

Organic Agriculture – Consumer Behavior and Market

## **Individual differences in response to minority descriptive norms for organic food.**

---

Master thesis

Evangelia Lasithiotaki



**First supervisor:** Dr. Erica Van Herpen

**Second supervisor:** Drs. Ynte Van Dam

**Wageningen,**

**2012**

**Thesis supervisor**

Dr. Van Herpen Erica

Marketing and Consumer Behaviour Group

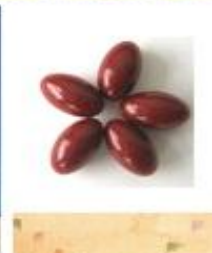
Wageningen University

**Thesis co-supervisor**

Drs. Van Dam Ynte

Marketing and Consumer Behaviour Group

Wageningen University



**ORGANIC FOOD**

Organic Agriculture – Consumer Behavior and Market

**Individual differences in response to minority  
descriptive norms for organic food.**

Master thesis

Evangelia Lasithiotaki

**First supervisor: Dr. Erica Van Herpen**

**Second supervisor: Drs. Ynte Van Dam**

**Wageningen,  
2012**

## Acknowledgments

The author wish to express her appreciation to her supervisor, Erica Van Herpen for the time she dedicated to discuss the steps should be followed for this research. Particularly, her valuable instructions on how to deal with specific issues and how to clarify them and her useful comments were essential for the development of this topic. Also, the fruitful and professional meetings and the effective communication, helped for the successful completion of this thesis on the scheduled time. The author is also thankful to her second supervisor, Ynte van Dam, for the creative input in the beginning of this research, and generally for his valuable help and guidelines.

## Table of Contents

Abstract .....	vi
Chapter 1: Introduction .....	1
1.1 Problem selection .....	1
1.2 Problem description .....	2
1.3 Problem statement .....	2
1.4 Research questions .....	2
1.5 Purpose of the thesis .....	3
1.6 Set-up of the thesis .....	3
Chapter 2: Theoretical framework .....	4
2.1 Social norms .....	4
2.2 Descriptive and injunctive norms .....	4
2.3 When do social norms influence behavior? .....	6
2.4 Minority influence .....	6
Chapter 3: Moderators of behavior .....	8
3.1 Individual Characteristics .....	8
3.1.1 Ego-involvement .....	9
3.1.2 Domain-Specific Innovativeness (DSI) .....	10
3.2 Conceptual framework .....	11
3.3 Application in Organic food Sector .....	12
Chapter 4: Methodology .....	13
4. 1 Study design .....	13
4.2 Measures .....	14
4.2.1 Ego-involvement .....	14
4.2.2 Domain specific innovativeness (DSI) .....	14
4.2.3 Attitudes towards organic food .....	15
4.2.4 Behavioral intentions .....	15
Chapter 5 Results .....	16
5.1 Sample description .....	16
5.2 Reliability of Constructs .....	17
5.3 Factor analysis .....	17
5.4 Testing hypothesis .....	18
5.5 Statistical analysis for the female population of the sample .....	23
Reference list: .....	29

Appendix 1: Consumer’s attitudes towards organic food.....	i
Appendix 2: Statistical analysis for Hypothesis 1a and Hypothesis 1b .....	ii
Appendix 3: Statistical analysis for Hypothesis 4 and Hypothesis 5 .....	iii
Appendix 4: Statistical analysis for the female population of the sample .....	iv
Appendix 5: Statistical analysis for the female population concerning ego-involvement.....	vi
Appendix 6: Statistical analysis for the female population concerning DSI .....	vii

## List of tables

Table 1. Influence of demographic characteristics on buying frequency of organic food.....	16
Table 2. Number of participants and gender distribution among the norm manipulations. .	17
Table 3. Homogeneity of groups based on demographic characteristics. ....	17
Table 4. Reliability of constructs. ....	17
Table 5. Means of the stories for buying intention .....	19
Table 6. Tests of Between-Subjects Effects for buying intention.....	19
Table 7. Pairwise Comparisons between different norm manipulations.....	19
Table 8. Tests of Between-Subjects Effects buying intention .....	21
Table 9. Tests of Between-Subjects Effects for attitudes.....	21

## Table of figures

Figure 1: Conceptual framework for the relationships between constructs .....	11
---	----

## Abstract

This study combined descriptive norm (information about what others are doing) and minority influence; examining their power in the context of individual differences and characteristics in the area of organic food. An online survey was conducted (N=150 WUR students) to investigate the role of consumers individual characteristics (Ego-involvement and Domain Specific innovativeness) in response to minority and growing norm descriptive message compared to the control (no-norm message). This research was aiming to find out if personal traits play a role in organic food choice and more specifically if and how those they influence attitudes and buying intention under different norm manipulations. Firstly, was tested the effect of minority and growing norm messages on attitude and buying intention of organic food compared with the control (no-norm) condition. Secondly, was examined the impact Ego-involvement & DSI in attitude and buying intention of organic food. Third, was studied their impact as moderators of behavior under three different messages (minority, growing and no-norm). The study shows that provision of information coming from a minority descriptive norm has the potential to increase buying intention. Individual characteristics did not have any moderating impact under norm manipulations, although ego involvement was found to be important determinant of organic food choice. The results suggest that communication can be more effective if the message is based on minority descriptive norm message and targets to consumers who are high ego-involved with food category.

**Key words:** descriptive norms, minority influence, growing norms, organic food, ego-involvement, domain specific innovativeness

## Chapter 1: Introduction

### 1.1 Problem selection

It is widely accepted (by marketers) that social norms have the power to influence consumers' behavior. They are extensively used as a mean for shifting behaviors in numerous campaigns and they vary from safety campaigns (wear seatbelts), reduced anti-social behaviors (alcohol consumption), increasing pro-social behaviors (reducing energy consumption) or even used in commercials. Baseline for the influence of social norms in behaviors is that consumers are likely to adopt a behavior if they believe that this behavior is in line with their group norms (Melnyk, 2011). People depend on social comparison to value their own beliefs in relation to the social reality. That means that people, especially under ambiguous situations, observe others to guide their behavior (Lapinski & Rimal, 2005).

There are several ways by which people learn. Among others, learning process can occur either by observing others behavior or by what behavior is acceptable from others and thus, social norms can be divided in two categories. On the one hand, normative beliefs or injunctive norms reflect which behavior is expected from others; what is acceptable to do or not (ex. My colleagues expect me to buy organic vegetables) (Melnyk, 2011; Gockeritz et al., 2010). This is based on the inherent need to be accepted by others. Injunctive norms are likely to influence attitudes as they probably activate typical attitudes that are perceived acceptable by a social group (Melnyk, 2011). On the other hand, there is another type of influence called informational influence or descriptive norms (Aarts & Dijksterhuis, 2003). Descriptive norms define what the majority does in a specific situation and what is the typical to do (ex. most of my colleagues buy organic food) (Melnyk, 2011; Gockeritz et al., 2010). Also under conditions of uncertainty and ambiguity they help people to decide what to do (Lapinski & Rimal 2005).

Undoubtedly, descriptive and injunctive norms have the power to influence people behavior; informing them whether a behavior is appropriate for a specific situation and accepted from the society. However, they differ in the source of human motivation (Kallgren et al., 2000). Descriptive norms provide information for what is done and the non-compliance with the norm involves less social sanctions than injunctive norms. Injunctive norms specify what is ought to be done (Lapinski & Rimal, 2005). Still, their basis for exerting influential behavior is what the majority does. But in many occasions, history has been shaped from the influence of minority behaviors and generally in everyday life it is obvious that not all people follow the majority's behavior (Lapinski & Rimal, 2005). Social influence models imply that the greater in terms of number is the source, the greater is the ability to exercise influence. Minorities, have smaller numbers of people supporting them, so it should be expected the influence they exert to be minimal relative to majority. However, this is not the occasion about minority influence (Wood et al., 1994). In scientific literature there are strong evidence which support that minority has the ability to influence public opinion. The question is under which conditions minority opinion induces influence in the majority and whether minorities and majorities exert influence through same processes (Wood et al., 1994). Furthermore, the power of social influences has to be examined in the context of



individual differences and characteristics, because humans do not act only based on how common a behavior is.

## 1.2 Problem description

An example of minority influence is the organic food market. Although, it expands worldwide on average 20% per year (Pino et al., 2012), only the minority of the consumers still purchase organic food products. Consumers maintain a positive attitude towards them for several reasons and there are numerous studies (Saba & Messina, 2002; Makatouni, 2002; Shepherd et al., 2005; Padel & Foster, 2005; Michaelidou & Hassan., 2008) which confirm that view. However, this positive attitude is not reflected in the actual behavior.

Organic market remains quite small in Europe and in other countries. Presumably, if organic products would have more effective policy and suitable marketing communication, the organic market share would have the potential to increase even more (Wier & Calverley, 2002). Further, individual characteristics might play a role in organic products communication strategies, moderating consumer's behavior. Examining how individual traits will affect behavior in the organic food context might help in future research in how organic food products can be better communicated in the market.

## 1.3 Problem statement

The power of social influence has to be understood in a context of individual characteristics, because humans do not only act based on the popularity of a behavior (Lapinski & Rimal, 2005). So, in the organic food occasion whether the minority or the growing norm will be adopted may depend from the personal traits of ego involvement with the food context and domain-specific innovativeness that will probably moderate the behavior. Investigating these aspects will probably give an insight for further research in the area of marketing communication of organic food.

## 1.4 Research questions

Thus the central research question can be formulated as the following:

**Central research question:** How the personal traits of Ego-involvement and Domain Specific Innovativeness (DSI) will moderate consumer behavior regarding organic food purchases in a context of descriptive minority and growing norm message.

### Sub questions

-How Ego-involvement with food category will influence attitudes and buying intention towards organic food in a given minority descriptive or growing descriptive norm?

-How Domain-Specific Innovativeness (DSI) in food category will influence attitudes and buying intention towards organic food in a given minority descriptive or growing descriptive norm?

-How the findings can be applied in improving marketing communication for organic food?

## 1.5 Purpose of the thesis

The purpose of this thesis is twofold. In practice, it targets to define whether a minority descriptive norm communication has the potential to provide explanatory power in a context of organic food consumption.

Additionally, in this study it will be explored the moderating impact of personal traits (Ego-involvement and DSI) under a minority and growing norm message wording. The literature on growing norms is scarce so it rather difficult and complex to make a hypothesis, but it will be interesting to examine it.

Further, the content of this thesis is scientifically interesting in theory. Even though food choice is considered to be very complex and many factors can influence this process, limited studies examine the influence of the food-related personal traits particularly in the organic food context (Chen, 2007). The role of ego-involvement has not been studied in the context of organic food and is a relatively new topic in that area. Additionally, literature in the organic food context lacks of scientific research about which is the correct way to communicate the message (Winter et al., 2000; Tarkiainen & Sundqvist , 2009). Further, the majority of research focuses on examining norms in the context of negative behaviors (smoking, alcohol consumption). Research on increasing the purchase of specific products is very limited (Melnyk, 2011) .

Based on that knowledge gap and trying to go deeper in consumer psychology about minority influence and growing norms influence ; this thesis will investigate what is the role individual characteristic of ego-involvement and DSI as moderators of behavior. Starting point is the premise that descriptive norms messages are applicable in the organic food occasion and have influential power.

## 1.6 Set-up of the thesis

The remainder of the paper is structured as follows. Chapter two develops a theoretical framework of the concepts that will be discussed in this thesis. After that, chapter three applies the insights of the previous chapter and develops a conceptual framework for the concept of organic food. Following, chapter four describes the methodology and the constructs that will be measured. Chapter five includes the results from the statistical analysis. At last, chapter 6 deals with the discussion, conclusions and the limitations of the study.

## Chapter 2: Theoretical framework

### 2.1 Social norms

Human's behavior is influenced significantly, directly or indirectly, by others behavior as humans are social animals. In many occasions behavior is determined by the belief of what other people do or expect from us (Aarts & Dijksterhuis, 2003). So, people's behavior is determined from personal goals and motives which are in consistence with social norms that are internal part of society. Embedded in every life, social norms are part of values, ethical and behavioral rules, expectations and behaviors exciting among a social group (Melnyk, 2011). Thus, social norms can be defined as "a way of thinking, feeling or behaving that is perceived by group members as appropriate (or normal)" (Melnyk, 2011). They are the usual and accepted behaviors to perform for a variety of situations (Gockeritz et al., 2010). Social norms can be characterized as non-obligatory, informal and socially shared among members of a group which means that there are social sanctions, like approval and disapproval, which differentiates them from laws (Melnyk, 2011).

Definitely our everyday behavior is influenced by social norms. This becomes clearer if we think our behavior in a library. For example, from the moment we enter in a library, we are trying to keep quiet, even if we do not have direct contact with other people. Though the power of this indirect influence by others (who may not see them at the moment but we know that they are silent) is strong enough so people comply with it and keep silent in the environment of the library (Aarts & Dijksterhuis, 2003). In cases like this, it is obvious that people's behavior is guided by social norms. The "silent behavior" in the library is activated and controlled from what we believe that other people anticipate from us (to be silent). It is also obvious from this example that influence can happen automatically without thinking our behavior but just follow what is perceived the right thing to do (Gockeritz et al., 2010). This is supported as well from Aarts & Dijksterhuis (2003) who claim that social influence forms our knowledge-based beliefs about how to behave in specific situations. During the individual socialization process people learn what is usual and common to do within the society by developing mental representations on how to behave in a specific context. So, specific behaviors become part of our internal behavioral activities, affect our behavior and through the social environment norms become embedded and shared within the society.

### 2.2 Descriptive and injunctive norms

Social norms as it was mentioned before can be distinguished in two categories. On the one hand, the inherent need to be accepted by others motivates people to behave in a way that they believe other people approve and discharge a behavior that they believe other people reject. In short, they refer to what is ought to be done. Those are normative beliefs, also known as subjective or injunctive norms. (Aarts & Dijksterhuis, 2003; Lapinski & Rimal, 2005). Injunctive norms reflect which behavior is expected from others; what is acceptable to do or not (ex. My colleagues expect me to buy organic vegetables) (Melnyk, 2011; Gockeritz et al., 2010). Injunctive norms include direct social pressure (Park et al., 2012). So, it is likely to influence attitudes as they probably activate typical attitudes that are perceived acceptable by a social group (Melnyk, 2011).

On the other hand, often people observe others to decide how to behave. This informational influence is called descriptive norms (Aarts & Dijksterhuis, 2003). Descriptive norms define what the majority does in a specific situation and what is the typical to do (ex. most of my colleagues buy organic food) (Melnyk, 2011; Gockeritz et al., 2010), but they do not involve direct influence (Park et al., 2012). Further, descriptive norms under conditions of uncertainty and ambiguity help people to decide what to do (Lapinski & Rimal, 2005).

In brief, both types of norms are similar because provide information about whether a behavior is appropriate for a specific situation. However, they differ because descriptive norms provide information for what is done and the non-compliance with the norm involves less social sanctions than injunctive norms (Lapinski & Rimal, 2005). So they differ in the source of human motivation (Kallgren et al., 2000).

In the literature there is concrete evidence which support that the formulation of a message, according to the occasion, determines its influential power. But sometimes normative information may fail and to produce the opposite results from the initial intentions (Melnyk, 2011). Frequently, communicators in their effort to mobilize the public view about a problem, they depict it (alcohol \drugs campaigns). Although that this depicts the truth, by saying that many people are performing the undesirable behavior that might be received as "Many people are doing this" (Cialdini, 2003; Melnyk, 2011).

For example Cialdini (2003) showed that in the case Arizona Petrified Forest National Park, where the park is suffering from theft by visitors of more than one tone of wood per month. When the message is focused on descriptive normative information, recipients were most likely to increase theft. But when, it is focusing on injunctive normative information, theft was more likely to be suppressed. Undoubtedly, the presentation of a message is of utmost importance for determining the effectiveness of the message depending on the occasion. Cialdini (2003) claims that in situations where the behavior is harmful for the environment, messages should be based on injunctive norms (what people approve or disapprove). Opposite, when the behavior is beneficial for the environment (for example recycling) the descriptive norm message should be effective (Cialdini, 2003).

More specifically, the influence of descriptive norms on behavior was found to be strong in a study regarding the re-use of linen in a hotel. It was found that when a message was based on descriptive norms ("Join your fellow citizens in helping to save the environment"), guests' participation for re-using their linens was higher (44,1 %) in comparison with the environmental-protection message (35,1%) (Goldstein at al., 2007; Cialdini, 2007). Also, the effect of descriptive norms is higher when promotional rather than preventional goals are salient (Melnyk, 2001). Based on human psychology researchers have the ability to define which way of communication is more effective in different situations. So, it is important for marketers to understand when to use social different types of social norm messages depending on the situation, in order to make optimal use of social norms (Cialdini, 2003; Melnyk, 2011). It is important to reiterate that changing the framing of a message is a costless way to guide the behavior towards the desired outcome (Cialdini, 2007).

### 2.3 When do social norms influence behavior?

According to Kallgren et al. (2000) social norms are a powerful strategy to guide human behavior, under specific situations. In that sense, descriptive or injunctive are unlikely to influence the behavior unless they are salient.

Although that social norms are part of the culture an internal part of the daily habits; it is not always the case that they are constantly active. Only if a norm is activated by a situational cue, can spread the activation in the brain and influence the behavior. After the activation of the norm the behavior will be changed in case the consumer believes the norm. If consumers do not believe the message it is more likely to ignore it (Melnyk, 2011). To continue, another factor that determines the extent to which a behavior will be influenced by a norm is whether the behavior is performed in a public or private setting (Lapinski & Rimal, 2005).

The source of the norm plays key role in the adoption of the norm. People are more likely to follow norms that come from other people but who are psychologically close to them such as family and friends. Usually, those people have similar values, preferences and opinions and as a result they have the power to influence other people (Melnyk, 2011). According to social comparison theory, people do not only seek for similar characteristics but also for similar situation which a decision has to be made. Sharing commonalities with other people increase the perceived similarity and as consequence the probability to follow the norm. (Cialdini, 2007; Goldstein et al., 2007). Apart from similarity, uncertainty plays an important role in a norm adoption. More specifically, when people are under ambiguous situations is more likely to follow a descriptive norm to make a decision (Lapinski & Rimal 2005; Cialdini, 2007).

Overall, there are several factors that regulate the effect of social norms. At last, among those are the characteristics of the individual (Lapinski & Rimal, 2005). Individual difference may determine the extent to which a norm will influence the behavior, because not all consumers respond similarly to a stimulus.

### 2.4 Minority influence

Many studies have been conducted on the social pressure exercised by majority groups and minority influence upon the majority (Moscovici et al., 1969). In scientific literature there is evidence which support that both, majorities and minorities, exercise social influence but their influential power occurs through different ways of information processing and under different conditions.

Moscovici et al. (1969) was from the pioneers who claimed that pressure exercised by minority influence can lead to the adoption of minorities' opinion. A consistent minority can affect private and public reactions of the majority (Moscovici & Personnaz, 1980). Though, if the behavior is not consistent the impact of the minority group in the majority is minimal. Individuals who resist in the majority influence introduce an alternative solution or a new norm for the group. That creates uncertainty among the group members about the validity of the majority opinion.

The power of minority was investigated further by Moscovici and Personnaz (1980). Persuasion of the majority by the minority was explained with conversion theory, which is an opposite of compliance (majority influences the minority). More specifically, according to Doms & Van Avermaet (1980) in the majority influence people are involved in a process of comparing their opinion with the public opinion. They comply with the public opinion rather than processing the information of the stimuli. This public compliance is possible to have no true effect on a person's attitude (Baker & Petty, 1994)

However, when individuals are exposed to the minority opinion, they process the information more carefully judging the two different responses, so the conflict is resolved by converting the minority point of view. At the beginning they believe that is wrong because it is against to the public opinion. But, if the minority opinion is consistent, people involve automatically in a validation process in which they critically judge their attitudes and compare them with the minorities'. (Moscovici & Personnaz, 1980; Walker, 1998; Levine & Resnick, 1993; Wood et al., 1994). Further, because a consistent minority creates a conflict with the majority's opinion, individuals are trying to understand the minority's opinion allocating cognitive resources and energy. This conflict arouses higher involvement in their effort to understand the meaning of the stimulus rather than focusing what the other people support (Moscovici & Personnaz, 1980; Levin & Resnick, 1993). Thus, under minority influence, true change in people's opinion is more likely to occur because the procedure is taking place under cognitive elaboration of information (Baker & Petty, 1994). Therefore, minority triggers a more diverse and creative thinking than majority motivating people for information searching and active evaluation of the available information (Levine & Resnick, 1993; Walker, 1998).

Although minorities lack, by definition, of status and numerical power they do not result in minimal impact related with majority sources (Wood et al., 1994). Martin et al. (2003) found that majorities prompt a non-systematic processing as people do not cognitively process the relevant information for a specific issued but comply with what majority supports. Thus, attitude change is weak and not stable. Also, Martin Et al. (2007) finds that attitude is stronger when it is changed via minority influence and based on systematic processing of stimuli and it is more probable to involve in an attitude-consistent behavior than when attitude is altered due to compliance by majority influence through non-systematic information processing. These findings are in line with Moscovici and Personnaz (1980), Levin and Resnick (1993) who support that under minority influence people allocate cognitive resources and energy in their effort to understand minority beliefs.

## Chapter 3: Moderators of behavior

### 3.1 Individual Characteristics

As it is mentioned in the introduction, the power of social influence has to be understood in a context of individual evaluations and characteristics, because humans do not only act based on the popularity of a behavior (Lapinski & Rimal, 2005). Impacts of social norms in behavior cannot be equal to everyone given the differences and personal characteristics of each individual. Food choice is considered to be very complex and many factors can exert influence on this process but few studies have examined the probable influences of the food-related personal traits particularly in the organic food context (Chen, 2007).

In this study the personal traits of ego-involvement and DSI were chosen to be examined. Research has shown that personality traits are good predictors of human behavior on food habits (Chen, 2007; Kim et al., 2010). Further, food-related personality traits, like food involvement have both a direct and an indirect effect on the intention to buy organic products (Guido et al., 2010). Ego-involvement is relatively a new research topic in the context of organic food consumption. There is a lot of discussion about the role of involvement in shopping behavior and it is accepted that the level of involvement has an essential role on consumer evaluations; but studies in the context of organic food are limited. Shopping food is regularly presumed to be a low involvement activity (Tarkiainen & Sundquist, 2009; Kim et al., 2010). However, it is still vague if organic products belong to this category as their purchase frequently reflects an alternative way of thinking (Tarkiainen & Sundquist, 2009). Further, the minority descriptive norm (organic food) is expected that will activate ego- involvement as it induces cognitive elaboration of information.

Organic food, although it is not a relatively new concept in the market, it may be perceived as quite new by some consumers. Thus, domain- specific innovativeness (DSI) as a moderator of behavior is assumed that will have an influence in the behavioral intention. Product- specific measurement of innovativeness can be an indicator for the adoption as it has been revealed that it yields more useful predictions (Citrin et al., 2000) than general innovativeness in the innovation adoption. Identification of the innovators in a product-specific domain is of highest importance for marketers, because in that way they could focus on them and thus to enhance even more their tendency for innovation and marketing strategies and to adapt to the characteristics of the “innovators” group (Goldsmith, 2001).

As it is mentioned before, descriptive norms define what the majority does in a specific situation and what is the typical to do (ex. most of my colleagues buy organic food) (Melnyk, 2011; Gockeritz et al., 2010), Further, descriptive norms under conditions of uncertainty and ambiguity help people to decide what to do, as a strategy of saving cognitive resources (Lapinski & Rimal 2005; Cialdini et al., 2007). So, it can be hypothesized that:

**Hypothesis H1a:** Minority descriptive norm message will result in higher behavioral intention (BI) and more positive attitudes towards organic food than no-norm messages (control).

Unboundedly, people tend to like being part of a growing group, as it offers a feeling of security and it can be also a confirmation that their behavior is in line with the behavior of

the other members of the society. The existing literature on growing norms is scarce, but in this thesis will make an attempt to explore the influential power of growing norms in consumer behavior. So, the following hypothesis can be formulated as follows:

**Hypothesis H1b:** Growing norm message will result in higher BI and more positive attitudes towards organic food than minority descriptive norm and no-norm condition.

### 3.1.1 Ego-involvement

Martin et al., (2007) supports that people are more probable to engage in systematic information processing when a topic is of high personal relevance. The same holds for involvement which is an essential component which determines whether or not a message will be processed. According to Park et al. (2012) the issue of involvement is defined as “the extent to which an individual believes that an issue is of intrinsic value or has important consequences for his or her own life”.

Involvement is a multidimensional concept. In practice, are distinguished different types of involvement. For instance situational involvement reflects short-term feelings under specific circumstances. On the other hand, ego-involvement (or enduring involvement) describes the individuals’ stable long-term concern about a concept or product. More specifically, ego-involvement is a form of self-expression and refers to “the extent by which individuals’ self-concept is connected with their position on a particular issue and forms an integral part of how individuals define themselves” (Lapinski & Rimal, 2005; Park et al., 2012). Ego-involvement usually is related with attitudes, however people may be ego-involved in behaviors as well provide that they are related with the self-concept. For example, people who see themselves as “drinkers” are possible to be highly ego-involved in activities related with alcohol drinking, because they see this role as central part of their self-concept (Lapinski & Rimal, 2005).

In the organic consumption occasion, presumably people who see themselves as “organic consumers” (or green consumers) is likely to get ego-involved in the related behaviors believing that those behaviors are linked with their self-concept. Lapinski & Rimal, (2005) suggest that the influence on descriptive norms on behavior is likely to be supported if the behavior is related with the self-concept. This can be explained through the premise that strong descriptive norms activate the associated aspect of the self-concept making one’s ego-involvement salient. As a result the possibility of performing the behavior is increased. The second hypothesis can be formulated as follows:

**H2:** People with high Ego-involvement are expected to have positive attitudes and higher BI towards organic food.

To continue, minority influence triggers cognitive elaboration of the information. In the food context, although that organic minority norm does not have the “power” of a majority descriptive norm can arouses higher involvement (Moscovici & Personnaz, 1980; Levin & Resnick, 1993). So, individuals allocate cognitive resources and energy in their effort to understand minority beliefs. So, the last hypothesis can be formulated as follows:



**H3:** Under the minority descriptive norm message, Ego-involvement with the food concept will lead to more positive attitudes and higher BI towards organic food than no-norm condition (Control).

The effect of ego-involvement will under a growing norm message is going to be explored.

### 3.1.2 Domain-Specific Innovativeness (DSI)

Innovativeness is a construct that has received a lot of attention and investigation by researchers in the area of consumer behavior as it is highly related with it (Midgley and Dowling, 1978; Hirschman, 1980; Citrin et al., 2000). Innovativeness is the intrinsic willingness of consumers to innovate; without it consumers would focus on routinized buying decisions in a stable product set (Hirschman, 1980). Innovativeness is often understood as a global construct influencing different behaviors, although it should also be understood as a domain specific phenomenon, which will be more predictive of actual behavior in a specific product field comparatively with global innovativeness (Goldsmith et al., 1998). Hirschman (1980) puts forward doubts about whether innovativeness is a personality construct or a genetic trait or is socially oriented characteristic as it was found that is significantly correlated with variables like education level, status, age and income.

Citrin et al. (2000) describes two main types of innovativeness, general innovativeness and Domain Specific Innovativeness. On the one hand, general innovativeness focuses on a cognitive style which affects the individual's responses to new products and more generally experiences. Consumers with high generalized innovativeness are more open to new experiences and are actually looking for something new. However, a person's innovation can be more product-specific and not as much of a personality trait. Domain specific innovativeness (DSI) can support this view as it mirrors the likelihood of consumers to adopt an innovation from a specific domain of a product category. Domain or product specific innovativeness "reflects the tendency to learn about and adopt innovations (new products) within a specific domain of interest" (Goldsmith & Hofacker, 1991; Chao et al., 2009). So, it can reflect a deeper construct of innovativeness explicit for the area of interest of the consumer (Citrin et al., 2000).

Consumers who have high DSI, they are more likely to adopt a perceived innovation for a specific domain of interest as this tendency is an inherent trait of their personality. Apart from that, people with high DSI are willing to allocate cognitive resources in information searching within the products of a specific category. It is expected that consumers with high DSI with food category, will develop a high behavioural intention towards organic food. So, the fourth hypothesis can be formulated as follows:

**Hypothesis H4:** People with high DSI are expected to have more positive attitudes and higher BI towards organic food.

Consumers who are under minority descriptive norm exposure, they get involved in cognitive elaboration processing and they evaluate more critically the available stimuli. That being the case, consumers with high level of DSI presumably have stronger tendency to learn about and adopt innovations (new products) within the food category, so that will be reflected in their purchase intentions. Thus it is assumed:

**H5:** Under the minority descriptive norm condition DSI with the food concept will lead in more positive attitudes and higher BI towards organic food than no-norm condition (control).

The effect of DSI under a growing norm message is going to be explored.

### 3.2 Conceptual framework

The relations between norms, behavior and probable moderators of behavior are illustrated in the diagram.

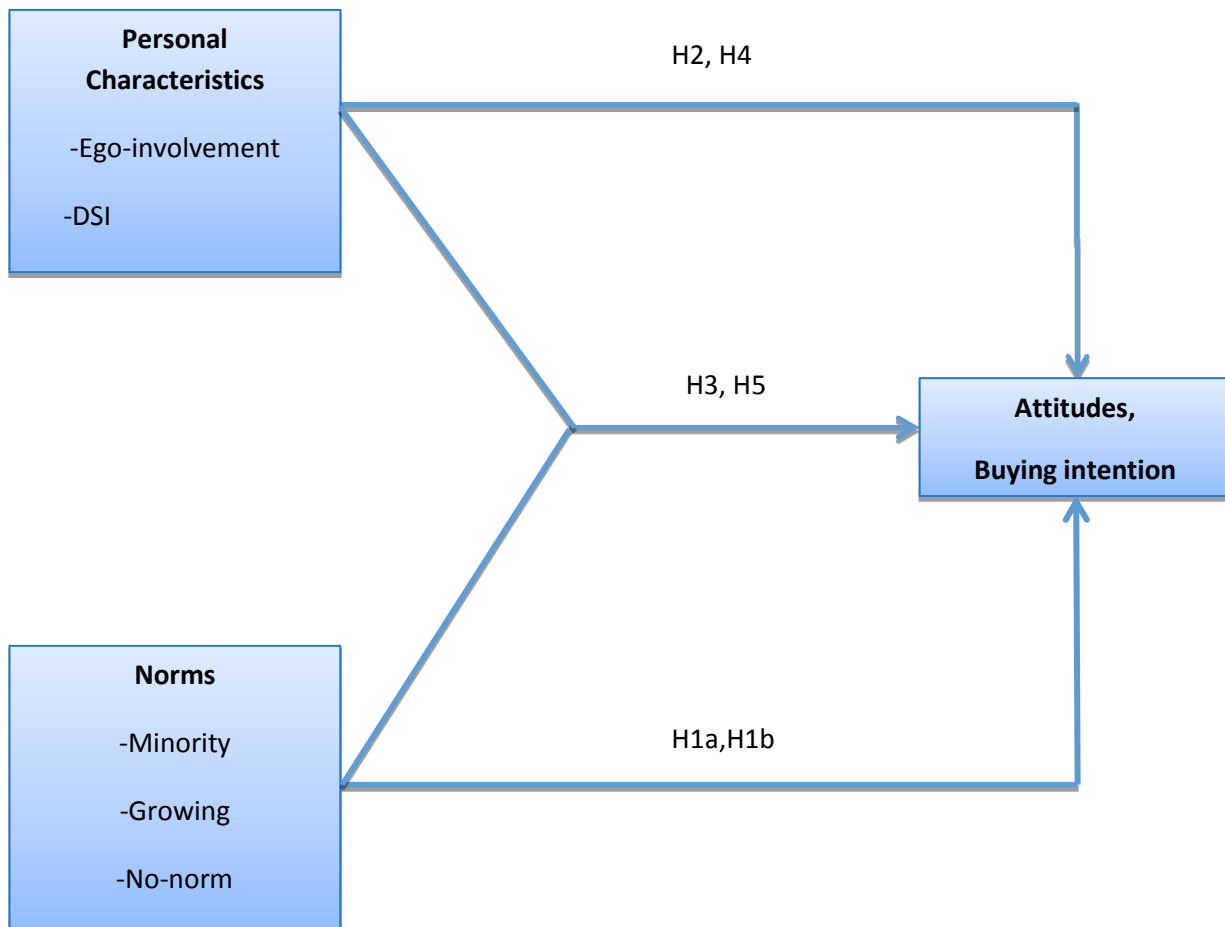


Figure 1: Conceptual framework for the relationships between constructs

### 3.3 Application in Organic food Sector

During the last years, organic sector has increased significantly in Europe and globally and organic market is a promising and blooming segment in Europe (Michaelidou & Hassan, 2008; Tarkiainen & Sundqvist, 2009; Guido et al., 2010). Specially, in Austria and Denmark organic market share is higher than other European countries (Aertsens Et al., 2011). Further, in the developing countries there is a significant increase of organic food production. Several studies (Saba & Messina, 2002; Padel & Foster, 2005; Shepherd et al., 2005; Tarkiainen & Sundqvist, 2009; Aertsens et al., 2011) indicate that consumers have formulated positive attitudes towards consumption of organic food (Appendix 1). However, Sepherd et al. (2005), Tarkiainen & Sundqvist (2009) and Aertsens et al. (2011) indicate that the percentage of systematic organic consumers is low.

Many studies (Saba & Messina, 2002; Hansen et al. 2003; Shephert et al., 2005; Midmore et al., 2005; Michaelidou et al., 2008) have focused on the reasons which influence consumers to purchase organic food and the perceived benefits from organic food consumption. Other studies are focused on defining the market segments and portrait organic consumers' profile (Makatouni, 2002; Padel & Foster, 2005; Vermair & Verbrke, 2006). Although marketers have gained a lot of knowledge about organic market segments and the reasons why people buy organic food; the organic market lacks in effective policies and marketing communication.

Organic market share has the potential to increase with the "proper" message presentation towards the consumers. In the organic food context, social norm campaign is probably applicable as social norms have stronger influence in behaviors that can be observed (buying behavior can easily be observed). Specially, descriptive norm formulation is more effective than injunctive in changing the consumer behavior rather than consumers attitudes. Consumers have already formulated positive stable beliefs about organic products, so the challenge is that marketers manage to change the behavior.

## Chapter 4: Methodology

### 4.1 Study design

The purpose of the experiment is to examine the effect on behavioral intention of the two moderators (ego-involvement and DSI) in two three norm conditions (control minority and growing descriptive norm).

#### Participants & Design

The study sample consisted of 150 undergraduate students of Wageningen University in the Netherlands due to convenience reasons. In 4 weeks' time 27 male and 123 female participants took part in the research and successfully completed the survey. The majority of the students were from Netherlands (128), Greece (8) and 4 from Germany. They took part in the on-line experiment voluntarily and through random selection. The study design included three conditions (Minority, Growing & No-norm message) in which participants were assigned randomly. The age of participants ranged from 18 to 30 years. The majority of participants were between 21-23 years (44%).

#### Procedure

Participants took part in the experiment voluntarily, invited through e-mail. First, they were informed shortly about the type experiment and then the individual traits of ego-involvement and DSI with the food context will be measured. Also in that stage the buying frequency of organic food will be measured. After, participants were assigned randomly in three conditions. In the first (A): No-norm (control condition) were assigned 52, in the second (B) Minority norm assigned 50 and in the last (C) Growing norm condition were assigned 48. In the first condition (A), information about organic food was presented. In the second condition (B), information about organic food was presented formulated in minority descriptive norm wording. At last, in the third condition (C) information about organic food was presented formulated as a growing descriptive norm. More specifically, the norm manipulation was presented as follows:

**No-norm condition (A):** "Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved." (IFOAM, 2009a)

#### **Minority norm (B): Wageningen students buy organic food**

A study among Wageningen students has shown that, even though not the majority of students, a stable group of students consistently buys organic food products.

"Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved." (IFOAM, 2009a)

### **Growing norm (C) : Wageningen students increasingly buy organic food**

A study among Wageningen students has shown that, even though not the majority of students, a growing group of students consistently buys organic food products.

“Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.” (IFOAM, 2009a)

Then the attitudes and the behavioral intention towards organic food will be measured. The data analysis will indicate the impact of individual differences in the attitudes and the behavioral intention. At last, questions about demographics (gender, age, country of origin, master program) will be presented.

## **4.2 Measures**

### **4.2.1 Ego-involvement**

Ego-involvement with food concept in general will be measured before the message presentation. Via this construct I will try to measure whether consumers see food choice as a way to express themselves. Ego-involvement will be measured with three statements in a 7-point scale (adapted from Park et al, 2012)

1. Buying food is an important part of who I am
2. Food choices are important part of my everyday life
3. Food choices can reflect my personality.

### **4.2.2 Domain specific innovativeness (DSI)**

Goldsmith & Hofacker (1991) as a solution to the difficulties faced in the past in measuring “innovativeness” construct in a reliable and valid way developed the DSI; a self- report scale which is applicable in measuring how innovative a consumer is in a specific product field. Research has proved that DSI is appropriate for services and goods and can be used in several situations and in different cultures and product categories as it gives reliable and valid results (Goldsmith, 2001).

DSI scale is a “six item Likert scale using a five-point response format that contains three positively worded and three negatively worded items developed as a reliable and valid way to measure the extent to which a consumer is an innovator in a specific product field (Goldsmith and Hofacker, 1991). It has been used by several researchers (Goldsmith, 2001 ;Citrin et al., 2000) to measure product- specific innovativeness in the field of internet purchases. The construct of DSI will be measured via the following statements in a 7-point Likert scale (Adopted from Roehrich, 2004).

1. Compared to my friends, I like to try new food products.
2. In general, I am the last in my cycle of friends to experience\ taste a new food product
3. In general, I am among the first in my cycle of friends to buy a new food product when it appears in the market.
4. I will not buy a new food product if I haven't taste it first
5. I am aware of the most of the new food products in the market.

#### 4.2.3 Attitudes towards organic food

There are various definitions which describe the meaning of attitudes. Olsen (1999) describes attitudes as “ an evaluative state that intervenes between certain classes of stimuli (objects or entity) and certain classes of evaluative responses”.

Attitudes towards organic food products will be measured with the following 6 items:

1. I think that buying organic food is reasonable (adopted from Tarkiainen & Sundqvist, 2009)
2. I think that eating organic food is good
3. I think that eating organic food is wise (both from Saba & Messina, 2003)
4. I think that organic food is beneficial for health.
5. It is important for me to eat organic food
6. Organic food contributes to environmental protection.

#### 4.2.4 Behavioral intentions

Warshaw & Davis (1984) define behavioral intention as “the degree to which a person has formulated conscious plans to perform or not some specified future behavior”. From psychological point of view, behavioral intention reflects a person's motivations to perform a behavior (Sheeran, 2002). Research has shown there are positive associations between intentions and actual purchase behavior (Kalwani & Silk, 1982). Purchase intention is an important concept for marketing as they have been used to measure a large variety of constructs (Kalwani & Silk, 1982; Morrison, 1979). Buying intention will be measured with the use of four items in a 7-point scale (strongly agree-strongly disagree).

1. I would be willing to search for organic products in the store, in my next purchases.
2. I would be willing to buy organic food in my next purchases (from Martin et al., 2007)
3. I intend to eat organic food products the next week (adopted Sparks and Shepherd (1992)
4. I intent to increase my purchases of organic products in the future (from Luan & Lin, 2005)

## Chapter 5 Results

### 5.1 Sample description

The initial number of respondents was 164. From this number nine participants were excluded because they did not fill up the whole survey and five participants were excluded from the sample because their responses were not to be taken seriously. The first participant exclusion was based on the comment that the picture displayed with the message was offensive, so that maybe affected the attitude towards organic food. Additionally, four more participants were excluded because either they spent too little time (less than one second) in reading the message or they spent too much time on the page with the message, so it was believed that did not take seriously the survey.

So, the final sample consisted of 150 undergraduate students of Wageningen University in the Netherlands due to convenience reasons. In 4 weeks' time 27 male and 123 female participants (Table 2) took part in the research and successfully completed the survey. The majority of the students were from Netherlands (128), Greece (8) and 4 from Germany. They took part in the on-line experiment voluntarily and through random selection. The study design included three conditions (Minority, Growing & No-norm message) in which participants were assigned randomly. The age of participants ranged from 18 to 30 years. The majority of participants were between 21-23 years (44%).

The field of studies that respondents were currently enrolled in has been used as a criterion to divide them aiming at exploring whether their educational background plays a role in the buying frequency of organic products. The majority of the participants belonged to Technology and Nutrition group (35.3 %), followed by Biology, Plant and Animals group (28 %), and at last there were almost equal number of respondents from the field Society and Economics (19.3 %) and Environment and Landscape department (16%).

Statistical analysis indicated that there is no significant influence of the age, the gender and the field of studies over the buying frequency of organic food.

**Table 1.** Influence of demographic characteristics on buying frequency of organic food.

Demographic Characteristics	Significance
Age	0.239
Gender	0.436
Field of studies	0.491

Out of 150 respondents 52 were assigned in the Control condition, 50 in the Minority norm condition and 48 in the Growing norm condition (Table 2).

**Table 2.** Number of participants and gender distribution among the norm manipulations.

Stories	Gender		Number of participants
	Male	Female	
Control	12	40	52
Minority	9	41	50
Growing	6	42	48
<b>Total</b>	<b>27</b>	<b>123</b>	<b>150</b>

Then the homogeneity of the groups was examined in terms of age, gender and field of studies. The statistical tests indicated that the three groups were homogenous except from the field of study (Table 3 below).

**Table 3.** Homogeneity of groups based on demographic characteristics.

Demographic characteristics	Significance
Age	0.551
Gender	0.388
Field of studies	0.041*

## 5.2 Reliability of Constructs

The two latent variables, “Ego-involvement” and “DSI”, were measured with 3-item and 5 - item scale respectively. To check for reliability , Cronbach’s alpha was calculated for each of the two constructs independently. Results are shown in the table 4; both scales showed acceptable levels of reliability.

**Table 4.** Reliability of constructs.

Constructs	N of Items	Reliability	Level
Ego-involvement	3	0.78	acceptable
DSI	5	0.70	acceptable

## 5.3 Factor analysis

Factor analysis was conducted on the 8 items with orthogonal rotation (varimax) because it was assumed the underlying factors were independent. Analysis was run to obtain the eigenvalues of the data. Three components had eigenvalues over the Kaiser’s criterion of 1 and in combination explained 69.480% of the variance. Taking into account the Kaiser’s criterion and by looking at the scree-plot and the inflexions two components were retained finally (the point of infection was left out). However according to Field (2011), Kaiser’s criterion overestimates the number of factors to retain.



## 5.4 Testing hypothesis

For testing the five hypothesis was used the General Linear Model

**Hypothesis H1a: Minority descriptive norm message will result in higher behavioral intention (BI) and more positive attitude than no-norm messages (control) towards organic food.**

The General Linear Model was used to test hypothesis H1a. It was assumed, based on the theory behind, that minority descriptive norm story would result in higher behavioral intention and in more positive attitudes than the control story. Looking at the Pairwise Comparisons between the Control story (0) and the Minority story (1) it is indicated that they have significant difference ( $p=0.04$ ) (Table 7). That means that buying intention increases after the exposure on a minority descriptive norm message.

Regarding attitudes, looking at the Pairwise Comparisons between the Control story (0) and the Minority story (1) there is not statically significant difference between the two conditions ( $p=0.86$ ) (Appendix 2). That means that the exposure on a minority descriptive norm message does not change participants' attitudes towards organic food.

Conclusion for H1a: The hypothesis H1a is partly confirmed; minority descriptive norm message did result in higher behavioural intention but it did not result in more positive attitude than no-norm message (control).

**Hypothesis H1b: Growing norm message will result in higher BI and more positive attitude than minority descriptive norm and no-norm (Control) condition, towards organic food.**

The General Linear Model was used to test hypothesis H1b. Although there is not existing literature on growing norms, based on the premise that people seek to belong in a growing group, it was assumed that: exposure to growing descriptive norm story would result in higher behavioral intention and more positive attitudes than the minority story and the control condition. However, this hypothesis was not confirmed. Looking at the Pairwise Comparisons between Minority story (1) and Growing norm story (2) there is no statically significant difference between the two stories ( $p=0.12$ ) (Table 7). Also, the Pairwise Comparisons between Growing norm story (2) and Control condition (0) indicate that there is no statically significant difference between the two stories ( $p=0.7$ ) (Table 7). That means that there is no significant difference in the buying intention after the exposure in a minority descriptive norm message or in a growing norm message. It was indicted that the overall effect of story on buying intention is not significant ( $F(2,147)=2.26$ ,  $p=1.08$ ) (Table 6).

Regarding attitudes, by looking the Pairwise Comparisons between Minority story (1) and Growing norm story (2) there is not statically significant difference between the two conditions ( $p=0.85$ ). Also, there is not any statistically significant difference between Growing norm story (2) and Control condition (0) ( $P=0.71$ ) (Appendix 2). The results indicate that the overall effect of the three stories on attitudes, has not any statistically significant difference ( $F(2,147)=0.068$ ,  $p=0.93$ ) (Appendix 2).

Conclusion for H1b: The statistical analysis indicates that the hypothesis H1b is not confirmed. That means that growing norm message did not result neither in higher buying

intention nor in more positive attitudes towards organic food, compared with the minority and the no-norm message norm (control) message.

Table 5. Means of the stories for buying intention

Dependent Variable: INTENTION			
Story	Mean	Std. Deviation	N
Control	3.59	1.43	52
Minority	4.20	1.53	50
Growing	3.71	1.57	48
Total	3.83	1.52	150

Table 6. Tests of Between-Subjects Effects for buying intention

Dependent Variable: INTENTION					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10.336a	2	5.168	2.260	.108
Intercept	2205.529	1	2205.529	964.508	.000
Story	10.336	2	5.168	2.260	.108
Error	336.143	147	2.287		
Total	2552.563	150			
Corrected Total	346.479	149			

a. R Squared = .030 (Adjusted R Squared = .017)

Table 7. Pairwise Comparisons between different norm manipulations

Dependent Variable: INTENTION				
(I) Story	(J) Story	Mean Difference (I-J)	Std. Error	Sig.
Control	Minority	-.604*	.300	.046
	Growing	-.117	.303	.699
Minority	Control	.604*	.300	.046
	Growing	.486	.306	.114
Growing	Control	.117	.303	.699
	Minority	-.486	.306	.114

Based on estimated marginal means  
 \*. The mean difference is significant at the .05 level.

Hypothesis H2 and hypothesis H3 will be analysed together.

**Hypothesis H2: People with high Ego-involvement with food category are expected to have high BI and more positive attitudes towards organic food.**

**Hypothesis H3: Under the minority descriptive norm message Ego-involvement with the food concept will lead is higher BI and more positive attitude than no-norm condition (Control).**

To test the second and the third hypothesis the General Linear Model was used. The second hypothesis assumed that high ego-involvement with food category will result in more positive attitudes and higher buying intention towards organic food. To test the second hypothesis, firstly, the variable Ego-involvement was centered around its mean; in that way the results are more easy and clear for interpretation. The mean value of the variable Ego-involvement was subtracted and then a new variable (MeanCenteredEgo-involvement) was created from the calculation of the original values minus the mean. The third hypothesis stated that under the minority message ego-involvement would lead to more positive attitudes and higher behavioral intention towards organic food. In short, third hypothesis indicated that ego-involvement would moderate consumers' behavior under the different norm manipulations.

The results suggest that there is significant main effect of ego-involvement in the buying intention of organic food ( $F(1, 144)=17.42, p<0.001$ ) (Table 8). But the interaction effect between the variable story and Ego-involvement, is not significant ( $F(2, 144)=0.99, p=0.38$ ) (Table 8). That indicates that the effect of story is not depended on the level of participant's Ego-involvement. So, the level of ego-involvement did not play a role on participant's responses after the exposure in the different stories.

Regarding attitudes, table 10 indicate that there is significant main effect of ego-involvement on the participants' attitudes towards organic food  $F(1, 144)=20.3, p<0.001$  (Table 9). Additionally, the statistical analysis suggests that the interaction effect between ego-involvement and the story is not significant ( $F(2, 144)=1.34, p=0.26$ ) (Table 9). That means that people who are more ego-involved with food category tend to have more positive attitudes towards organic food, independent from the story that they are exposed.

Conclusion for H2 and H3: The statistical analysis indicates that the hypothesis H2 is confirmed for both buying intention and attitudes. However, hypothesis H3 was not confirmed either for buying intention or for attitudes. That means that people who are high ego-involved with food category tend to have higher buying intention and more positive attitudes towards organic food, than people who are less; independent from the story that they are exposed. So, ego-involvement with food category has not moderating effects in intention and attitudes under the different norm messages.

**Table 8.** Tests of Between-Subjects Effects buying intention

<b>Dependent Variable: INTENTION</b>						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
<b>Corrected Model</b>	49.298a	5	9.860	4.777	.000	
<b>Intercept</b>	2193.767	1	2193.767	1062.997	.000	
<b>Story</b>	7.885	2	3.943	1.910	.152	
<b>MCentEGO</b>	35.945	1	35.945	17.417	.000	
<b>Story* MCentEGO</b>	4.088	2	2.044	.990	.374	
<b>Error</b>	297.181	144	2.064			
<b>Total</b>	2552.563	150				
<b>Corrected Total</b>	346.479	149				
<b>a. R Squared = .142 (Adjusted R Squared = .113)</b>						

**Table 9.** Tests of Between-Subjects Effects for attitudes

<b>Dependent Variable: ATTITUDE</b>						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
<b>Corrected Model</b>	22.594a	5	4.519	4.510	.001	
<b>Intercept</b>	3498.384	1	3498.384	3491.347	.000	
<b>MCentEGO</b>	20.333	1	20.333	20.292	.000	
<b>Story</b>	.195	2	.098	.098	.907	
<b>Story * MCentEGO</b>	2.692	2	1.346	1.343	.264	
<b>Error</b>	144.290	144	1.002			
<b>Total</b>	3700.111	150				
<b>Corrected Total</b>	166.884	149				
<b>a. R Squared = .135 (Adjusted R Squared = .105)</b>						

Hypothesis H4 and H5 will be analysed together.

**Hypothesis H4: People with high DSI are expected to have high BI and positive attitude toward organic food. Hypothesis H4: People with high DSI are expected to have high BI and positive attitude toward organic food.**

**Hypothesis H5: Under the minority descriptive norm condition DSI with the food concept will lead in higher BI than no-norm condition (control) and in more positive attitude toward organic food.**

To test the fourth and the fifth hypothesis the General Linear Model was used. The fourth hypothesis assumed that high DSI in food category will result in more positive attitudes and higher buying intention towards organic food. To test the fourth hypothesis, firstly, the variable DSI was centered around its mean; so the results are more easy and clear for interpretation. The mean value of the variable DSI was subtracted and then a new variable (MeanCenteredDSI) was created from the calculation of the original values minus the mean. The fifth hypothesis stated that under the minority message ego-involvement would lead to more positive attitudes and higher behavioral intention towards organic food. In short, it was hypothesized that DSI would moderate consumers' behavior under the different norm manipulations.

The results suggest that there is no significant main effect of DSI in the buying intention towards organic food ( $F(1,144)=0.979$ ,  $p=0.33$ ) (Appendix 3). The interaction effect between the variable story and DSI, is not significant ( $F(2, 144)= 0.32$ ,  $p=0.72$ ) (Appendix 3). That indicates that the effect of story is not depended on the level of participant's DSI in food category. In short, the level of DSI did not play a role on participant's responses after the exposure in the different stories.

Concerning attitudes, there is no significant main effect of DSI on attitudes towards organic food ( $F(1,144)=0.17$ ,  $p=0.89$ ) (Appendix 3). Also, the interaction effect of DSI with the story is not significant ( $F(2, 144)= 0.85$ ,  $p=0.43$ ) (Appendix 3).

Conclusion for H4 and H5: The statistical analysis indicates that hypothesis H4 and H5 are confirmed neither for attitudes nor for buying intention. That means that the level of DSI with food category does not have any impact neither on buying intention nor on attitudes. Moreover, DSI with food category has not any moderating effects neither on buying intention nor on attitudes towards organic food, under the different norm messages.

## 5.5 Statistical analysis for the female population of the sample

Literature indicates that females are more attached to animal welfare issues and environmental values (Aertsens et al., 2012). Organic products are perceived to be more environmentally sustainable than conventional products and are produced in line with animal welfare principles. Thus, maybe women respond differently to social norm messages concerning organic food. Therefore, statistical analysis was conducted for the female population of the sample (N= 123). The aim for this analysis is to investigate whether females respond differently in social norm messages and what will be the effects on the results.

The results showed that when the analysis was conducted only for the female population minority descriptive norm message compared with the no-norm message (control) did not result in higher buying intention. Though, when the analysis was conducted for the whole population (N=150) minority descriptive norm message resulted in higher buying intention compared with the no-norm message (control). However, it was believed that female population would respond positively in the minority norm message for organic food, as literature supports that women are more attached to environmental values (Aertsens et al., 2012); resulting in high buying intention for organic food. On the other hand, similar results were indicated concerning ego-involvement. In both cases, ego-involvement resulted both occasions in higher buying intention and more positive attitudes towards organic food, but did not have any moderating effects under the three different norm manipulations. At last, regarding the variable DSI the statistical analysis showed that DSI did not have any impact on buying intention and attitudes or played a role as a moderator of behaviour under the different norm manipulation for the female population; same results were indicated when the analysis was conducted for the whole population of the sample (N=150).

More specifically, the results indicated that the overall effect of story on buying intention is not significant  $F(2, 120)=1.96, p=0.14$  (Appendix 4). That means that there is no significant difference after the exposure in a minority descriptive norm message or in a growing norm message or in a no-norm message (control) in the buying intention of female population. Regarding attitudes, the results indicate that the overall effect of the three stories on attitudes, have not any statistically significant difference ( $F(2,120)=0.133, p=0.89$ ) (Appendix 4).

Also, the results suggest that there is significant main effect of ego-involvement in the buying intention of organic food for the female population of the sample ( $F(1,117)=13.9, p<0.001$ ) (Appendix 5). But the interaction effect between the variable story and Ego-involvement, is not significant ( $F(2, 177)= 0.75, p=0.48$ ) (Appendix 5). That indicates that the effect of story is not dependent on the level of participant's Ego-involvement. So, the level of ego-involvement did not play a role on participant's responses after the exposure in the different stories.

Regarding attitudes, statistical analysis indicated that there is significant main effect of ego-involvement on the participants' attitudes towards organic food ( $F(1,117)=14.9, p< 0.001$ ) (Appendix 5). Additionally, the statistical analysis suggests that the interaction effect between ego-involvement and the story is not significant ( $F(2, 177)= 1.3, p=0.28$ ) (Appendix

5). That means that people who are more ego-involved with food category tend to have more positive attitudes towards organic food, independent from the story that they are exposed.

The results suggest that there is no significant main effect of DSI in the buying intention towards organic food ( $F(1,117)=0.15$ ,  $p=0.7$ ) (Appendix 6). The interaction effect between the variable story and DSI, is not significant ( $F(2, 177)=0.12$ ,  $p=0.89$ ) (Appendix 6). That indicates that the effect of story is not depended on the level of participant's DSI in food category. In short, the level of DSI did not play a role on participant's responses after the exposure in the different stories.

Concerning attitudes, there is no significant main effect of DSI on attitudes towards organic food ( $F(1,117)=0.52$ ,  $p=0.47$ ) (Appendix 6). Also, the interaction effect of DSI with the story is not significant ( $F(2, 177)=0.89$ ,  $p=0.41$ ) (Appendix 6).

## Chapter 6: Discussion and conclusions

Literature indicates that social norms have the potential to affect behavior as people depend on social comparison to value their own beliefs and especially under ambiguous situations, observe others to guide their behavior (Lapinski & Rimal 2005, Melnyk, 2011). This study was particularly interesting because combined descriptive norm information and minority influence; examining their power in the context of individual differences and characteristics.

This study was conducted aiming to examine consumers individual characteristics (Ego-involvement and DSI) in response to minority norm message; seeking to find out whether personal traits play a role in organic food choice and more specifically if and how those personal traits influence attitudes and buying intention under different descriptive norm messages. In this research were investigated firstly, the effect of minority and growing norm messages on attitude and buying intention of organic food compared with the control (no-norm) condition. Secondly, the impact of food-related personal characteristics (Ego-involvement & DSI) in attitude and buying intention of organic food. Third, their impact as moderators of behavior under three different messages (minority, growing and no-norm). The concept of growing norm was introduced and examined although there is no existing literature on that topic.

In general, findings show that attitudes and buying intention towards organic food cannot be changed easily. The actual results of this study vary from the expected. There are many possible reasons for this discrepancy that will be discussed in the limitations section.

Based on the findings, minority descriptive norm has the potential to influence behavior but have limited influence on attitudes. This is in line with findings from previous studies (Menllyk, 2011) in which was indicate that descriptive norms have stronger effects on behavior than attitudes. Additionally, minorities, although the lack of numerical power; according to Moscovici & Personnaz, 1980; Levin & Resnick, 1993 can affect majority's opinion. Under minority influence people allocate cognitive resources and energy in their effort to understand minority beliefs. So minority influence in combination with descriptive norm formulation has the potential to influence behavior rather that attitudes.

Further, based on the assumption that people like being part of a growing group, as this offers a feeling of security, it was hypothesized that growing norm message will lead to higher buying intention than minority message. However this was not confirmed. Due to the lack of scientific literature and research in that topic, the hypothesis was based on non-scientific background. Research is needed on this topic, so we can understand if and how growing norms exert social influence.

In this study two personal traits (Ego-involvement & DSI) and their influence in attitudes and buying intention were examined. Previous research (Chen, 2007; Kim et al., 2010 indicated that personality traits are good predictors of human behavior on food habits. In the case of Ego-involvement, the main effects were statistically significant. That indicates that people highly involved with food category have stronger buying intention towards organic food than people who are low involved. So, this confirms that the premise that ego-involvement is important determinant of organic food choice. Also, is in line with Guido et al. (2010) who



suggests that involvement has direct and an indirect effect on consumer's the intention to buy organic products. However, the moderating role of ego-involvement under different norm messages was not confirmed.

Concerning DSI, analysis did not indicate statistically significant differences neither in the buying intention nor as a moderator of behavior under the three norm manipulations. So, in this study, it seems that the level of DSI in food category did not play a role in consumers intention to buy organic food. Probably, DSI scale is created for really innovative constructs, so maybe it was not the proper personality trait to measure.

Additionally, in this study statistical analysis was conducted for the female population of the sample. The results from this analysis indicated that for the female population of the sample minority descriptive norm message compared with the no-norm message (control) did not result in higher buying intention like it resulted when the analysis was conducted for the whole population. Similar results were indicated concerning ego –involvement. In both cases, ego-involvement resulted in higher buying intention and more positive attitudes towards organic food, but did not had any moderating effects under the three different norm manipulations. At last, regarding the variable DSI the statistical analysis showed that DSI did not had any impact on buying intention and attitudes or played a role as a moderator of behaviour under the different norm manipulation for the female population; same results were indicated when the analysis was conducted for the whole population of the sample.

### **Limitations**

The results of this study were based on an on-line experiment. As it seems, on-line experiments are not the more effective methods to investigate interaction among latent variables. Also, is questionable whether participants paid attention to the messages as the time to read the message diverse between the participants. So, to increase participants' attention and avoid environment distractions it is advisable that future studies invite all the participants in a room to fill up the survey. Besides, maybe the results were different if the experiment was designed and conducted in a more realist set up. For example the messages could have been presented like short fictious advertisements on television or like advertisements in a magazine.

Regarding message wording, in the minority descriptive norm occasion, the message was not clear enough as, in its first part, it stated: "A study among Wageningen students has shown that, even though *not the majority of students, a stable group* of students consistently buys organic food products." This message formulation is not very clear and is questionable whether it makes salient the minority influence. Though people who were exposed in that message, they showed higher buying intention than people who were exposed in the no-norm message.

Further, a student sample is unlikely to be representative of the whole population and especially when the student sample comes from Wageningen University; which is well-known from the emphasis that gives in issues such as sustainability and sustainable food consumption. Additional to that, the majority of participants were Dutch students; so the sample lack of cultural diversity. Probably this had played a role in the results. Statistical

data of 2010 indicate that organic food consumption in the Netherlands is lower than in other European countries (European commission, 2010). Maybe if the sample was diverse in cultural backgrounds the results were different. Also, is questionable if students are ego-involved with food because of the lack of time and money. They seek more for convenience and low price in food. That might have affected their initial attitudes.

Additionally, the normative pressure from the environment was not taken into account, because the experiment was on-line. Although the messages contained a type of social pressure describing a particular behavior that students from Wageningen University perform. Though, participants did not have the opportunity to interact with their peers in a real environment.

Another limitation of the study concerns the scales. Neither Ego-involvement scale nor DSI showed high levels of reliability. Regarding DSI, the initial scale which developed by Goldenstein & Hofacker (1991) was 6-item scale, but in this study was developed and used a 5-item scale; maybe affect the reliability of the scale. Further, DSI in the literature concerns really new and innovative products (Chao et al., 2009). Organic food products can be perceived as a new concept in the food industry by some consumers who are not familiar with them but is doubtful if they can be considered as really innovative products.

Is difficult to draw conclusions because there is a variety of situational factors that may draw the attention to a norm or distract attention from it (Kallegnen & Reno, 2000). For example mood, price, assortment variety, family life cycle are some of the factors which may influence consumer's attitudes and intentions towards organic food. Those variables were not examined during this survey.

### **Practical implications**

Norm – based communication for organic food have the potential to increase the likelihood of organic food products purchase (promote environment, animal welfare, freshness, naturalness). Minority descriptive norm campaigns maybe will stimulate and will catch the attention of the consumers to process the message. Further, the results indicated that people who are more ego-involved with food category tent to have higher possibilities to buy organic food that those who are less. Based on that result, a marketing strategy that focuses on displaying an advertisement on food magazines or between television series which deal with food and cooking, maybe is effective. Alternatively, a marketing strategy could focus on how to increase consumers ego-involvement in food category or in organic products. That could be succeeded probably provision of more information about organic food (Aertsens et al., 2011).

Social norms campaigns should use people very similar to the target group. According to social comparison theory; when people are people are making decisions under uncertainty, individuals tent to follow the norms of others who look similar to them (Goldenstein et al., 2007). Also, campaigns of organic products should focus on enhancing the trust of organic certification systems, by drawing consumer's attention on certification logos and provide information about it. Also, is challenging how marketers will structure the messages so they can maximize the chance that the persuasive components of the messages remain salient at

the time of purchase (Cialdini, 2003). Altering the wording of a message and adopting it in the characteristics of the consumers is an effective and costless way to guide behavior (Cialdini, 2007).

### **Suggestion for future research**

This unique study was an attempt to go deeper in consumer psychology and behavior towards organic food and social norms. As it was mentioned before, due to time constraints the experiment did not take place in a real environment. So it is recommended that future research be more realistic. Possibly, communicators can develop a short fake advertisement illustrated in a magazine or displayed on television and then measure the attitudes and the buying intention of the participants. However, still the results probably will not be very representative of the actual behavior at the point of purchase, because of the construal theory (the more distant an object is from the individual the more abstract it will be thought of).

Another suggestion is that future research changes the target group. People from different cultures, age, status, educational background have different views towards organic food. Maybe this affects how they receive and process the messages. People from collectivistic cultures (compared to individualistic) have a stronger tendency to be "as everybody", that may increase the influence of descriptive norms (Menlyk, 2011). Also, a non-student population would help in generalizing the findings.

Additionally, a similar future study could use different and more scales to measure constructs which so they are more reliable. Also, other moderators could be examined, to investigate their role in the relationship between descriptive norms and behaviors such as injunctive norms (Lapinski & Rimal, 2005), or other types of involvement (situational), and self-identity. At last, research should be conducted in growing norms influence, investigate by which mental processes information coming from a growing norm are followed in the brain.

## Reference list:

- Aarts, H.; Dijksterhuis, A. (2003): 'The silence of the library: Environment, Situational Norm, and Social Behavior'. *Journal of Personality and Social Psychology*, **84**(1), 18-28.
- Baker, S.M.; Petty R.E. (1994). 'Majority and Minority: Source-position imbalance as a Determinant of Message Scrutiny.' *Journal of Personality and Social Psychology*, **67** (1), 5-19.
- Chao, C.W.; Reid, M., Mavondo F. (2009). 'The influence of consumer innovativeness on really new product adoption.' *ANZMAC*, 1-8.
- Chen, M.F. (2007). 'Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits'. *Food quality and Preference*, **18**, 1008-1021.
- Cialdini, R.B. (2003). 'Crafting Normative Messages to Protect the Environment'. *Current Directions in Psychological Science*, **12**, 105.
- Cialdini, R.B. (2007). 'Descriptive social norms as underappreciated sources of social control'. *Psychometrica*, **72**(2), 263-268.
- Citrin, A.V.; Sprott, D.E.; Silverman, S.N.; Stem, D.E. (2000). 'Adoption of Internet shopping: the role of consumer innovativeness'. *Industrial Management & Data Systems*, **100** (7), 294-300.
- Doms, M.; Van Avermaet E. (1980). 'Majority influence, Minority Influence and Conversion Behavior : A replication'. *Journal of Experimental Social Psychology* , **16**, 283-292.
- European Commission- Agriculture and Rural Development.(2010). 'An analysis of the EU organic sector'. (Available [http:// ec.europa.eu/agriculture /analysis/ markets/ organic\\_2010\\_en.pdf](http://ec.europa.eu/agriculture/analysis/markets/organic_2010_en.pdf)) (last access 13\11\2012).
- Field A. P. (2011). *Discovering statistics using spss*. 3<sup>rd</sup> ed. London: Sage.
- Fotopoulos, C.; Krystallis, A. (2002). 'Organic product avoidance: Reasons for rejection and potential buyers' identification in a countrywide survey'. *British Food Journal*, **104** (3/4/5), 233-260.
- Gockeritz, S.; Schultz, P.W.; Rendon, T.; Cialdini, R.B.; Goldstein, N.J.; Giskevicious, V. (2010). 'Descriptive normative beliefs and conservation behavior: The moderating roles of personal involvement and injunctive normative beliefs'. *European Journal of Social Psychology*, **40** , 514-523.
- Goldsmith, R.E.; d'Hauteville F.; Flynn L.R. (1998). Theory and measurement of consumer innovativeness: A transnational evaluation'. *European Journal of Marketing*, **32** (3), 340 – 353.
- Goldsmith, R. E.; Hofacker, C. E. (1991) 'Measuring Consumer Innovativeness'. *Journal of the Academy of Marketing Science* **19**, 209-221.

Goldsmith, R.E. (2001). 'Using the Domain Specific Innovativeness Scale to identify innovative Internet consumers.' *Internet Research*, **11** (2), 149 – 158.

Goldstein, N.J.; Griskevicius V.; Cialdini R.B. (2007). 'Invoking Social Norms: A Social Psychology Perspective on Improving Hotels' Linen'. *Cornell Hotel and Restaurant Administration Quarterly*, **48** (2), 145-150.

Guido, G.; Prete, M.I.; Peluso, A.M., Maloumy-Baka R.C., Buffa C. (2010). 'The role of ethics and product personality in the intention to purchase organic food products: a structural equation modeling approach'. *Int Rev Econ* **57**, 79–102.

Hansen, J.; Holm, L.; Frewer, L.; Robinson, P.; Sandoe, P. (2003): 'Beyond the knowledge deficit: recent research into lay and expert attitudes to food risks'. *Appetite*, **41**(2), 111-121.

Hirschman, C.E. (1980). 'Innovativeness, Novelty seeking, and Consumer Creativity.' *Journal of Consumer research*, **7**(3), 283-295.

Kallgren, C.A.; Reno, R.R.; Cialdini R.B. (2000). 'A Focus Theory of Normative Conduct: When Norms Do and Do Not Affect Behavior'. *Personality and Social Psychology Bulletin*, **26**, 1002-1012.

Kalwani, M.U.; Silk, A.J. (1982). 'On the Reliability and Predictive Validity of Purchase Intention'. *Measures Marketing Science*, **1**, 243-286.

Kim, Y.G.; Suh, B.W.; Eves, A. (2010). 'The relationships between food-related personality traits, satisfaction and loyalty among visitors attending food events and festivals.' *International Journal of Hospitality Management*, **29**, 216-226.

Lapinski, M.K.; Rimal, R.N. (2006). 'An Explication of Social norms.' *Communication theory* **15** (2), 127-147.

Levine, J.M.; Resnick, L.B.; Higgins E.T. (1993). 'Social foundations of cognition'. *Annu. Rev. Psychol.*, **44** (5), 85-612.

Luarn, P.; Lin H.H. (2005). 'Toward an understanding of the behavioural intention to use mobile banking'. *Computers in Human Behaviour*, **21**, 873–891.

Makatouni, A. (2002). 'What motivates consumers to buy organic food in the UK? Results from a qualitative study'. *British Food Journal*, **104**(3/4/5), 345-352.

Martin, R.; Hewstone M.; Martin P.Y. (2003). 'Resistance to persuasive messages as a function of majority and minority source status.' *Journal of Experimental Social Psychology*, **39**, 585–593.

Martin, R.; Martin, P.Y.; Smith J.R., Hewstone M. (2007). 'Majority versus minority influence and prediction of behavioral intentions and behavior'. *Journal of Experimental Social Psychology*, **43**, 763–771.

Melnyk V. (2011). 'What is normal to do? Social norms as Determinants of Consumer Decision Making', Thesis (Phd), Wageningen University.

- Michaelidou, N.; Hassan, L.M. (2008). 'The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food'. *International Journal of Consumer Studies*, **32**(2), 163-170.
- Midgley, F.D.; Dowling, G.R. (1978). 'Innovativeness: The concept and Its Measurement'. *Journal of consumer research*, **4**(4), 229-242.
- Midmore, P.; Naspetti, S.; Sherwood, A.M.; Vairo, D.; Wier, M.; Zanolli, R. (2005): 'Consumers attitudes to quality and safety of organic and low input foods : A review', available at: meetings/misc/QLIF\_Review\_Reanalysis200509.pdf (last access 13\11\2012).
- Morrison, D.G. (1979). 'Purchase intentions and purchase behavior'. *Journal of Marketing*, **43** (2), 65-74.
- Moscovici, S.; Lage E.; Nafferechoux M. (1969). 'Influence of a Consistent Minority on the responses of a Majority in a Color Perception task.' *Sociometry*, **32** (4), 365-380.
- Moscovici, S.; Personnaz, B. (1890). 'Minority Influence and Conversion Behavior in a Perceptual Task'. *Journal of experimental social psychology*, **16**, 270-282.
- Olsen, S.O. (1999). 'Strength and conflicting valence in the measurement of food attitudes and preferences'. *Food Quality and Preference*, **10**, 483-494.
- Padel, S.; Foster, C. (2005). 'Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food'. *British Food Journal*, **107**(8), 606-625.
- Park, N.; Oh, H.S.; Kang N. (2012). 'Factors influencing intention to upload content on Wikipedia in South Korea: The effects of social norms and individual differences.' *Computers in Human Behavior*, **28** , 898-905.
- Paschal, S. (2002). 'Intention—Behavior Relations: A Conceptual and Empirical Review'. *European Review of Social Psychology*, **12** (1), 1-36.
- Pino, G.; Peluso A.M.; Guido G. (2012). 'Determinants of Regular and Occasional Consumers' Intentions to Buy Organic Food'. *The Journal of Consumer Affairs*, **46** (1), 157-169
- Ploeger, A. (2010). 'Organic Food and Consumer Acceptance – Recommendations for Emerging Markets', available at: <http://www.docstoc.com/docs/32645244/Organic-Food-and-Consumer-Acceptance--Recommendations> (last access 13\11\2012).
- Roehrich, G. (2004). 'Consumer Innovativeness Concepts and Measurements'. *Journal of Business Research*, **57**, 671-677.
- Saba, A.; Messina F. (2002). 'Attitudes towards organic foods and risk/benefit perception associated with pesticides'. *Food Quality and Preference*, **14**(8), 637-645.
- Sheeran, P. (2002). 'Intention—Behavior Relations: A Conceptual and Empirical Review'. *European Review of Social Psychology*, **12**(1), 1-36.

Shepherd, R.; Magnusson, M.; Sjoden, P.O. (2005). 'Determinants of Consumer Behavior Related to Organic Foods.' *Ambio-A Journal of the Human Environment*, **34** (4), 352-359.

Sparks, P.; Shepherd R. (1992) . ' Self-Identity and the Theory of Planned Behavior: Assessing the Role of Identification with "Green Consumerism". *Social Psychology Quarterly*, **55** (4), 388-399.

Tarkiainen, A.; Sundqvist, S. (2009). ' Product Involvement in Organic Food Consumption: Does Ideology Meet Practice?'. *Psychology and Marketing*, **26** (9), 844-863.

Vermeir, I.; Verbeke, M. (2006). ' Sustainable food consumption: Exploring the consumer attitude-behavioural intention gap.' *Journal of Agricultural and Environmental Ethics*, **19**, 169–194.

Walker, A. (1998). "The Power of Minorities in Groups Settings: Do They Inspire Divergent Thinking?," *McNair Scholars Journal*, **2** ( 1).  
(Available at <http://scholarworks.gvsu.edu/mcnair/vol2/iss1/16>)(last access 13\11\2012).

Warshaw, P.; Davis, F.D. (1985) .'Disentangling Behavioral Intention and Behavioral Expectation'. *Journal of experimental social psychology*, **21**, 213-228.

Wier, M.; Calverley C., (2002). 'Market potential for organic foods in Europe'. *British Food Journal*, **104** (1), 45 – 62.

Winter, P.L., (2000). 'Choosing to Encourage or Discourage: Perceived Effectiveness of Prescriptive Versus Proscriptive Messages'. *Environmental Management*, **26** (6), 589-594.

Wood, W.; Lundgren, S.; Ouellette, J.A.; Busceme S.; Blackstone T. (1994). 'Minority Influence: A Meta-Analytic Review of Social Influence Processes.' *Psychological Bulletin*, **114** (3), 323-345.

IFOAM. 2009a. 'Definition of organic agriculture.' (Available at [http:// www.ifoam.org/growing\\_organic/definitions/ doa/ index. html012](http://www.ifoam.org/growing_organic/definitions/ doa/ index. html012)] (last access 13\11\2012).

IFOAM. 2009b. 'Criticisms and Frequent Misconceptions about Organic Agriculture: The Counter-Arguments.' (Available at [http://www.ifoam.org/growing\\_organic/ 1\\_arguments \\_for\\_oa/ criticisms\\_misconceptions/misconceptions\\_no2.html](http://www.ifoam.org/growing_organic/ 1_arguments _for_oa/ criticisms_misconceptions/misconceptions_no2.html)) (last access 13\11\2012)

## Appendix 1: Consumer's attitudes towards organic food

Several studies (Saba & Messina, 2002; Padel & Foster, 2005; Shepherd et al., 2005; Tarkiainen & Sundqvist, 2009; Aertsens et al., 2011) indicate that consumers have formulated positive attitudes towards consumption of organic food. Although attitudes are not very effective in predicting buying intention and separating buyer from non-buyers (Tarkiainen & Sundqvist, 2009). The formulation of positive attitudes seems to be encouraged by the mistrust and doubts people have about food safety, health, and environmental sustainability when considering conventionally produced commodities (Midmore et al., 2005; Saba & Messina, 2002). In this sense, scholars talk of “technological pessimism” and negative attitudes towards modern technologies which seem to strengthen positive attitude towards more traditional and natural (Hansen et al. 2003) and less risky methods of production, one of which constitutes organic food (Michaelidou & Hassan, 2008).

Organic food is produced “through biological methods devoid of synthetic fertilizers, toxic pesticides, and genetic engineering” (Guido et al., 2010). Saba & Messina (2002) & Ploeger (2010) indicate that people perceive organic food to be healthier and produced with more environmentally friendly methods than conventional food. Consumers associate organic food with premium taste, similar to home grown food and free of potentially harmful additives (Makatouni, 2002). Organoleptic characteristics, such as taste or the pleasure to eat constitute further categories, driving consumer intentions towards consumption of organic food as derived from studies in Greece and Italy (Padel & Foster, 2005; Ploeger, 2010).

Some studies (Makatouni, 2002; Padel & Foster, 2005) indicate that consumers tend to purchase organic products for the benefit of their children. According to IFOAM this seems to be confirmed as recent studies indicate “a positive effect of organic production on the nutritional value of food products” (IFOAM, 2009b). Also, consumers associate organic food with feelings of relaxation and satisfaction, nostalgia and longer life (Makatouni, 2002; Michaelidou et al. 2008). Further, values driving organic food consumption are centred on altruism, ecology and maintaining an alternative lifestyle. (Makatouni et al., 2002; Padel et al., 2005; Shepherd et al., 2005).

Apart from positive attitudes, consumers associate organic food with higher prices, a lack of availability and accessibility, limited trust (Fotopoulos et al., 2002), and insufficient knowledge towards organic certification systems (Padel & Foster, 2005). Concluding, numerous studies (Makatouni, 2002; Saba & Messina, 2002; Padel & Foster, 2005; Michaelidou & Hassan., 2008) indicate that the main driving force for organic products purchases are health concerns.



## Appendix 2: Statistical analysis for Hypothesis 1a and Hypothesis 1b

### Descriptive Statistics

Dependent Variable: ATTITUDE

Story	Mean	Std. Deviation	N
.00	4.8910	1.01775	52
1.00	4.8533	1.12619	50
2.00	4.8125	1.04939	48
Total	4.8533	1.05831	150

### Tests of Between-Subjects Effects

Dependent Variable: ATTITUDE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.154 <sup>a</sup>	2	.077	.068	.934
Intercept	3527.933	1	3527.933	3110.445	.000
Story	.154	2	.077	.068	.934
Error	166.731	147	1.134		
Total	3700.111	150			
Corrected Total	166.884	149			

a. R Squared = .001 (Adjusted R Squared = -.013)

### Pairwise Comparisons

Dependent Variable: ATTITUDE

(I) Story	(J) Story	Mean Difference (I-J)	Std. Error	Sig. <sup>a</sup>
.00	1.00	.038	.211	.858
	2.00	.079	.213	.713
1.00	.00	-.038	.211	.858
	2.00	.041	.215	.850
2.00	.00	-.079	.213	.713
	1.00	-.041	.215	.850

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

## Appendix 3: Statistical analysis for Hypothesis 4 and Hypothesis 5

### Tests of Between-Subjects Effects

Dependent Variable: INTENTION

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13.643 <sup>a</sup>	5	2.729	1.181	.322
Intercept	2184.920	1	2184.920	945.296	.000
Story	10.576	2	5.288	2.288	.105
MCenteredDSI	2.263	1	2.263	.979	.324
Story * MCenteredDSI	1.475	2	.737	.319	.727
Error	332.836	144	2.311		
Total	2552.563	150			
Corrected Total	346.479	149			

a. R Squared = .039 (Adjusted R Squared = .006)

### Tests of Between-Subjects Effects

Dependent Variable: ATTITUDE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.100 <sup>a</sup>	5	.420	.367	.871
Intercept	3497.232	1	3497.232	3056.118	.000
Story	.191	2	.095	.083	.920
MCenteredDSI	.020	1	.020	.017	.896
Story * MCenteredDSI	1.939	2	.970	.847	.431
Error	164.785	144	1.144		
Total	3700.111	150			
Corrected Total	166.884	149			

a. R Squared = .013 (Adjusted R Squared = -.022)

## Appendix 4: Statistical analysis for the female population of the sample

### Descriptive Statistics

Dependent Variable:INTENTION

Story	Mean	Std. Deviation	N
.00	3.6188	1.49785	40
1.00	4.2622	1.52577	41
2.00	3.7798	1.54821	42
Total	3.8882	1.53651	123

### Tests of Between-Subjects Effects

Dependent Variable:INTENTION

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9.133 <sup>a</sup>	2	4.566	1.965	.145
Intercept	1857.548	1	1857.548	799.253	.000
Story	9.133	2	4.566	1.965	.145
Error	278.893	120	2.324		
Total	2147.563	123			
Corrected Total	288.025	122			

a. R Squared = .032 (Adjusted R Squared = .016)

### Pairwise Comparisons

Dependent Variable:INTENTION

(I) Story	(J) Story	Mean Difference (I-J)	Std. Error	Sig. <sup>a</sup>
.00	1.00	-.643	.339	.060
	2.00	-.161	.337	.633
1.00	.00	.643	.339	.060
	2.00	.482	.335	.152
2.00	.00	.161	.337	.633
	1.00	-.482	.335	.152

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

### Descriptive Statistics

Dependent Variable: ATTITUDE

Story	Mean	Std. Deviation	N
.00	4.9500	1.02268	40
1.00	4.9268	1.08144	41
2.00	4.8373	1.04537	42
Total	4.9038	1.04280	123

### Tests of Between-Subjects Effects

Dependent Variable: ATTITUDE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.293 <sup>a</sup>	2	.146	.133	.876
Intercept	2957.737	1	2957.737	2681.249	.000
Story	.293	2	.146	.133	.876
Error	132.374	120	1.103		
Total	3090.472	123			
Corrected Total	132.667	122			

a. R Squared = .002 (Adjusted R Squared = -.014)

### Pairwise Comparisons

Dependent Variable: ATTITUDE

(I) Story	(J) Story	Mean Difference (I-J)	Std. Error	Sig. <sup>a</sup>
Control	Minority	.023	.233	.921
	Growing	.113	.232	.628
Minority	Control	-.023	.233	.921
	Growing	.090	.231	.699
Growing	Control	-.113	.232	.628
	Minority	-.090	.231	.699

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

## Appendix 5: Statistical analysis for the female population concerning ego-involvement

### Tests of Between-Subjects Effects

Dependent Variable: INTENTION

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	41.586 <sup>a</sup>	5	8.317	3.949	.002
Intercept	1822.834	1	1822.834	865.413	.000
MCentEGO	29.329	1	29.329	13.924	.000
Story	7.444	2	3.722	1.767	.175
Story * MCentEGO	3.143	2	1.571	.746	.477
Error	246.439	117	2.106		
Total	2147.563	123			
Corrected Total	288.025	122			

a. R Squared = .144 (Adjusted R Squared = .108)

### Tests of Between-Subjects Effects

Dependent Variable: ATTITUDE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	17.339 <sup>a</sup>	5	3.468	3.518	.005
Intercept	2895.849	1	2895.849	2937.818	.000
MCentEGO	14.779	1	14.779	14.993	.000
Story	.100	2	.050	.051	.951
Story * MCentEGO	2.577	2	1.289	1.307	.274
Error	115.329	117	.986		
Total	3090.472	123			
Corrected Total	132.667	122			

a. R Squared = .131 (Adjusted R Squared = .094)

## Appendix 6: Statistical analysis for the female population concerning DSI

### Tests of Between-Subjects Effects

Dependent Variable: INTENTION

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9.919 <sup>a</sup>	5	1.984	.835	.528
Intercept	1821.222	1	1821.222	766.191	.000
MCenteredDSI	.355	1	.355	.149	.700
Story	9.311	2	4.656	1.959	.146
Story * MCenteredDSI	.575	2	.287	.121	.886
Error	278.107	117	2.377		
Total	2147.563	123			
Corrected Total	288.025	122			

a. R Squared = .034 (Adjusted R Squared = -.007)

### Tests of Between-Subjects Effects

Dependent Variable: ATTITUDE

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.314 <sup>a</sup>	5	.663	.600	.700
Intercept	2914.421	1	2914.421	2636.099	.000
MCenteredDSI	.577	1	.577	.522	.471
Story	.486	2	.243	.220	.803
Story * MCenteredDSI	1.974	2	.987	.893	.412
Error	129.353	117	1.106		
Total	3090.472	123			
Corrected Total	132.667	122			

a. R Squared = .025 (Adjusted R Squared = -.017)