncertainty", "fear of failure", "disruption of routine", "perceived loss of control, security or status" and "lack of rewards for implementing change" could be classified in the psychological barriers, since these factors show that the customers' norms, values and routine as well as the amount of risks is in conflict with the new product. In Table 2, a more extensive explanation is given on how the factors and barriers are related to each other.

| Functional barriers | | | Explanation |
| --- | --- | --- | --- |
| Lack of understanding of the firm's intentions | ⟷ | Value barriers and amenability barriers | When a customer has a lack of understanding of the firm's intentions, it is not clear for the customer what the advantages are when using the new product, in comparison with other existing products. So, it is not clear for the customer what intentions the company that provides the new product has, which is in line with value barriers. Besides, customers could have the feeling the new product has limited potential to be adjusted to their needs. So, the customers perceive a lack in understanding their own needs and therefore, do not understand the intentions of the firm, which is in line with amenability barriers. |
| Increased workload | ⟷ | Complexity barriers and communicability barriers | When a new product is difficult to use, customers need to learn how to use it properly, which will cause an increase in workload. This is in line with complexity barriers. Besides, communicability barriers emerge when a customer perceives ineffectiveness in a new product. Ineffectiveness could also cause an increased workload. |
| **Psychological barriers** | | | **Explanation** |
| Employees' attitude/disposition toward change | ⟷ | Norm barriers and image barriers | A customer has its own norms and traditions, which could be in conflict with the change. This will perceive a certain attitude towards the change-process, which is in line with norm barriers. In addition, a customer could have specific associations with the brand of the new product or the country it is operating in, which also causes a certain attitude towards the change. This is in line with image barriers. |
| Fear of unknown/uncertainty | ⟷ | Information barriers | Asymmetries in information, or incorrect information, could cause uncertainty among customers, this corresponds to information barriers. |

| | | |
|---|---|---|
| Fear of failure ⟷ Functional risk barriers | | The perception of the customer on how the product should function, could not be in line with the reality. When a product is not working properly, the customer perceives failure in the change implementation, which is in line with functional risk barriers. |
| Disruption of routine | ⟷ Usage barriers | When using the new product, undesirable disruptions in work routines could arise, which is in line with usage barriers. |
| Perceived loss of control, security or status | ⟷ Social risk barriers and personal risk barriers | When using a new product, losing status could arise when customers perceive disapproval from social groups. Besides, customers could feel they are losing control and security when they perceive to be physically in danger or feel afraid the new product could harm their property, which is in line with personal risk barriers. |
| Lack of rewards for implementing change | ⟷ Economic risk barriers | Customers could perceive that the costs are too high to implement the new product. In other words, customers could be concerned the revenues are not high enough compared to its costs. So, there is a fear that the economic reward for implementing the change would not be high enough, which is related to economic risk barriers. |

*Table 2: Combining the Change Management Perspective with the Marketing Perspective*

So, when comparing resistance to change from a change management perspective and from a marketing perspective, individual-level factors and barriers can be associated with each other. Therefore, in this thesis, the attention will be paid to the factors and barriers described in Table 2, since they are considered to be the most important with regard to resistance to change. However, since Talke and Heidenreich (2014) mentioned five more possible barriers at the individual level, these will not be disregarded as they might be able to further explain nuances related to resistance to change in the business-to-business setting.

Although these barriers illustrate and explain quite comprehensively why a new product could be rejected by customers, these individual-level barriers do not explicitly take into account the crucial role that technology may play in influencing customers' perspective. As mentioned before, a great percentage of all articles published in top management do not take into account the role of technology. Neglecting the technological part in resistance to change may cause incomplete findings, and, therefore, confined knowledge, which is especially relevant for marketing theory and practice. Therefore, the socio-material perspective will now be used in the section below in order to describe the relevance of sociomateriality in combination with the above mentioned barriers.

## 2.3. Socio-material perspective

The lens of sociomateriality is used in this research to identify new factors that may trigger or explain resistance to change. This lens is valuable because it helps understanding how the entanglement of human and non-human produce changes, which manifests in practice. Sociomateriality entails the result of the interaction between humans and non-humans that forms and is formed by each other (Fenwick, Edwards, & Sawchuck, as cited in Moura & Bispo, 2018). Non-humans could be for example technology or machinery (Moura & Bispo, 2018, p. 351). Sociomateriality takes into account the role and influence of technology (Orlikowski & Scott, 2008). The 'socio-' part in the term 'sociomateriality' refers to for example symbols and meanings, whilst 'materiality' does not necessarily involve a physical object. This could also be a technology, machine, data or checklist (Moura & Bispo, 2018). According to Orlikowski and Scott (2008), a great percentage of all articles published in top management do not take into account technology. Technology, or materiality, in a large part of the articles are taken for granted. Materiality, or technology, is used through social processes to achieve goals. Orlikowski and Scott (2008) researched three different streams, among others sociomateriality. They depicted that people and things only exist in relation to each other. So, humans as well as technologies acquired form and capabilities through their interpenetration (Orlikowski & Scott, 2008). In other words, social and material are inherently inseparable (Orlikowski & Scott, 2008). Thinking of any practice, sociomateriality emerges and is shaping the possibilities of everyday organizing (Orlikowski, 2007).

The change-process within this research is, on the one hand, *socio*-material because the success of the change hinges on the translation of the affordances of the new product into meaningful knowledge; on the other hand, it is socio-*material* because the change cannot be a success without structures. Therefore, the change process is seen through a socio-material perspective, in which the social and material are fused to explain a successful change process and resistance in practices (Iveroth, 2011).

In order to define how the social and material are entangled, it is important to know what the affordances of the new service or product are. Affordances determine which potentials the materiality, such as technology, offer in relationship with the social (Van Dijk & Rietveld, 2017). In other words, affordances refer to the relationship between a person and an object and it represents the possibilities for how the person can interact with a certain object (Norman, 1999). Affordance is also defined as “the possibilities and limits for action that a material object offers to an actor” (Robey, Anderson, & Raymond, 2013, p. 386). It is therefore important that the material fits the target group of people and that the material affords the target group of people to use it in a way they can understand how the product works (Norman, 1999). Affordances designate constant exchanges of attributes between the human and non-human, such as technologies (Bloomfield, Latham, & Vurdubakis, 2010). Affordances could be positive (possibilities), or negative (limitations) that influence the way in which social and material agencies work together (Norman, 1999). Sandberg and Tsoukas (2011) state that there can be a so-called breakdown when consumers cannot reach their goal due to a disruption of a sociomaterial practice. In other words, when the endless sequence of possibilities is disrupted. This could lead to negative affordances. Hence, as long as consumers perceive positive affordances in the sociomaterial practice, there will be no disruption and could lead to new product acceptance.

According to Leonardi’s Affordance Theory (2013), there are different levels of affordances: individualized affordances, collective affordances and shared affordances. Individual affordance, also called an individual-level construct, is an affordance that someone determines when using a certain object, like technology, but this affordance is not acknowledged within their social group (Leonardi, 2013). So, the person who uses the object could gain status or power, since the rest of the group might not be able to use the object. Collective affordance is collectively created by the social group, which will allow the social group to accomplish things that it would not accomplish otherwise (Leonardi, 2013). This is also called a group-level construct, that could be the result of different individualized affordances grouped together. Shared affordances are shared by all members of the social group. Shared affordances are different from collective affordances, since shared affordances are individuals who share the same affordances and therefore could continue to carry out their work, while collective affordances are created by social groups in order to achieve group goals (Leonardi, 2013). As mentioned before, within this thesis, the individual-level dimension will be the focal point of analysis due to the time available and since the interest of this study is to explore resistance to change from the receiver's perspective. Therefore, Leonardi's Affordance Theory (2013) on the individualized affordances will be the focal point in the section below to offer a comprehensive understanding on how sociomateriality is possibly related to the barriers mentioned in Table 2.

### 2.3.1. Integrating the barriers of resistance to change in the socio-material literature

Since the goal of this research is to explore barriers that influence resistance to change through the lens of sociomateriality and how to overcome these challenges to successfully market a new product from a marketing perspective, the framework illustrated in Figure 2 helps to better understand how sociomateriality can be integrated with the barriers mentioned above in Table 2. As it can be noted, new product acceptance (NPA) is centrally located in the figure and describes whether a consumer does or does not adopt a new product. When a new product is introduced in the market, consumers can either relate to it through negative or positive affordances. Since negative affordances indicate that consumers perceive limitations when adopting a new product, then it could be related to the barriers to adoption mentioned in Table 2. On the contrary, positive affordances arise when there are no barriers perceived by the consumer and when the consumer has the capabilities to determine the properties of an object and how it could possibly be used. Thus, Figure 2 gives a clear visual image of what could be one of the potential effects of negative affordances, namely resistance to change, probably due to those individual-level factors mentioned in Table 2. Besides, the effect of positive affordances is displayed here in a way that seems assuming there is no resistance to change, since the customers are potential adopters. Therefore, since in this research, negative as well as positive affordances will be revealed, Figure 2 helps to visually structure and understand how these affordances are related to new product acceptance. Hence, Figure 2 represents the theoretical framework within this study.

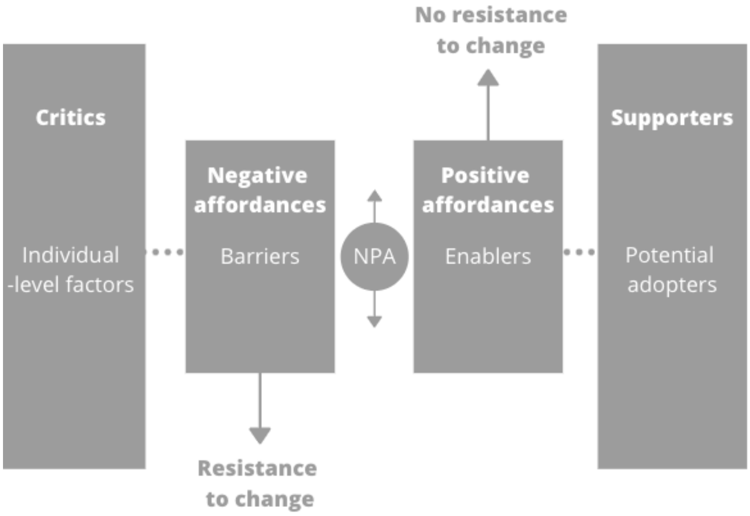


*Figure 2. Interflow of Sociomateriality in Resistance to Change*

# 3. Methodology

Section 3.1. elaborates further on the research design and methodology to execute this research. Section 3.2. describes the research instrument and section 3.3. elaborates on the case selection and sampling. In section 3.4., the data collection is formulated and section 3.5. describes the data analysis.

## 3.1. Research design

This thesis follows an empirical qualitative study approach, in order to successfully answer the research questions. A qualitative study is chosen due to the fact that its goal is to find a deeper understanding of the factors and challenges influencing resistance to change in a business-to-business setting to include technology through the lens of sociomateriality. Qualitative research is by its nature more focused on exploring people's feelings, thoughts and experiences (Denzin, as cited in Rahman, 2017). Besides, qualitative studies have a flexible structure and are not bound by the limitations of quantitative research. Qualitative data could reveal insights which numbers from quantitative data are unable to do (Rahman, 2017). Potential drawbacks of qualitative research are that contextual sensitivities may be left out, so that there is only focus on thoughts and meanings of participants (Verhoeven, 2014). Besides, the relatively small sample sizes in qualitative research raises the issue of generalizability (Verhoeven, 2014). Moreover, the analysis of qualitative research takes a considerable amount of time and the interpretation of data could be more complex (Verhoeven, 2014). Despite these drawbacks, qualitative research is still considered to be the best method to answer the research questions of this thesis.

## 3.2. Research instrument

Since this study is partially exploratory in nature, interviews will be the key research instrument implemented in this study. Indeed, they allow the researcher to investigate people's perception of the factors influencing resistance to change, why it arises in the first place and how to tackle it. Advantages of interviews in qualitative research are that the response rate is usually higher than for example surveys, the non-verbal communication can be observed and the interviewer has control over the order of the questions, which makes it more easy to tailor the subsequent question to an interesting answer provided by the interviewee (Verhoeven, 2014). However, there are also a few disadvantages. Sociomateriality has a holistic approach whereby the practice itself is the unit of analysis (Reckwitz, 2002). However, due to the time allowed for this research, the focus was on the individual, instead of for example the whole environment or interactions between people and material. Other biases could be caused due to, for example, the reaction of the interviewer or the appearance. This could cause socially desirable answers, instead of the real thoughts of the interviewee. Also, conducting interviews may be time-consuming (Verhoeven, 2014). Yet, despite these disadvantages, interviews will be the best choice within this research, as they allow to gather new and in-depth insights regarding individuals' opinion on resistance to change and fit in the timespan of this research.

The interviews held in this thesis aimed to explore interviewee's beliefs, thoughts and experiences in relation to technology and resistance to change, referring to the theoretical framework formulated in section 2.3.1. The interviews are semi-structured since they prompt the observation of subjective responses from the interviewee regarding a particular situation they have experienced (McIntosh & Morse, 2015). This allows the researcher to go more in depth when an answer is not clear or when the interviewer wants to develop further a specific aspect that (s)he found of particular interest (McIntosh & Morse, 2015). Another advantage of semi-structured interviews is that, by following roughly the same interview protocol, they facilitate the analysis and allow the comparison of themes across participants (McIntosh & Morse, 2015).

## 3.3. Case selection and sampling

This study focuses on analyzing and exploring the resistance during a change-process within a business-to-business setting. Recently, Premium Foods, who supplies dairy products, marketed a new product among bakers and they are planning to commercialize the product. However, they noticed that there is resistance among bakers to buy the product. Therefore, this research takes place within this company.

Due to the time available, it is not possible, and necessary, to collect data from all bakers in the Netherlands. Therefore, a sample was used to get valid findings. To use the right sample, convenience sampling was used, since this is in line with the qualitative nature of this thesis. Convenience sampling is a nonprobability sampling strategy where participants are selected based on availability and willingness to take part (Etikan, Musa, & Alkassim, 2016). This strategy was chosen, due to the fact that Premium Foods who supplies the new product, has indicated that bakers are usually working day and night and therefore do not have much time. The company has therefore given a list of bakers who are, in their eyes, most willing to participate. This list consisted of bakers who showed resistance and also bakers who did not show resistance to change. This study has received ethical approval by the University of Twente Ethics Committee.

## 3.4. Data collection

The participants were interviewed face-to-face at location, or, due to the coronavirus outbreak, through phone. The interviews were held in the time span of April to June 2021. A final number of 15 interviews were conducted. After these 15 interviews no new themes were emerging. Hence, theoretical saturation was met. On average, the interviews lasted about 30 minutes. Out of the 15 interviews, five of the participants already were working with the new product, whilst ten of them had heard about the product but decided not to purchase it. About half of the interviews were held on location, because then expressions and body posture were more easily observed. When a person feels nervous, and for example is very active in their chair, it would be helpful to start with a very easy question that will be put at ease. In the end, eight interviews were held on location and seven interviews were held through phone.

The interviews focused on the exploration of the (technological) factors influencing resistance to change in a business-to-business setting and the understanding how these barriers could be overcome to formulate managerial implications for new product acceptance. A brief questionnaire that was sent prior to the start of the interviews could be found in appendix I. This questionnaire was used to gather some demographics for the description of the sample. The interview guide that was used within this research could be found in appendix II.

## 3.5. Data analysis

After the data collection, the collected data was analyzed through thematic analysis, mostly through a deductive, top-down approach. This analysis helped to identify patterns and to make sense of the data (Braun & Clarke, 2006). Advantages of thematic analysis are that it is useful to summarize a lot of data, it can highlight similarities and differences and the analysis is relatively quick and easy to conduct (Braun & Clarke, 2006). Out of the total six steps suggested by Braun and Clark (2006), three steps are particularly important to go through a more deductive approach of thematic analysis. Firstly, the held interviews were transcribed and translated from Dutch to English. The translation process was done by the researcher herself, since the researcher is a Dutch native speaker and fluent in English. To guarantee anonymity, the interviewees were given a psuedo-name and their age was noted in brackets. Secondly, the interviews were coded. For the coding, mostly a top-down approach was followed based on the predefined set of codes derived from the literature as reported in Table 2. During this process, the set of codes given were related to the barriers as described in section 2.2.2. However, given the novelty of topics related to sociomateriality, the emergence of new themes was also needed since any new theme could be integrated in the existing list suggested in Table 2. Hence, for those potential themes, related to technology, and that could not fit within the categories in Table 2, an inductive approach was also implemented through open coding and, subsequently, axial coding. So, when a specific theme could not be related to one of the barriers mentioned in Table 2, another code was invented by the author. The implementation of both deductive and inductive analysis is called abductive analysis (Bamberger, 2018). This kind of analysis is a valuable approach where the development of explanation is linked to the results of advanced theories, whereby new, puzzling facts arise that cannot be typed into the existing categories or be explained by the theory (Bamberger, 2018). Thus, this approach allows offering important alternative reasoning in management, uncovering important phenomena and demanding the researcher to explore beyond the existing theory when the results do not fit the empirical reality (Bamberger, 2018).

# 4. Results

In this section, the results of the study are discussed. As mentioned in section 1.3, the aim of this study is two-fold: (1) to explore the factors influencing resistance to change in a business-to-business setting to include technology through the lens of sociomateriality and (2) to understand how to overcome these challenges to successfully market a product from a market perspective. In line with this aim, the following research question was formulated: "How can a socio-material perspective help explain barriers of new product acceptance?".

## 4.1. General findings

As mentioned in section 3, 15 interviews were conducted with bakers in the Netherlands. All interviewees were male with an average age of 46, whereby only one participant was under 30 years. Besides, the average number of working experience was 27 years. So, a lot of participants started working in the bakery at a young age. Also, six participants were located with their bakery in the east of the Netherlands, three were located in the North, three were located in the South and two of them were located in the West of the Netherlands.

Most interviewees found the information received beforehand the implementation of the new product clear and sufficient. In other words, they understood the firm's intentions of why the company tried to sell the product. Interviewee Andrew (42) stated *"Everything was very clear. We received a folder and got some information from the representative. We did not have any questions or anything"* and interviewee Casper (52) agreed by noting *"I was very satisfied with the way Premium Foods presented the product, it was very clear".* In general, almost all bakers found the new product good, with a nice fresh taste. Bakers who were working with the product had been doing that on average for about 1 year. Bakers who were not working with the product first heard of the product about 2 years ago. When bakers heard about the product for the first time, a representative went over to show them the new product and let them test it. Next to the representative, a few bakers also saw and tried the new product at the annual fair.

In the next sections, the results are described in the specific order from the sub-research questions as mentioned in section 1.4.

## 4.2. Barriers causing resistance to change

Eight barriers were mentioned by the interviewees that caused, according to them, resistance to change in a business-to-business setting. First of all, an **information barrier** was found by 60 percent of the interviewees. An information barrier arises when asymmetries in information are being told, which causes uncertainty among customers.

These uncertainties could have been taken away when the information given was clear and complete. As interviewee Filip (28) mentioned *“We did not know how to combine the new product with winter flavors”*, and interviewee Kai (56) added “*We tried several recipes in winter, but are still not satisfied with the taste. That is why we did not continue selling the product in winter”*. Therefore, the interviewees were only using the new product in summer. In other words, they did not have the full information on how to use the product in winter periods. The interviewees were open-minded to use the product in winter, since they mentioned that when they had the information or inspiration for these winter combinations, they would try and test it. So, in order to overcome this barrier, full information should be given in order to take away the uncertainties of customers.

Secondly, in 40 percent of the interviews who did not use the product, the **value barrier** was found. The value barrier corresponds to a lack of clarity about the advantages of a new product, in comparison with alternative products. Interviewee Leo (32) mentioned *“I just did not see the added value to purchase the new product*”, interviewee Jack (58) agreed by stating *“Why would I add another product to my already huge assortment, if my alternative product is of the same quality or even of a higher quality?”* and interviewee George (55) depicted: *“We are already using so many products. So, then we will make the consideration which products we want to use in our assortment. But I was not triggered enough by the representatives to purchase the new product”*. So, they did not understand, or were not convinced, what the new product could have added to their company.

Relating to this, and which is also the third barrier, is that the interviewees stated they are traditionally working many years with the same product. This is related to the **norm barrier**. The norm barrier corresponds to a person's norms and traditions. As interviewee Dan (45) mentioned: *“If I am satisfied with the product I am working with, I will not switch to another product. Unless the price would be really attractive for the other product”*. This corresponds to what interviewee Michael (52) indicated: *“We have been working for many years with this product, and we are happy with it. I would not change a product we are happy with”.* So, the interviewees worked like this over generations and felt comfortable with that. However, like some interviewees mentioned, they would consider changing their traditional working environment when the price of the new product would be cheaper, like interviewee George (55) stated: *“Then it will be a price-technical story. The other product should be a lot cheaper to switch. Just because our alternative product is that good”* and interviewee Eric (30) added: *“We are currently using another product from another supplier, and we are just very satisfied with that. Then we will not switch, unless the other product is so much cheaper and I could go on holiday with the money I saved.”*

This raises the next, and fourth barrier, found during the interviews, namely the **economic risk barrier**. This barrier implies the perception of costs being too high in comparison with the revenue. 50 percent of all interviewees who were not using the new product mentioned that price was one of the main reasons why they did not purchase the product. Interviewee Ben (39) stated: *"I think the costs will be too high in comparison with the revenue. I do not have that problem with the product I am using now"* also interviewee Michael (52) indicated *"I just think the product is too expensive. That's the main reason we did not purchase it"*. Others stated their alternative product was cheaper and therefore did not want to purchase the new product, like interviewee George (55) stated: *"If the price would be cheaper than my alternative product, I would consider changing. But then it needed to be that attractive so I can go on holiday with the savings".* However, the other 50 percent of the interviewees mentioned that they rather pay more and have a higher quality, than pay less for a poorer quality. Interviewee Nico (43) indicated: *"We are looking for qualitative products, and there is a price tag attached. Our products need to be of high quality, so we only buy the best products"*. Interviewee Jack (58) agreed by stating *"When the product is more expensive but the taste and quality is much better, we will of course buy that product"*. So, for them the importance of quality was above price.

The fifth barrier found was the **image barrier**, which corresponds to a specific association customers could have with a product. The image barrier found during the interviews was caused by the name of the product. About 20 percent of the interviewees associated the new product with something they personally did not like and therefore, in advance, rejected the new product. As interviewee Jack (58) mentioned: *"When you personally do not like buttermilk, you will not work with that product very quickly. Although it can taste really great, I will just associate it with something not tasty".* So, the negative image of ingredients hindered their potential acceptance of the new product. Interviewee Filip (28) agreed by stating *"When you associate a specific taste with a product, and customers do not like that in general, we will not proceed with it".*

Sixth, some interviewees seemed to be afraid of failing, which corresponds to the **fear of failure barrier.** When the expectations of the customers were not in line with reality, the customer perceived failure in the change implementation. The customers' opinion was very important, as, according to interviewee Filip (28) *"If the customers do not like the product, I failed to sell it"* and interviewee Oscar (46) "*You need to make your customers enthusiastic to buy a new product. When that does not work, you did not succeed in selling the product".* All bakers wanted a new product they were selling to be a success. However, when the new product was not a success, they had the feeling they failed. The interviewees noted that they then would have removed the product out of the assortment and replaced it for another product by which they knew it would sell, like interviewee Ivan (63) stated *"When the product is not selling, we are stuck with it. When something is not selling, we will put another product in the assortment so we can make money again".*

The seventh barrier mentioned by the interviewees was the **usage barrier.** All bakers stated that a new product should be easy to use. As interviewee Harry (43) underlined *"I do not have time and do not want to put a lot of effort in a very difficult product in use".* Besides, the interviewees noted that the product should easily fit in their current work-routine and their workload should not be increased due to a new product. As interviewee George (55) stated *"A new product should be easy to use",* interviewee Filip (28) noted *"The new product is definitely easy to use, it does not take a lot of time and fits in our work routine"* and interviewee Michael (52) described *"When I use a new product, it should be easy to process. I do not want to work more. My work only needs to become easier when I purchase a new product".* So, they mentioned they did not want to purchase new machineries or equipment in order to be able to process the new product. They wanted the product to be as easy as possible, in order to save time and energy.

The last barrier found during the interviews, which was a novel factor discovered through inductive analysis, was related to **time**. As interviewee Nico (43) mentioned *"The timing I came in contact with the new product was just not right. I was really busy and was not waiting for another new product",* interviewee Ivan (63) stated *"You need to contact us at the right time. When we are not that busy, we are open to try new things and are full with new plans. But well, when you contact us when we are super busy, we will not consider purchasing it. You need to contact us at the right time."* and interviewee Jack (58) noted: *"I came in contact with the new product right before the COVID outbreak. So it was just bad timing. I still have the product in my freezer. Due to COVID we had a lot of losses. Now things are going better, so perhaps I will try the product later on this month".* This showed that some interviewees were not open-minded at specific times to try out new products. Not all interviewees could explain when the best timing should be to introduce a new product, as interviewee Leo (32) declared *"You just need to be lucky to contact us at the right time. But I cannot tell you when the right timing should be. You just need to try and be lucky".* The interviewees who could answer that question mentioned that most of the time the end of January or mid September would be the best time to contact them, since then they were planning on which products to include in their assortment in summer and winter, respectively. As interviewee Ivan (63) stated *"Mostly, in September we are thinking about our autumn and winter assortment, and in January or February we are thinking about spring and summer. So, that is the time we are looking for inspiration"* and interviewee Jack (58) agreed by stating *"Mostly, in September or October we are switching our assortment to other flavors".*

## 4.3. Technology as a novel factor influencing resistance to change

When looking at how technology could influence resistance to change, it was remarkable that most interviewees did not think technology could help to overcome challenges among the new product acceptance process. As interviewee Kai (56) said: *"We work in a very traditional way, not with the latest technologies or stuff. We work like this over generations. So why change it with difficult technologies?*", interviewee Filip (28) added *"Two years ago we still worked with a fax machine, and did not even have an e-mail address. If that does not show we modernize very slowly, I do not know what will"* and interviewee Leo (32) described: *"I don't think technology could be of influence for the purchase of the product. I think a lot of bakers already know the product through mouth-to-mouth."*

First factor relating to technology the interviewees mentioned were the mailings Premium Foods sends them occasionally. However, 46 percent of the interviewees mentioned they did not read those mailings, since they had no time, were just not checking their mail or they were not interested in reading it because they already were using the products mentioned in the mailing. Interviewee Kai (56) stated *"I never read those mailings. But maybe that is more my fault than Premium Foods. I actually never read my emails",* interviewee Andrew (42) added *"To be honest, I never read those. Then I think: oh another mailing, and then I put it in the trash",* and interviewee George (55) agreed by stating *"I almost never look at them, I work non-stop in the bakery, I don't have time to go behind my computer and read all the received emails".* The interviewees who did read their mailings, about 54 percent, prefered to see mailings with new recipes for inspiration. Interviewee Eric (30) mentioned *"Yes I read them, mostly for new inspiration. And sometimes we try a recipe and test it if we and our customers like it"* and interviewee Ben (39) added *"I read them occasionally. I think it works well. Sometimes we try something out that was mentioned in the mail. Through mailings we can directly check whether it is something for us or not, I like that".* Also, attractive visuals seemed to be important according to them to really grasp their attention and read the mailings. Interviewee Casper (45) also underlined that it would be helpful if the mailings contained royalty-free photos they could use in their bakery for promotions: *"I think they are useful, but I think it would even be more helpful when they contained royalty-free photos we could use".* When the interviewees were asked what a better alternative of the mailings would be, 80 percent answered it would be best to send a representative who could show them the product, face-to-face. This should not be every month, but for example once every 3 or 4 months. As interviewee Ben (39) stated *"Some day a representative came by, to show us the product. Yes I think that works best. We get more enthusiastic about that, then from an email",* interviewee Filip (28) added *"I know my father appreciates it most when someone comes over. In that way, you could talk about it* *and taste the product. That is more convincing than an email"* and interviewee Andrew (42) stated *"I like it best when a representative comes by. Then we can brainstorm and give direct feedback".* Besides, 26 percent of the interviewees mentioned it would be a good idea to give them a test product, in a small amount. Interviewee Nico (43) stated *"You should give away samples of a liter or so. I think that is the best way to try the product and make us curious".* In that way, the bakers could test themselves with the product. According interviewee Ivan (63), almost no baker would throw away the test product, since it would be a sin to throw the product away: *"I am sure no baker will throw a test product away, that should be such a waste"*, and interviewee Nico (43) added *"No baker will throw away the samples. They will at least try, because throwing it away is a sin".*

Secondly, a technology that 86 percent of the interviewees were using, was social media. Especially the channels Facebook and Instagram were being used by the bakeries. Some interviewees also used Twitter and LinkedIn, but to a lesser extent. The interviewees mostly promoted special offers or posted when special occasions or holidays were occuring, like Mother's Day or Easter. The frequency of posting differed among interviewees; some posted daily, others weekly and others only in those special occasions. Promoting through social media is important to these interviewees. Interviewee Filip (28) stated *"When you want to attract new customers, you need to be visible on social media. You need to continue being interesting".* Also, all interviewees noticed positive reactions from customers after posting on social media. Interviewee Kai (56) noted *"We get a lot of positive reactions when we post on Facebook. We can notice the week after the post customers ask about it in the store and are enthusiastic"*, and interviewee Oscar (46) added *"Social media is very important to us, we also get a lot of positive reactions on it".* Besides, when the interviewees were asked whether or not they were using social media themselves for business related matters, 55 percent answered no or in a small amount. In other words, they were hard to reach on social media for marketing campaigns about the new product, since they were not on social media themselves that much. Interviewee Filip (28) mentioned *"I just do not have the time for it. I know we should post more and I really want it, but we just do not have the time"* and interviewee Ivan (63) added *"I do not like social media. I actually hate it. I hate it because I do not understand it. And when you are my age, you do not feel like learning it anymore"*.

Thirdly, one of the demands a new product should comply with was that the product should be easy to work with and fit in their work-routine. As interviewee Harry (43) mentioned *"New products should be easy to work with. I should be able to process the product with the machineries I already have. It is too much of an effort to purchase a new machine only to try a new product",* and interviewee George (55) noted *"The product should be easy to process. I do not like it when it takes a lot of time, it should be fast and I should be able to test it during my normal working day".* So, the technology of machinery that the interviewees have should be able to process the product. Positively, all interviewees mentioned that the new product was easy in use, fitted in their work-routine and could be processed with the machinery they already had.

Concluding, technology does not seem to influence resistance to change in a business-to-business context in a profound way, since the interviewees clearly stated that they prefer that a new product is promoted more in the traditional way. As interviewee George (55) noted: *"I prefer when a representative comes over in our bakery with a new product. Then I can really taste, smell and feel the product in real life. Technologies are not really my thing, I do not have a lot of understanding of it".*

### 4.4. Implications for marketing practices

Four factors were mentioned by the bakers when they considered purchasing a new product: (1) taste/quality, (2) price, (3) usage and (4) customer's opinion, with quality and taste of the product being by far the most important ones according to all bakers. Interviewee Jack (58) stated *"The first thing I pay attention to when trying a new product is the taste of the product. It should be of great quality"* and interviewee Nico (43) added *"The taste should be nice and of high quality, otherwise people will not like the product and I cannot sell it".* The interviewees mentioned they let their employees taste it and when most people like it, they will consider continuing with the product. Secondly, as stated in section 4.2., interviewees mentioned the price as an important factor for product acceptance. About half of the interviewees stated that when the quality of the new product was high, they were willing to pay more for the product. As interviewee Kai (56) noted *"The product needs to be of the right quality and have a good taste. I will not buy the cheapest, I think quality is the most important aspect".* However, a few interviewees also noted that when the quality of the new product did not differ much, neither as the price, with their alternative product, they would stick to the alternative product. When the new product would be a lot cheaper, they would consider using the new product. Thirdly, the interviewees stated they were looking to see whether the product was easy to process. They prefered products that would fit in their daily work routine and that they did not have to make big changes, since that would take too much time. Lastly, the customer's opinion was important when considering whether or not to purchase a new product. Interviewee Oscar (46) mentioned *"We let our customers try the product. Their opinion is very important. If they do not like it, it makes no sense to us to put the product in the assortment"* and interviewee Jack (58) added *"Nowadays, with COVID, we do not let the customers try the product, but before we did and we added a lot of value to their reaction. It was like a small test for us on how the product was perceived by our customers".* Besides, all interviewees stated they would put a new product in their assortment as a test and post on social media in order to promote the product and try to convince the consumer to buy the new product. As interviewee Nico (43) emphasized: *"Good promotion material is so important. Also, try to get in the mind of your customers. When we want to sell spiced biscuits, we place some of it in our oven and let the whole store smell like spiced biscuits. Guaranteed customers will buy the product".* So, during marketing implications, these four main aspects should be taken into consideration when a representative comes by and is trying to sell the new product.

## 4.5. Concluding results

Overall, the above results could help answering the research question: "How can a socio-material perspective help explain barriers of new product acceptance?". It can be stated that technology on its own does not have a big influence on new product acceptance in the business-to-business context of this specific research. Barriers found during the interviews as described in section 4.2. are not specifically related to technology. Besides, when looking at section 4.3., the interviewees mentioned that they prefer their traditional working environment, without using advanced technologies too much. So, although literature showed technology has a substantial role in organizations, in this specific sector the opposite could be stated: technology does not have a substantial role in the change processes within the bakery sector. However, a novel factor was found through inductive analysis that could cause resistance to change, namely *time*.

# 5. Discussion

The aim of this study was to explore factors influencing resistance to change in a business-to-business setting through the lens of sociomateriality. The discussion reflects the results, underlying the similarities and differences in relation to the literature.

A remarkable point is that the found barriers in the literature, which were described more from a business-to-consumer setting or within a company (see: Beer et al., 1990; Canning & Found, 2015; Coch & French, 1948; Cooperrider & Srivastva, 1987; Kotter, 2007), were also found in the researched setting of this thesis that was a business-to-business setting. The found barriers relate to the functional and psychological barriers as depicted in Figure 1. Although the relationship between businesses and consumers is different than the relationship between businesses and enterprises, an entwinement of motives has been seen during the change process of new product acceptance from this research. For instance, Coviello and Brodie (2001) do mention there are few similarities between business-to-consumer and business-to-business environments, like both wanting to generate a high financial return, building up long-term relationships and investing in communication technologies. So, this finding suggests that the motives of resistance to change of consumers as well as businesses are, overall, very much alike.

Next to the found similarities of the business-to-consumer and business-to-business settings during change processes, also a difference was found. All barriers, described in Table 2, were initiated during the interviews, except for one. Only one was not discussed by participants, namely the barrier *perceived loss of control, security or status*. This barrier is related to the feeling of people to lose their 'face' or position due to a perceived disapproval from social groups and the feeling of losing control and security when they perceive to be physically in danger or feel afraid the new product could harm themselves (Rosenberg & Mosca, 2011). According to Aladwani (2001), these risks refer to the perception of the personal risks associated with the change. However, no personal risks were mentioned by the interviewees. In other words, a possible and logical reason this barrier was not found during the interviews was that the new product was not perceived by the interviewees to be dangerous in use and not perceived to cause any harm to anything, since the specific food product is not dangerous at all.

Although one barrier was not mentioned by the participants, seven other barriers were mentioned by the participants which were also found in the literature. The most important one noticed by almost all of them who were not using the new product was the *norm barrier.* The norm barrier refers to the violation of social norms like traditions (Talke & Heidenreich, 2014). As mentioned in the results, few interviewees did not want to break their traditional way of working and some of them perceived negative associations towards the new product. These barriers are difficult to overcome. According to the iceberg theory of Hemingway (as cited in Darzikola, 2013), norms are based in the system of people and are not obviously noticed from the surface. Norms are hard to change, but it is possible when people's empirical and normative expectations are changed, according to Bicchieri and Merchier (2014). In order to change these expectations, discussions and deliberations between the change maker and change receiver could be helpful (Bicchieri & Mercier, 2014).

Next to the norm barrier, *time* was also an interesting barrier that was found through an inductive analysis of participants' words. This was the real novel barrier of this thesis. Time was not grounded in literature research, as described in section 2. A reason for the absence of this barrier in the business-to-consumer literature is that time plays perhaps a more important role in business-to-business settings. The saying *"time is money"* could explain this difference. Businesses feel they have to be on-demand all the time in order to reduce losses due to unused resources (Weinman, 2011). Also, time management in businesses is related positively to the perceived control of time, health of employees and job satisfaction (Claessens, Van Eerde, Rutte, & Roe, 2004). Time is related to sociomateriality, since the way humans interpret time can be *socio,* whilst their use of time could be seen as *material.* Interpretations, interests and interactions of a certain product can vary by time (Meck, 1996). In other words, humans interpret time and interact with time the way they perceive it and feel like something is the 'right or wrong timing' (Meck, 1996). According to Einstein (1905) time is relative, since time passes based on the person's own reference. Maister (1985) agreed by stating that occupied time feels shorter than unoccupied time and waiting solo feels longer than waiting in a group. Also, time is the phenomenon humans use to arrange processes, which makes time socio-material. These processes differ in making appointments or letting machines work accurately. Therefore, time could be a novel factor to explain resistance to change in a business-to-business setting. To underline the importance of timing, Barzel (1968) emphasizes innovations need to be introduced at the right timing for the optimal results. Hwang and Low (2012) also indicated time to be an important factor in their research to processes in construction work. Janicik (2001) added that the value of time is rising among customers and that people like it more to notice a change in advance than on short-term. This also indicates the importance of time during change processes.

As stated above, time is related to sociomateriality. This is of huge relevance, since this research was conducted through the lens of socio-materiality, with a specific focus on technology in the business-to-business sector. As depicted in Figure 2, sociomateriality is connected to negative and positive affordances. The affordances found in this thesis show however that technology was not playing a leading role for the interviewees since they did not account for it in their daily work. A potential reason for their reticence and not positive relationship towards sociomateriality (with a focus on technology and change processes) could be found in the age of the participants. The mean age of the participants was 46, with only one participant under 30 years old and the most participants aged between 40 and 55. In other words, it may be that this generation has less interest in technology and therefore did not feel like it could help overcome barriers arising during a change process. According to Karr (2021), generation X (born between 1965 and 1976) mostly communicates through email and telephone. This corresponds to the found results of the interviewees not, or barely, using social media primarily themselves. This is in contrast to millenials (born between 1977 and 1996) and generation Z (born in 1996 and later). These generations are primarily using social media and communicating through handheld devices (Karr, 2021). Another potential reason could be that the unit of analysis in this research is the individual, instead of encountering the broader context and researching the practice as the unit of analysis. Due to this, it may be that there have been different interpretations and therefore a reticence has been seen towards technology.

Looking at technologies mentioned by the interviewees, the majority mentioned they did not have the time to put a lot of effort in social media. On the one hand, they are hard to reach on social media to promote new products, since they do not have the time to be on social media themselves. On the other hand, almost all interviewees acknowledged the importance of social media. According to Fusté-Forné and Filimon (2021), bakeries acknowledged the importance of social media even more during the COVID-19 pandemic, in order to keep a close relationship with their customers. In comparison to business-to-consumers, the business-to-business sector has been slow in the adoption of social media (Michaelidou, Siamagka, & Christodoulides, 2015). Also, Bamford (2020) depicted bakers do use technology, in the form of using machines, but until now the adoption of technology has been limited. Veldeman, Van Praet and Mechant (2017) agreed by stating that business-to-business environments are more hesitant to embrace the adoption of technologies like social media, while business-to-consumer sectors quickly adopted the use of social media. A fear of being unfamiliar and a lack of knowledge and experience seems to be the reason for these businesses to not adopt social media that quickly (Veldeman et al., 2017).

Overall, seven barriers already identified in the business-to-consumer literature were also found in the change process of new product acceptance in a business-to-business setting during this specific research. A new variable, time, also emerged as an important factor influencing resistance to change. Literature has shown technology plays an important role in organizations. However, the lens of sociomateriality showed technology not to be an important factor in this specific sector. Through several marketing practices, attention could be drawn towards the new product.

## 5.1. Theoretical and practical implications

By addressing the research question *“How can a socio-material perspective help explain barriers of new product acceptance?”* this thesis has both theoretical and practical implications. In terms of theoretical implications, this research contributed to literature on change in business-to-business settings and sociomateriality in two ways. Firstly, it has integrated a sociomaterial perspective into change management processes, to explore how technological influences hindered or facilitated the adoption of new products (Leonardi, 2021; Olikowski & Scott, 2008; Vargo & Lusch, 2004; Macdonald et al., 2011). This integration is novel since there was a gap seen in the imbalance between socio versus material treatment in several studies. In other words, technology is understudied in organizational research, whereby this study narrowed this gap. Besides, technology was the focus of this study, while other organizational research tends to take technology for granted. Secondly, this work expanded the limited research regarding resistance to change in the business-to-business environment (see: Beer et al., 1990; Canning & Found, 2015; Coch & French, 1948; Cooperrider & Srivastva, 1987; Kotter, 2007), by showing that business-to-consumer barriers can also be applied in this environment, as well as proposing time as a novel factor influencing resistance to change. So, this study contributed to the existing literature by extending well-established factors from the business-to-consumer area in a business-to-business environment, and adding the novel *time barrier* during change processes in these environments.

In terms of practical implications, the marketplace feedback about the product was used to learn how to improve the company’s performance. In general, companies in the business-to-business environment have gotten several insights into the barriers that could arise during change processes. In order to overcome these challenges, companies could (1) make sure all information is given and none is withheld, in order to overcome the information barrier; (2) the value of a new product is clearly described and transferred towards their potential customer, in order to overcome the value barrier; (3) have discussions and deliberations between the change maker and change receiver for change traditions, in order to overcome the norm barrier; (4) highlight the economic benefits in comparison to alternative products, in order to overcome the economic risk barrier; (5) try to positively change the image of a specific product through appointing all personal benefits for the customer, in order to overcome the image barrier; (6) make sure the expectations of the customer is in line with reality, in order to overcome the fear of failure barrier; (7) make sure the new product is easy in use which will not cause an increase in workload and fits in their work-routine, in order to overcome the usage barrier; and (8) try to find a time where the potential customer is less busy, so not in their high season, in order to overcome the time barrier. In terms of technology, social media could be adopted to increase the end consumers' positive attitude towards a new product and machinery should be able to process the new product.

When looking more specifically at practical implications for Premium Foods, representatives should search for the right timing to introduce a new product. Only through this way, they can gain attention and overcome the time barrier. Also, when implementing marketing practices by Premium Foods, most focus should be on the taste and quality of the new product, since these were by far the most important factors according to the interviewees. Here, the service-dominant logic comes in place. The S-D logic focuses on operant resources, such as knowledge and skills (Vargo & Lusch, 2006). Representatives of Premium Foods should therefore especially transfer knowledge about the product, with a specification on the quality of the product, and teach them skills on how to work with the product. Looking from another perspective, bakers themselves should also learn how to market the product. The interviewees mentioned they were not using social media that much, but do acknowledge the importance of it. Therefore, they should be aware of other possibilities to promote new products. They could, for example, work with in-store promotions such as displays or sales promotions. According to Mussol, Aurier and Lanauze (2019), promotions of the product have a positive relationship on the feelings toward the brand and the purchase intentions of consumers. Looking again from another perspective, Premium Foods could try to reach the end-consumer of the product, since almost all interviewees stated their customer's opinion is very important. Few interviewees mentioned they would not purchase the product, since there is no demand for it. In other words, Premium Foods could try to create a demand for the new product among the end-consumers.

In short, this thesis helped, on the one hand, to enlarge the awareness and comprehension of how to react to resistance to change; and, on the other hand, to provide companies handles and directions in order to successfully market a new product.

## 5.2. Limitations and future research

As all research, this thesis was not without limitations. Firstly, the sociomaterial perspective was not fully representative in this study. Individuals were interviewed due to the time allowed for this thesis and therefore, the entire research context was not embraced, since there was no time to look at the practice as a unit of analysis, like the environment and interactions of people with materiality. So, according to the theory, sociomateriality has a more holistic approach, but due to available time the focus was more on the individual, which caused inconsistency between the theory and execution of this study. Secondly, convenience sampling was used during this study. Although this way of sampling was in line with the qualitative nature of this work and it was relatively easy and inexpensive in comparison with other methods, it might be that the population of bakers was not totally representative. On the one hand, all the interviewed bakers were men. According to Marktdata (2019), almost 65 percent of all bakeries in the Netherlands are registered in the name of a man. Therefore, the population is not totally representative, since the remaining 35 percent of the female population is not accounted for in this thesis. On the other hand, most bakers that were willing to participate were located in the Eastern part of the Netherlands, with only few bakers from the Western, Northern and Southern part of the Netherlands. The mindset towards willingness to take part in the study was in the Eastern part of the Netherlands more open than in the rest of the Netherlands. A reason for this could be that people, or the interviewees, in East Holland are more in solidarity (Valkeman, 2020). Therefore, future study could focus on another sampling method in order to conduct a more gender divided study and take all geographic areas into account. Secondly, the sample that was used during this study contained participants that were mostly between the age of 40 and 55. Hence, it could be possible that this age category is less familiar with technology. So, future studies with a similar focus could be conducted with younger participants, who might be more inclined to rely more on technology. Broady, Chan and Caputi (2010) added that older people could learn the same new technological skills as younger people, but older people need sufficient time and a supportive environment more than younger people. Younger people learn faster and, therefore, are using new technologies at an earlier stage, like millenials are generation Z. Lastly, as can be read in the results, this specific business-to-business sector is perhaps less prone to implement technology. According to Verspagen and De Loo (1999) there are sectors which are high-tech, medium-tech, and low-tech. Bakeries could be placed in the low-tech box. Also, Bamford (2020) depicted bakers do use technology, in the form of using machines, but until now the adoption of technology has been limited. Hence, future research could compare and further explore whether the results of this thesis are corroborated or, on the contrary, differ between business-to-business sectors. A similar business-to-business sector could be a sector in the food industry, for example the wholesale. An example of a different business-to-business sector could be a high-tech sector, such as engineering or mathematics. Such comparison could also foster a better understanding of the entwinement between the logic and practice in the bakery sector.

# 6. Conclusions

The aim of this thesis was to explore the challenges influencing change in a business-to-business setting to include technology through the lens of sociomateriality and, at the same time, to understand how to overcome these challenges to successfully market a product from a marketing perspective. Through semi-structured interviews with 15 bakers in the Netherlands and an abductive approach, the aim of this study has been achieved. The most important barriers for new product acceptance were the ‘norm barrier’, identified through a more deductive approach, together with the novel ‘time barrier’, which was found through the inductive analysis implemented in this thesis. In order to overcome the norm barrier, discussions and deliberations between the change maker and change receiver could be helpful. In order to overcome the time barrier, representatives should search for the right timing to introduce a new product, which is very likely in January and September for the bakery sector. It was remarkable that technology, from a sociomateriality perspective, was not perceived as a key element according to the interviewed bakers. A reason for this finding could be that the interviewees in the bakery sector, mostly from generation X, do have less interest in technologies than other, younger, generations and than other, more high-tech, sectors. Also, the findings suggested that the barriers found in the business-to-business sector aligned with the ones characterizing the business-to-consumer sector during a change process. Future directions in research with a similar focus could investigate whether other sectors, with younger participants, do have a greater influence of technology through the socio-material perspective and use another way of data collection in order to make sure the practice is the unit of analysis, instead of the individual.

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# Appendices

## Appendix I: Demographic data

Questions sent before the interviews:
Demographic data:

1. How old are you?
2. What is your nationality?
3. Where is your bakery located?
4. How long are you in this business?

## Appendix II: Interview questions

*How can a socio-material perspective help explain barriers of new product acceptance?*

1. How did you hear about the new product for the first time?
2. Which information did you receive about the new product?
    a. To which extent was this clear information for you?
3. What do/did you think of the new product?
4. To what extent are you using the new product nowadays? (If no: go further with question 5. If yes: go further with question 9)
5. What can be considered an obstacle for not using the new product?
    a. Why is this an obstacle for you?
6. What could be helpful for you to overcome such obstacles?
    a. How could this be helpful?
7. If you could change one thing about the product, what would that be so that you would consider using the new product?
8. Imagine you would use the new product, how would the product fit in your traditional routine/workflow? (Go further with question 17)

9. Why did you decide to use this product?
10. How long have you been using the new product?
11. How easy or difficult is the new product in use?
12. How did you get convinced to use the new product?
13. Which obstacles did you face using the new product?
14. How did you overcome these obstacles?
15. What advantages are in it for you to use the new product?
16. How does the new product fit in your traditional routines/workflow?

17. Are you using social media for business-related matters?
    a. Which channels are you using?
    b. Why are you using these channels?
    c. How occasionally are you using these channels?
18. The company occasionally sends information about the new product through online mailings, what do you think about that?
    a. Why do you think that?
    b. What would you do differently?
19. Which kind of technologies do you use in your daily working life?

a. Why do you use these technologies?

20. How does these technologies influence your working routine?
21. How could these technologies be of influence when implementing the new product?

Thank you for answering all my questions. Is there anything that perhaps I forgot to ask but that you would like to share with me?