Nudging people towards more sustainable menu card choices:
A field experiment in a restaurant

Renske Hermans
Wageningen University
09030329030

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Wageningen University
De Leeuwenborch
Hollandseweg 1, 6707 KN, Wageningen

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Author: Renske Hermans
Contact: renske.hermans@wur.nl
Mobile: +31646385565
Student number: 09030329030

Supervisor: Dr ir E. van Kleef
Contact: ellen.vankleef@wur.nl

Second examiner: Prof. dr ir J.C.M. H. van Trijp
Contact: hans.vantrijp@wur.nl

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Abstract

Background: In 2050 we are facing the enormous challenge of feeding nine billion people worldwide. There is a worldwide discussion how we can produce enough food and still maintain a sustainable environment. Particularly meat consumption is a burden for the environment. A growing group of consumers is willing to change their meat consumption, but research has shown that these intentions do not automatically lead to a change in consumption behaviour. This study will test if simple menu card nudge can manipulate people's food choices in a restaurant setting. Earlier research has shown that bundling products into a menu can increase the visibility, attractiveness and perceived value for money of these products.

Objective: An experiment in a restaurant was conducted to examine if a simple menu card nudge can be used to stimulate more vegetarian food choices among consumers. By bundling vegetarian dishes in a combo menu we expect to increase the visibility, attractiveness and perceived value for money of these products and in this way to stimulate more sustainable food choices in a restaurant setting.

Methods: A quasi-experimental design with three conditions was used to study the effect of adding a vegetarian combo menu to a menu card on the sales of vegetarian dishes. 291 guests of the restaurant participated in this study. Their food choices were collected by a daily report of the cash register. Next to that, participants were asked to fill out a questionnaire after their dinner. The data of these two sources were used to test the hypotheses.

Results: No effect of the menu design on the relative share of vegetarian dishes in the total sales of dishes was found. The number of participants that chose a vegetarian main course was not higher when a vegetarian combo menu was offered on the menu card. The study showed a big difference in sales of the combo menus. When the vegetarian combo menu was offered only 17% of the participants chose the menu, but when the meat combo menu was offered 52% of the participants chose the menu. Furthermore, the design did not impact the attractiveness of the menu card or the overall dining experience. Last, results showed that vegetarian dishes were more visible when a vegetarian combo menu was added to the menu card.

Conclusion: Our combo menu intervention to encourage restaurant guests to choose a vegetarian dish had no effect on the choices that were made. This suggests that meat substitutes are still coping with their negative image. It could be that these products are unfamiliar to consumers or they expect a negative taste. More research on stimulating sustainable food choices is needed to change consumption behaviour among consumers.

Preface

This MSc Thesis is part of the master program 'Management, Economics & Consumer Behaviour' at the University of Wageningen. I have done my thesis within the department 'Marketing & Consumer Behaviour'.

I would like to thank my supervisor Ellen van Kleef who supported me all the time during my thesis period. Thanks to her we conducted a unique experiment in the restaurant of the Hotel Management School in The Hague. I really appreciate her close involvement during the entire process. Her feedback helped me to get the most out of this thesis.

Further I would like to thank my second supervisor Hans van Trijp for his critical view on my thesis. Especially on the experiment and the theoretical model. With the help of his feedback I could improve the design of the study on time.

Next to them, I would like to thank Stefan Hollen of the Hotel Management in The Hague. He supervised the experiment in the restaurant. Stefan together with the teachers in the restaurant, Eva Goud and Yves Limonet, and the students were responsible for the dinner every night. I really appreciate their help with the questionnaires during the experiment. Also I would like to thank Bjorn Mielke, the Food & Beverage Controller of the restaurant, for sending the daily reports of the cash register to me.

Last, I would like to thank my family, friends and fellow students for their support during the entire period.

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1 Introduction

Due to the growing population and prosperity worldwide, it is expected that the demand for food will grow for another 40 years. It is going to be an enormous challenge to feed nine billion people in 2050 if our consumption behaviour does not change in the coming years. It is not only a challenge in which way this amount of food can be produced, but also in which way this production can maintain a sustainable environment (Charles & Godfray et al., 2010; Hoek et al., 2004). The high amount of meat demand in the total food market nowadays is not in line with its effects on the environment and on animal welfare (De Jonge & Van Trijp, 2012). A worldwide discussion about the production of meat and its effects on the environment exists already for a long time. The players in this discussion are farmers, consumers and other stakeholders all over the world (Kauppinen et al., 2010). Especially in the Netherlands the consumption of animal proteins is high. According to Bakker & Dagevos (2011) the Dutch people consume more than twice the amount of the average consumption on a global level. Today the annual meat consumption per capita is more than 43 kilos (Bakker & Dagevos, 2012).

When asked in a survey, the majority of citizens state that they are willing to purchase animal friendly meat products (European Commission, 2007). However, it has been shown that these good intentions of consumers do not automatically lead to an actual change in their consumption behaviour (De Jonge & Van Trijp, 2012). The reason for this contradiction is the presence of other product attributes that play a significant role in the decision making process. For example, meat products that are produced in animal friendly manner are typically more expensive. For this reason, consumers are inclined to go for the lower priced meat product.

In Europe there is growing group of consumers that has serious concerns about the environmental effects of food production and consumption. Some of them already felt the responsibility to change their consumption behaviour. Due to the rise of high qualitative meat substitutes in the nineties it has become easier to eat a balanced vegetarian meal (Hoek et al., 2003). Another group, the so-called 'flexitarians', tries to change their eating behaviour by including more meat substitutes in their daily diet. According to Campbell-Arvai et al. (2014) the small changes in food decisions of this growing group can already have a positive impact on the environment. However, most consumers who have serious concerns about the environment are currently not able to change their food consumption habits, simply because they do not know how to do this (Campbell-Arvai et al. 2014).

The challenge that policy makers are facing nowadays is to stimulate this large group of consumers to make small changes in their daily life, which will contribute to more sustainable behaviour. Providing information and educating people to support sustainable behaviour may not be effective enough to achieve behavioural change in the long-term (Quigley, 2013; Ratner, 2008). According to policy makers new interventions and strategies are needed to encourage behavioural change. Until now researchers have heavily focused on understanding the automatic decision-making process of consumers, but they did not use these findings to suggest consumers how they could change their consumption behaviour. There are different reasons why consumers are not able to make the choices in daily life that they actually would like to do. For example, the issue of animal welfare is an abstract issue at the time of purchase and consumption. These errors in decision-making can occur because of cognitive biases, emotions, incomplete information and limits of cognitive capacity (Campbell-Arvai et al., 2014; Ratner et al., 2008). Consumers are continuously making decisions in an environment that distracts them from making good choices, conscious and unconscious.

According to Kahneman (2012) every human has two separate cognitive systems that control the judgments and choices they make. These two systems are called system 1 and system 2, which interact to determine a person's behaviour.

Policy makers have realized that consumers need help in their decision making process. Researchers in behavioural economics have introduced a new approach to behavioural change, called 'nudging'. Nudging is defined as: "any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives (Thaler & Sustein, 2008; Marteau et al., 2011). Nudging is in line with Kahnemans dual system thinking, as it recognizes that most of the decisions that consumers make everyday are unconscious and automatic. These researchers focus on changing the choice architecture to nudge people in a desired direction. Thaler and Sustein (2008) introduced nudging as a movement of 'libertarian paternalism'. According to them nudging is paternalistic, because it tries to influence the choice of in consumers in a desired direction and it is libertarian, because consumers still have to freedom to choose. For example, nudging tries to manipulate consumer's choice by making the sustainable food product more convenient to choose. But on the other hand, it does not restrict consumers of the non-sustainable products. It has been shown that for example using a default option as a nudge, can be very effective by stimulating sustainable choices. The study of Campbell-Arvai et al. (2014) at a campus of a university showed that offering a meat-free menu as default option, results in higher sales of this menu. In this case the meat menu option is not eliminated, but placed in a less convenient position.

In this study product bundling is used as a nudge to stimulate sustainable food choices among consumers. Product bundling has become a prevalent marketing tool in the restaurant industry (Hur & Jang, 2015). Therefore, this study explores whether bundling vegetarian or meat dishes in a so-called 'Menu Gastronomique' influences the choices that consumers make in a real life restaurant. In this quasi-experimental field study, restaurant visitors will be exposed to experimentally manipulated menu cards. There are three different conditions or menu cards. Although the menu cards look different at first sight, in each condition the type and number of dishes are equal. In one condition a vegetarian main course is presented as part of a 'Menu Gastronomique'. In another condition the vegetarian main course is replaced by a meat main course in 'Menu Gastronomique'. There will also be a control condition without a 'Menu Gastronomique'. The relative number of guests who choose a vegetarian main course will be compared across the three conditions. The experiment consists out of two periods of each three weeks.

The key dependent variable in this study is the relative share of vegetarian dishes in the total sales of dishes. To shed light on potential explanations of our manipulation, after dinner, restaurant visitors will be asked to answer a brief questionnaire about the menu card and their dining experience.

This study will help us to better understand how a simple menu card nudge can be used to stimulate people to make more vegetarian and hence sustainable food choices. This leads to the following research question: *What is the influence of adding a vegetarian combo menu to a menu card on the relative share of vegetarian dishes in total sales of dishes?*
If the nudge in this study shows a positive effect on the sales of vegetarian dishes, it shows us how small chances in the choice architecture can lead to a decrease in meat consumption. In the long term these small changes in food decisions may contribute to more individual sustainable behaviour, which will lead to a more sustainable environment in the long-term.

2 Theoretical Framework

2.1 Meat Consumption

Meat production and its burden on the environment

The food system is currently heavily debated on a global level. The reason for this is that the world has to feed nine billion people in 2050 and the question is whether it is possible to produce this amount in a sustainable way (Godfray et al., 2010). Particularly meat consumption is considered to be a burden for the environment (PBL, 2011; Bakker and Dagevos, 2011; Elzerman et al., 2010).

Differences in meat consumption across consumers

For many consumers worldwide meat is an indispensable part of their daily consumption pattern. Due to the growing world population and the growth of prosperity in the developing countries the meat consumption has grown enormous in the last 50 years (Elzerman et al., 2010). The average amount of meat consumed per individual differs across countries. In the Netherlands, the average amount of meat consumed per individual was 83,7 kg in 2012. Which means that the consumption per person has decreased with one gram since 2011 (PVE, 2013). According to the report of the PVE (2013) the reduction in the consumption of meat is due to the increased meat price for consumers. This reduction in meat consumption is in line with the study of Dagevos and colleagues (2012). According to them the number of fulltime meat eaters, people who eat meat every day, has decreased from 26,7% in 2009 to 18,4% in 2012 in the Netherlands.

A small part of the population considers themselves to be vegetarian. Vegetarians exclude fish and meat products from their diet. According to the Meat Atlas (2014) most vegetarian people live in India. 31% of the population here describes themselves as a vegetarian. In the USA this is 11% of the population and in the EU only 2-10% of the people is vegetarian. In the Netherlands there are 800.000 vegetarians. Together they consume 80% of the total meat substitutes that are available on the market. The study of Dagevos et al. (2012) confirms that only 4% of the Dutch population is a vegetarian or vegan.

Worldwide there are variety of reasons why people exclude meat and fish. Avoiding a particular kind of meat or not eating any meat at all can be for religious reasons. For example Muslims and Jewish people do not eat pork. In the Western world most people choose for a vegetarian diet based on philosophy instead of religion. An Increasingly group of consumers can be distinguished that does not exclude meat and fish products from their diet, but it tries to reduce their consumption. These so-called 'flexitarians' consciously eliminate part of their meat consumption, for example by eating a vegetarian dinner once or twice a week (Bakker and Dagevos, 2011). In the Netherlands, this group counts three to four million consumers, which are mainly young adults, women and high-educated people (Dagevos and Voordouw, 2013; Beardsworth A., and Bryman A., 2004). Health is an important factor for these 'flexitarians' to reduce their meat consumption (Dagevos et al., 2012).

Despite the growing group of consumers that is trying to reduce their meat consumption, for most consumers meat is still an indispensable part of their dinner. According to Dagevos et al. (2012) most people do not want to be identified as a 'flexitarian'.

Meat replacers: consumption and perception

In the Netherlands, many vegetarians and flexitarians are used to eat plant-based meat substitutes as a replacement of meat in a meal. Elzerman et al. (2011) showed that for many consumers, the appearance and shape of meat replacers should be very similar to real meat products, to make them fit in a meal. They also showed that the flavour, texture and ingredients are less important determinants for the acceptance of meat substitutes. According to Hoek and colleagues (2011) almost no non-vegetarians do already consider meat substitutes as a real alternative to meat.

According to the Meat Atlas (2014) in the European Union 2-10% of the population call themselves a vegetarian of vegan. These are two reasons may explain why the market share of meat substitutes is currently only 1-2% compared to the total meat market worldwide.

Many new and qualitative meat substitutes have been introduced to the market in the last years (Dagevos et al., 2012). However, according to the Foodmonitor (2012) 75% of the Dutch population has no intention to buy these products on a regular basis. 50% of the people mentioned that they would never buy a meat substitute. When people were asked if they were planning to buy a meat substitute in the coming three weeks, only 11% of the people answered positively to this question. The most mentioned reason for not buying meat substitute is the taste. Most Dutch people highly prefer the taste of real meat and do not accept new meat substitutes. According to Degavos et al. (2012) the reason for this is that consumers have little or no experience with meat substitutes. The Foodmonitor (2012) argues that non-vegetarian people do not have intentions to buy meat substitutes, because of the image of these products. However some people argue that the taste and quality of meat substitutes are improved in the last years, many consumers still have a negative image in their mind (Foodmonitor, 2012; Dagevos and colleagues, 2012). The study of Dagevos et al. (2012) shows that participants consider fish products as best substitute for meat. Furthermore, egg and cheese products are seen as potential replacers for meat. Other meat substitutes, for example vegetarian burgers, mushrooms and tofu, are not seen as substitutes for meat.
Another reason for consumers to avoid meat substitutes is the price image. Many consumers think that meat replacers are not good value for their money (Dagevos et al., 2012).

Clearly, meat substitutes are still coping with a negative image among consumers. However the majority of the consumers (70%) argues that it is easy for them to avoid meat at least one day a week, it is still hard for them to integrate this in their daily life. It will be long process to make meat substitutes more integrated in people's food pattern. Due to the negative effects of meat production the environment, policy makers warn that a change is needed soon. They argue that new interventions and strategies are needed to achieve this behavioural change among consumers.

2.2 Nudging as a new approach to change consumer behaviour

What is nudging?
A lot of effort has been put in encouraging consumers to eat in a sustainable way. In these efforts, the idea is that education helps to improve knowledge and this in turn will change the behaviour of consumers. Unfortunately, educational and informational campaigns to change eating behaviours had limited success (Walls et al., 2009).

The major reason why educating people and providing information has shown limited success is due to the choice architecture in which consumers make food choices. The various triggers in the environment influence these choices to a large extent (Campbell-Arvai et al.,2014; Ratner, 2008). People are often not aware of these influences, which result in decision biases. These insights come from behavioural economics and psychology. An influential theory explaining consumer behaviour is the dual system thinking theory of Kahneman (2012). According to this theory the behaviour of people is shaped by two different systems: system 1 and system 2. When system 1 is used the decision will be intuitive, fast, automatic and emotional. These decisions are driven by someone's values and intentions. However when the second system is used the decision will be more rule-based, slow, controlled, rational and deliberate. This system requires little or no cognitive engagement of people; their choices are influenced by their feelings and the environment (Marteau et al., 2011). Research has shown that people mainly use system 1 and that system 2 is supporting system 1 in some situations. These cognitive systems explain why consumers want to make choices that have positive consequences for the environment in the long term, but why they do not make these choices in their daily live (Thorgeirsson & Kawachi, 2013).

Nudges are environmental interventions that adapt the environment in which people make choices, to stimulate better choices. Nudging does this without appealing to people's reasoning or forcing certain choices upon them (Thaler and Sunstein, 2008). This type of intervention focuses on automatic and unconscious decisions that consumers make in their daily live. An example of a nudge is changing the assortment of a checkout counter to increase sales of healthy snacks. A study of Kleef, Otten, & Trijp (2012) showed that a assortment that consist of 75% healthy snacks and 25% less healthy snacks results in a higher sales of healthy snacks. Although the assortment was changed, people did not feel more restrictive or less satisfied. In this way people are nudged towards a better choice, without being restricted of the less-healthy option.

Another example of a nudge is placing a convenience line in a school lunchroom that offers only healthy food, while the less-convenient line offers non-healthy food as well. The study showed that students increased their intake of healthy foods by 18% and decreased their intake of less-healthy foods by nearly 28% (Hanks, Just, Smith & Wansink, 2012). Additionally, a study of Van Kleef and colleagues (2014) showed that a fun shape of bread rolls could stimulate children to eat more whole wheat bread during breakfast.

All these nudging interventions try to influence the automatic and unconscious decisions that people make, therefore it uses the choice architecture in order to influence these decisions. Thaler and Sunstein (2008) refer to the choice architecture as "the structured context in which people make decisions, or the way the design and layout of options and information shape human behaviour."

Their idea of using the choice architecture to nudge people towards better choices can be described as the political theory of 'libertarian paternalism'. Paternalism tries to influence choices in a desired direction. Libertarianism wants freedom of choice for everyone. Nudging is based on both of these principles. It tries to stimulate people towards a desired choice without restricting their freedom to choose for other options.

It has been shown that for example using a default option as a nudge can be very effective by stimulating sustainable choices. A study of Campbell-Arvai et al. (2014) at a campus of a university in the Midwestern United States showed that offering a meat-free menu as default option results in higher sales of this menu. They used a default option to manipulate people in a real-world setting to make more sustainable food choices. The default option was presented as a appealing and an unappealing menu item to see the influence of appeal on choice. 89.7% of the participants that received the appealing meat-free menu items chose a meat-free meal. This group was even higher (92.5%) when additional information about the meat-free meal option was given. When participants received the unappealing meat-free meal option only 73.2% chose for this option and even fewer participants (68.4%) chose for this meal option when additional information was given. When no default option and no information was given to the participants the number of participants that chose the meat-free meal was significantly lower. Next to that, the study showed that the appeal of menu items significantly influenced the choice of participants. However, the presence of information did not influence the choice for a meat-free meal.
This study showed that people could be nudged towards a sustainable food choice if these products are more conveniently placed than the unsustainable food items. In this way canteens can encourage sustainable behaviour and offer a wide assortment of food items at the same time. Thieir study showed that by altering the choice architecture the sales of vegetarian dishes could be stimulated.

The table below gives an overview of the main similarities and differences between the study of Campbell-Arvai et al. (2014) and this study.

Table 1: Comparison between the study of Campbell-Artvai et al. (2014) and this study

Study of Campbell-Arvai et al. (2014)	This study
Experimental design.	Quasi-experimental design.
Aim of study is to stimulate environmental friendly food options.	Aim of study is to stimulate environmental friendly food options.
Experiment was conducted at a campus of a university in the Midwestern United States.	Experiment was conducted at the restaurant of the Hotel Management School in The Hague (The Netherlands).
Participants are briefed before the experiment.	Participants are not aware participation in experiment.
Participants did not receive a food item.	Participants had a real dinner.
Meat-free meal is the default option.	Participants can choose meat-free option from the menu card.
Participants received survey after experiment.	Participants received survey after dinner.
Results showed a significant effect on the sales of vegetarian dishes.	Results did not show a significant effect on the sales of vegetarian dishes.
Providing additional information did not influence the choice for a meat-free meal.	The effect of providing additional information was not tested in this study.

2.3. The menu card as influencer of food choices of consumers

How menu card design impact consumer choices

Restaurants have the ability to nudge the choices of consumers in a certain direction. The menu card is seen as an important marketing tool that can be used to influence food choices (Reynolds et al., 2005). If restaurants know in which way people perceive, interpret and react to different elements of the menu card, they are able to direct the food choices of consumers. Wansink and Love (2014) refer to this as menu psychology, which is used for years already by restaurant to gain maximal profit. Restaurants can tell consumers by using their menu card effectively what they have to buy. These subliminal messages are send by a variety of factors on the menu card, including the right positioning of items, price, graphics, descriptions, colours and many more (Panitz, 2000). Wansink & Love (2014) argue that behavioural economics can play a significant role in guiding these choices of consumers. According to them there are three key ways that can be very effective in guiding consumers, which are: shifting attention of consumers to certain items, enhancing their taste expectations and increasing their perception of value.

These three mechanisms are taken into account in this study. By bundling vegetarian dishes in a combo menu we try the shift the attention of consumers towards these dishes and make them more visible. Next to that the combo menu is given an attractive name, namely 'Menu Gastronomique'. By using this appealing name we hope that the expectation of guests will increase. By offering a combo menu we also try to increase guests' perception of value. We think that paying one price for a three-course menu instead of paying for every dish separately will increase the perception of value.

Potential explanations of the effectiveness of offering a combo menu

When menu engineering is used effectively a restaurant can guide choices of consumers in the desired way. Mostly restaurant will focus on the popular and high-margin items. However, menu engineering can also be effective to encourage more healthy or sustainable food choices in a restaurant. To target the most desired items restaurants can divide their menu items in four different categories: High-margin Stars, High-margin Puzzles, Low-Margin Favourites, and Forgotten Foods. To gain to highest possible profit restaurants should place their high-margin star items; these are the most popular items with a high profit margin, on the 'sweet spot' of the menu. The high-margin puzzle and low-margin favourite items should be changed in High-margin Star items, but the Forgotten food items should be eliminated from the menu. In order to the change certain items into High-margin Stars the attention of the consumer has to be shifted. Restaurants can do this by increasing the attractiveness, the visibility and the perceived value of dishes (Wansink & Love, 2012).

Increased attractiveness of offered dishes
A restaurant that wants to encourage vegetarian food choices can use descriptive names for these dishes to make them more attractive than others. For example a 'specialty of the day' label will suggest a consumption norm for consumers (Wansink et al., 2012). The study of Wansink et al. (2012) has proven that attention can be directed by using descriptive menu names. This study proved that giving attractive names to vegetables encouraged children's vegetable intake.

Another reason why descriptive names should be used is that names can influence the expectation of taste (Wansink et al., 2012). In food consumption expectation plays an important role. Even before a product is tasted, someone can have a positive of negative perception about it. These expectations vary enormously per person and they are generated by a variety of factors. One of the factors that can influence expectations is a previous experience. Additionally, the product itself can influence one's expectation: the packaging, the label, the price and advertisements of the product. The match of these product elements and someone's prior experience will influence the product choice. High expectations will lead to product choice and when this expectation is confirmed it may lead to a repeated product use. In case of low expectations the product will be rejected (Deliza & MacFie, 1996). In this study we expect to influence consumers' taste expectation of vegetarian dishes by using an appealing menu name. The combo menu will be named 'Menu Gastronomique'.

Increased visibility of vegetarian dishes
The right positioning of items can also be effective in shifting consumer's attention (Wansink & Love, 2014). Some menu designers argue that the optimum item position is on the inside right page above the centre. On this so-called 'sweet spot' starts and ends the eye of the viewer when reading the menu page (Reynolds et al., 2005).

In this study a 'Menu Gastronomique' is offered on the menu, next to a few separate dishes. By including vegetarian dishes in a combo menu we expect sales of these dishes to increase. The 'Menu Gastronomique' will be placed on a separate page on the menu card. In this way we try to increase the visibility and shift the attention of consumers towards this menu.

Increased value of money of combo menu compared to selection of separate dishes
The last step in the process of the menu engineering is increasing the perception of value.
The context wherein the decision is made is of influence on how consumers perceive the price of a product. In more exclusive restaurants consumers will pay less attention to the price in comparing to fast food restaurants (Wansink & Love, 2014). Research has also shown, that when consumers get more food items for one price it is harder for them to calculate the price than when are paying for each item (Poundstone, 2010; Wansink & Love, 2014). This explains why visitors of a restaurant often choose for a menu. When they choose a menu they get a few dishes for a combined price. Most people think they have more value for money than when they would choose a few separate dishes.

In the retail field, the bundling of two products has been extensively studied. Product bundling is the practice of selling two or more non-substitutable products together for one combined price (Adams and Yellen, 1976). Non-substitutable products are products that do not belong to the same product category classified by the consumption utility of consumers (Russell 1999). An example of this is a travel agency that is selling a package of airfare, accommodations and event tickets to consumers.

Not only in the retail environment, but also in the restaurant sector product bundling is a popular and often used marketing strategy (Hur & Jang, 2015). Hur & Jang (2015) argue that consumers evaluate products in bundled context different from products that are offered separately. For example, information about price can have a big influence on the evaluation of consumers. A study of Johnson et al. (1999) showed that consumers could evaluate equally priced deals differently, depending on how the information about a bundle is presented. They showed that consumer's satisfaction, likelihood of recommending and likelihood of repurchasing increased when price information is bundled and the price discount is debundled.

In a study of Yadav & Monroe (1993) 270 students participated in a laboratory experiment. They had to answer questions about the prices of two luggage items, which were presented in an advertisement. Results showed that it is more effective to show price discounts item per item instead of bundled. Savings on individual items in a bundle contribute to the buyer's total transaction value.

So the integration or segregation of price in a bundled context may influence consumer's perceived value for money (Johnson, 1999). Additionally the way in which items in a bundle are structured also influences consumer's evaluation process. According to Yadav (1994) the anchor item of a bundle is of bigger influence on consumer's evaluation in comparing to the in-tie item. In menu bundling the anchor item is the main dish in the menu and the in-tie item is the side dish or dishes in the menu. So the main dish in a menu will determine if a consumer will buy the menu or not. According to Hur & Jang (2015) information, price and product composition in a bundle will not only influence the likelihood of buying a bundle, but these components could also influence consumer's perception of the healthiness of the bundled products.

Besides using a product bundle to increase consumer's value for money, restaurants could use product bundling to reduce consumer's uncertainty about new products. Additionally a product bundle is used to help consumers in making a choice between their conflicting consumption goals (Chandon & Wansink, 2007; Hur & Jang, 2015). The relative new product that will be used in this study is a vegetarian main course. By offering this vegetarian main course in a combo menu we try to reduce their uncertainty about the new product and to stimulate a sustainable food choice.
In this study we expect that bundling products in a combo menu will increase the sales of this menu. The vegetarian main course in the menu is seen as the anchor item of the bundle. By using the three mechanisms 'visibility', 'attractiveness' and 'perceived value for money' we try to increase the relative share of vegetarian dishes in the total sales of dishes.

2.4   Theoretical model and hypotheses

The nudge that is used in this study is adding a combo menu to a menu card. It is expected that adding a combo menu will have a positive effect on the three mechanisms 'perceived value for money', 'visibility' and 'attractiveness'. The first mechanism 'perceived value for money' is related to the increased perceived value for money when products are bundled in a combo menu. The second mechanism 'visibility' relates to the extent to which vegetarian dishes in a combo menu are more visible to the guests. The third mechanism 'attractiveness' is the extent to which the menu card looks more attractive to guests when there is a combo menu presented.
De model will be tested in a field experiment in a restaurant. The data is collected by two different sources, namely the data of the cash register and the data of the after dinner questionnaire. These two data sources together will give a good indication of the relative share of vegetarian dishes in the total sales of dishes.

The following hypotheses will be tested in this study:

Hypothesis 1: Adding a vegetarian combo menu to a menu card will increase the relative number of vegetarian dishes sold.

Hypothesis 2: Adding a vegetarian combo menu to a menu card will increase the perceived value for money compared to a menu card without a combo option and therefore increase the relative number of vegetarian dishes sold.

Hypothesis 3: Adding a vegetarian combo menu to a menu card will increase the visibility of vegetarian dishes on the menu card compared to a menu card without a combo option and therefore increase the relative number of vegetarian dishes sold.

Hypothesis 4: Adding a vegetarian combo menu to a menu card will increase the attractiveness compared to a menu card without a combo option and therefore increase the relative number of vegetarian dishes sold.

Figure 1 shows the theoretical model that is derived from the available literature.

When dishes are bundled in a combo menu it is expected that participants have a higher perceived value for money of these dishes, compared to the menu card without a combo menu. Next to that, bundling dishes in a combo menu will shift the attention of participants to this combo menu and make these bundled dishes more visible on the menu card. Additionally, bundling vegetarian dishes in a combo menu will enhance the taste expectation among participants. If these three mechanisms show a positive effect, it is expected that the relative share of vegetarian dishes in the total sales of dishes will increase.

Figure 1: Theoretical Model
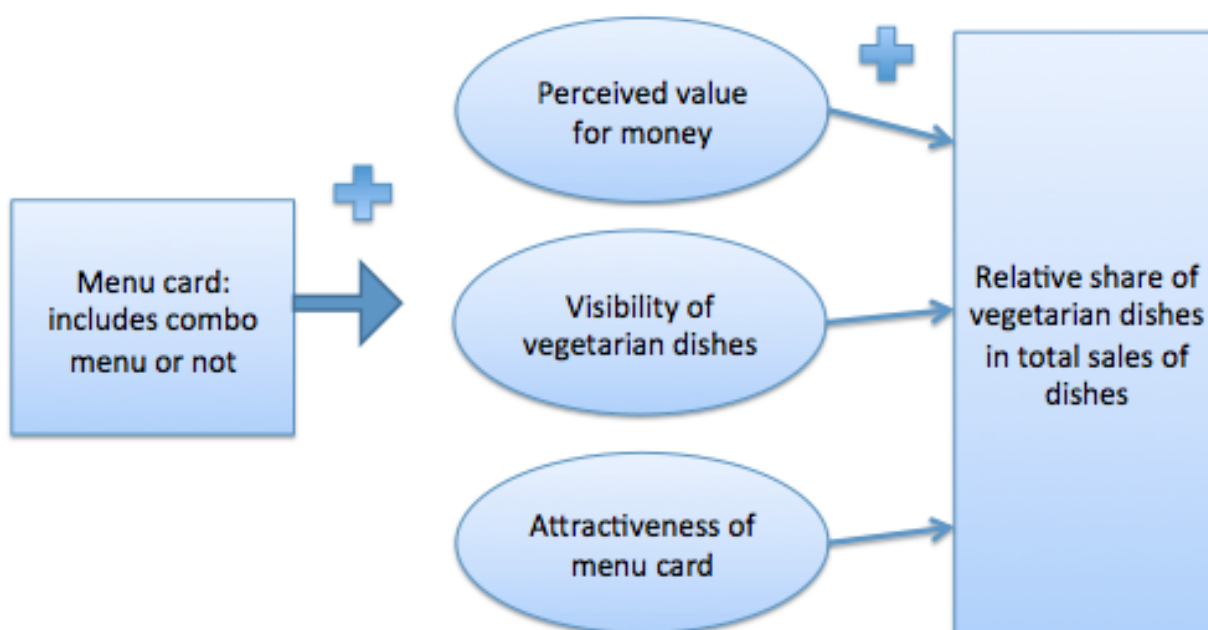
3 Methodology

A field experiment in a restaurant was conducted to research which role a menu card can play in stimulating more sustainable choices among consumers. After the field experiment the guests of the restaurant were asked to fill out a short questionnaire about their choices and opinions during the dinner.

Field experiment

Setting and context

The setting for this experiment was the fine dinning restaurant 'Le Debut' located at the Hotel Management School in Scheveningen, The Hague. The experiment was conducted for 4 weeks and took place from the 13th of October 2014 till the 28th of November 2014.

Le Debut is a small sized restaurant, which can accommodate around 50 people per night. The restaurant is run by Dutch and international students of the Hotel Management School. They cook and serve the food under guidance of instructors. The restaurant offers normally a menu that is composed according to ingredients of the season. These ingredients are mainly organic and locally produced. Next to the menu, the guests can choose separate dishes from the a la carte menu. All these dishes are served by especially selected corresponding wines.

The restaurant is open every week from Monday to Friday, from 18.00 – 22.30 hours. In the weekends the restaurant is closed. It is possible to reserve the restaurant for a private event for a night. This happened the Monday of week 1 in the second period of the experiment.

Participants

The total 549 people visited the restaurant during the whole experiment period. 258 Guests visited the restaurant as part of group of six people or more. This means that restaurant had 291 guests who could participate in the experiment. Their dinner choices are included in the cash register data. The cash register data of the guests that were part of a group is left out of the dataset. These guests did not see the menu card, so they their choice is not influenced by the design of the menu card. Groups arrange their menu beforehand with the restaurant.

Table 1 shows the number of guests who were not part of group. The restaurant had in the first period of the experiment more guests who were not part of a group than in the second period. In period one the group of participants counted 184 people in comparing to 107 participants in the second period. There is almost no difference in the number guests between the days of a week. On average 10 guests visited the restaurant per night on an individual base.

Table 2: Number of participants (groups excluded)

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Period 1						
Week 1	16	14	5	15	13	63
Week 2	4	12	6	9	25	56
Week 3	13	20	7	20	5	65
Total period 1					*184*	
Period 2						
Week 1	0	6	11	5	18	40
Week 2	9	11	7	20	0	47
Week 3	9	2	9	0	0	20
Total period 2					*107*	
Total	51	65	45	69	61	291

Design

A quasi-experimental design with three conditions was used to study the effect of adding a vegetarian combo menu to a menu card on the sales of vegetarian dishes. In these three conditions a different menu design was used. In the first condition a meat combo menu was added to the menu card. In the second condition a vegetarian combo menu replaced this meat combo menu. The third condition was included as a control condition. In this condition the menu design did not include a combo menu and therefore guests could only chose out of the separate dishes.

The guests that visited the restaurant were the participants of the quasi-experimental study. Before and during the dinner they did not know about their participation in the experiment. When their dinner was finished the waiters told them that they were part of a study on menu designs and the effect of this on food choices. The waiters asked the guests to fill out a short questionnaire about their choices and the motives behind their choices *(See appendix II for questionnaire).* Not all guests of the restaurant were willing to fill out a questionnaire after their dinner and it happened one night that the restaurant staff forgot to hand out a questionnaire. For this reason the number of participants who were not part of a group is not equal to the number of people who filled out a questionnaire.

The period of experiment consisted out of two times three weeks, in total six weeks. In these six weeks three different conditions were researched. In the first three weeks the dishes that were offered on the menu card were the same. In the second period of the experiment, the last three weeks, a few dishes on the menu card were changed. The vegetarian main dishes remained the same in both periods. Only the vegetarian main course in the combo menu changed from the chicken teri-yaki to the vegetable strudel in period two. By changing the main course in the combo menu we wanted to make sure that the choice of guests was not only influenced by disliking the chicken teri-yaki. The design of the menu card was the same in both periods of the experiment. The menu Gastronomique was placed on a separate page. Also the prices of all dishes and the combo menus were equal in all weeks. The price of a starter, main course and a dessert of the a la carte together were six euros higher than the price of Menu Gastronomique.

A visual representation of all menu designs is included in appendix I.

Figure 2: Visual representation of the menu card in the control condition.
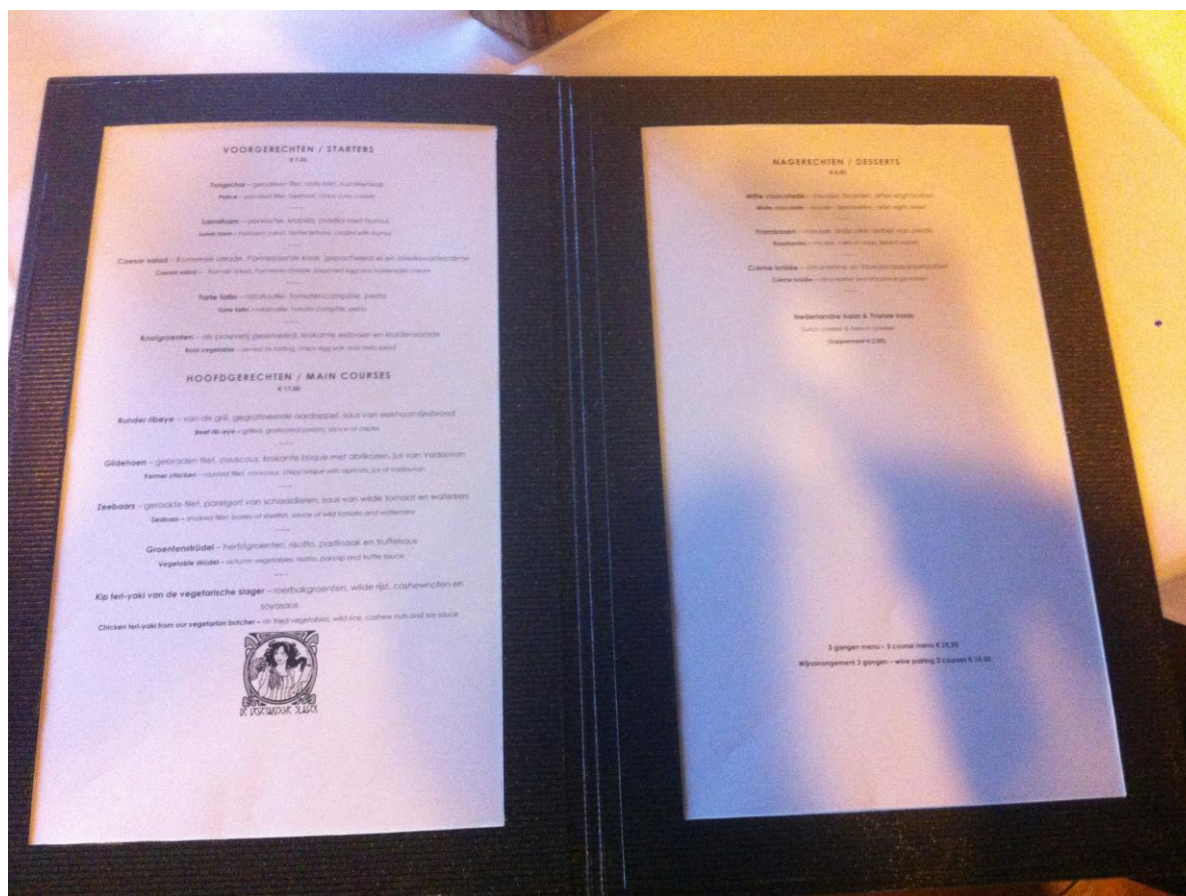

Table 3: Overview of the three different conditions

Week	Condition: Menu card	Main course in combo menu
Period 1: 13th till 31th of October		
Week 1	Meat combo menu	Runder ribeye (meat dish)
Week 2	Vegetarian combo menu	Chicken teri-yaki from the vegetarian butcher (vegetarian dish)
Week 3	No combo menu is offered	
Period 2: 11th till 28th of December		
Week 1	Meat combo menu	Venison steak (meat dish)
Week 2	Vegetarian combo menu	Vegetable strudel (vegetarian dish)
Week 3	No combo menu is offered	

Week 1+4: In these two weeks the 'meat combo menu' condition was tested. A meat combo menu was promoted on the menu card as menu Gastronomique. Besides that, the guests could choose out of five a la carte main courses.

Week 2+5: In these two weeks the 'vegetarian combo menu' condition was tested. A vegetarian menu was promoted on the menu card as menu Gastronomique. Besides that, the guests could choose out of the same five main courses as in week 1 and 4.

Week 3+6: In these two weeks no combo menu option was promoted on the menu card. There were only separate dishes on the a la carte menu. These dishes were the same dishes as in the other two conditions. These two weeks were the control condition of the experiment.

Table 3 shows an overview of all main courses that were offered on the menu card during period one and two. In every condition the menu card consisted out of two meat main courses, two vegetarian main courses and one fish main course.

Table 4: Overview of main dishes

	Meat dishes	*Vegetarian dishes*	*Fish dishes*
Period 1	Beef rib-eye	Chicken teri-yaki from the vegetarian butcher	Seabass
	Farmer chicken	Vegetable strüdel	
Period 2	Venison steak	Chicken teri-yaki from the vegetarian butcher	Tarbot
	Veal tail	Vegetable strüdel	

After their dinner the guests were informed that they were part of a study. The waiters asked them to fill out a short questionnaire, which consisted a few questions about their choices and the experience during their dinner. The questionnaire captured the three key ways of the model: 'visibility', 'attractiveness' and 'perceived value for money'.

Measures
For this study two different sources of data were used. The main data source was the information collected out the questionnaires. Next to this source the data from the cash register was analysed as well. The results of these two data sources were compared to see if they showed the same results.

Cash register sales data

Every night the number of guests, type of sold main courses and the number of sold menus were collected by the cash register. After every night a report with this information was sent to us by the Food & Beverage controller of the restaurant.

After dinner questionnaire

Every night when the guests had finished their dinner they were asked to fill out a short questionnaire. At this moment the guests were informed that their dinner is part of a research project. The questions were asked to collect some extra information about the participants, their experiences in the restaurant that night and about the choices they made.

First guests were asked if they had chosen the 'menu Gastronomique'. This question could be answered by 'yes' or 'no' and guests could write down why they had chosen the menu or why not. If guests answered this question with 'yes', they were asked to answer the question 'would you have chosen menu Gastronomique as well, if the price had been 6 euros higher?' This answered could be answered by 'yes' or 'no'. If guests answered this question with 'no' they had to answer the question 'which main course did you choose?' By asking this question we know the choice of main course of all guests that filled out the questionnaire.

Next to this, guests were asked: 'do you consider yourself to be a vegetarian or vegan?' By asking this question we came to know how many of the participants already have a vegetarian or vegan lifestyle.

To test the theoretical model, the three key ways 'perceived value for money,' 'visibility' and 'attractiveness' were included in the questionnaire. Three statements in the questionnaire captured these three key ways of the theoretical model. The statement that captured the concept of perceived value for money was: 'is the menu Gastronomique is good value for money'. The statement 'there were enough vegetarian dishes to choose from' was included to measure the concept of visibility. To measure the concept attractiveness the statement 'the menu looked attractive to me' was included in the questionnaire. Two other statements were included in the questionnaire to measure the overall dinner experience of guests. These statements were: 'making a choice was very easy for me' and 'my experience today in this restaurant is positive'. All these statements could be answered by a 5-point scale of 'completely disagree', 'disagree', 'neutral', 'agree' and 'completely agree'.

To gather some more information about the demographic background of the guests two personal questions were asked: 'What is your gender' and 'What is your age'?

During the control condition the question 'did you choose menu Gastronomique' was left out of the questionnaire, because in this condition there was no menu Gastronomique offered on the menu card. To know which main course these people had chosen they were asked to select their main course in the questionnaire. Also the statement 'the menu Gastronomique is good value for money' was left out of the questionnaire in the control condition.

Data analysis

After dinner questionnaire data

All hypotheses were tested by the after dinner questionnaire data. Hypotheses 2, 3 and 4 were tested by ANOVA. Age was added as a covariate in ANOVA to correct for the difference in age between the participants across the three conditions. The scores from the statements of the after dinner questionnaire showed if there was a significantly difference between the three key ways of the theoretical model across the three conditions. Besides that, by using ANOVA the overall opinion of guests was tested between the three conditions. Chi-square tests were used to check differences across conditions. If these three hypotheses showed a significant main effect of the menu design on the number of people that chose a vegetarian main course, we expected a main effect on the first hypothesis. To analyze the total number of vegetarian main courses sold per condition, both periods of the experiment were analyzed together. This means that condition one from the first period was taken together with condition one from the second period and so on. In the questionnaires participants had to fill out which type of main course they had chosen. With use of a chi-square test could be analyzed of there was a significantly difference in the number of vegetarian dishes chosen across the three conditions. Data were analysed by using SPSS 20.0 statistical package. A significance level of P<0.05 was used.

Cash register sales data

The data of the cash register was used to test the first hypothesis. Hypotheses 2, 3 and 4 could not be tested by this data source. By using ANOVAs, differences in outcome variables across conditions could be tested. For this study the key dependent variable was the relative share of vegetarian dishes in the total sales of dishes. The independent variable was the design of the menu. Three different menu designs were used in the three conditions. Data were analysed by using SPSS 20.0 statistical package. A significance level of P<0.05 was used.

4 Results

This chapter contains the results of the quasi-experimental experiment in restaurant 'Le Debut'. In this study two different sources of data were used, namely the data of the questionnaires after each dinner and the data of the cash register. The results of these two data sources will be discussed separately in this section. Besides that, the hypotheses will be tested.

4.1 Questionnaire data after each dinner

Descriptive information participants and randomisation check
In total 291 Dutch and international guests participated in the quasi-experimental experiment. Not all guests of the restaurant filled out a questionnaire after their dinner. Overall, there were 176 guests that filled out a questionnaire. The experiment was divided in two periods, which both consist out of three weeks. In the first period of the experiment there were 120 guests that filled out a questionnaire after their dinner. The second period of the experiment had only 56 participants that completed a questionnaire.

The average age of the participants in this study was 44.9 (SD=16,9) years. As a randomisation check, an ANOVA with age as dependent variable and condition as independent variable showed a significant main effect for age ($F=(2,174)=4.6$, $p=0,01$). The age of the participants in the three conditions was respectively 43,2 years, 39,7 years and 48,5 years. So the average age of participants in the control condition was higher than the age of the participants in the 'meat combo menu' condition and 'vegetarian combo menu' condition. To correct for the difference in age between the participants we added age as a covariate in all other analyses (ANOVA).

In total 83 (47,2%) females and 93 (52,8%) males filled out a questionnaire for this study. A chi-square test between gender and the three conditions shows $\chi=(2)0.6$, p-value=0.74. There was no significantly difference in the distribution of males and females across the three conditions. Figure 2 shows the distribution of males and females between the three conditions.

Figure 3: Distribution of gender between three conditions
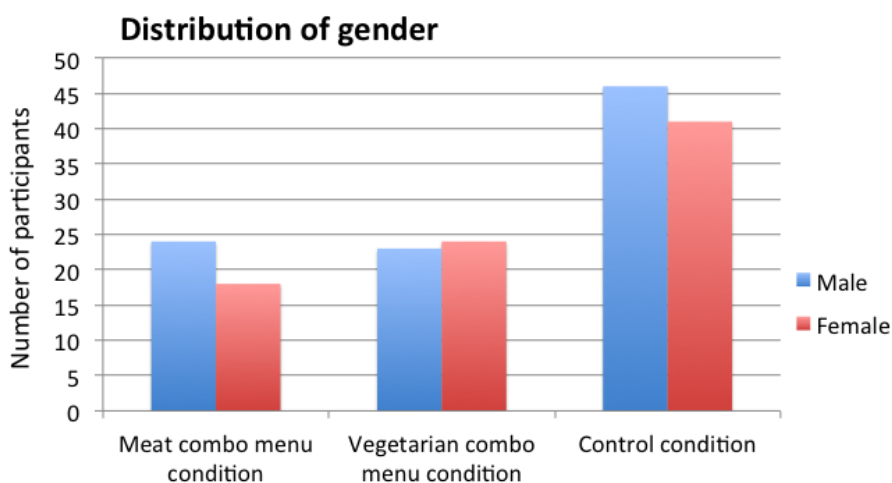
The first period had 120 participants of which 64 (53,3%) males and 56 (46,7%) females. The average age of the participants was 45.1 years (SD=16,7). The number of participants per condition was not equally balanced. The three conditions contained respectively 28, 24 and 68 participants. In the second period 56 guests participated in the experiment of which 29 (51.8%) males and 27 (48.1% females). The average age of the participants was 44.4 years (SD=17,5). The number of participants was also in this period not equally balanced. The three conditions contained respectively 14, 23 and 19 participants. In both periods the distribution males and females was almost equal.

Hypotheses testing

Number of vegetarian dishes chosen
We expected that the majority of guests would choose a combo menu instead of separate dishes in the 'meat combo menu' condition and the 'vegetarian combo menu' condition. In the 'meat menu condition' this expectation was confirmed, 52,4% of the guests chose a combo menu. However, in the 'vegetarian combo menu' condition only 17% the guest chose a combo menu. Results of a chi-square test showed a difference in the number of guests that chose a combo menu in the 'meat combo menu' condition and in the 'vegetarian combo menu' condition ($x=12,410$, $df=1$, $p<0,001$). These results confirm that the number of guests that chose a combo menu was significantly different between the two menu designs. Guests were much more attracted to choose a combo menu when a meat combo menu was offered on the menu card.

With help of a chi-square test was tested if there was a significantly difference between the number of guest that chose a vegetarian main course across the three conditions. The chi-square test did not show no significantly main effect, $χ= 3,085$, $df=2$, $p=0,21$. The first hypothesis: 'Adding a vegetarian combo menu to a menu card will increase the relative number of vegetarian dishes sold' has to be rejected. The results showed that the number of participants that chose for a vegetarian main course were not significantly higher when a vegetarian combo menu was added to the menu card.

Table 5: Number of menus and vegetarian dishes chosen

	Meat combo menu	Vegetarian combo menu	No combo menu
Total dishes sold	N=35	N=47	N=87
Number of guests that chose a vegetarian main course	2	9	12
% Of guests that chose a vegetarian main course (main courses of vegetarian combo menu included)	5.7%	19.1%	13.8%
% Of guests that chose a combo menu	52.4%	17%	/

Figure 4: Percentage of participants that chose a vegetarian main course

Participants that choose a vegetarian main course

Figure 5: Percentage of participants that chose a combo menu
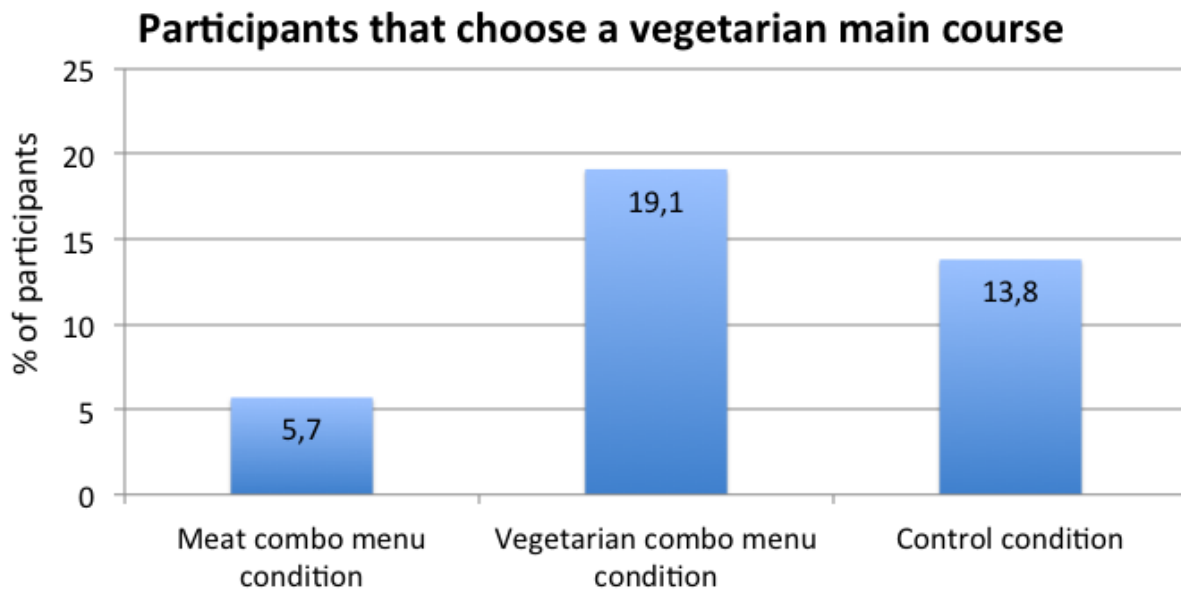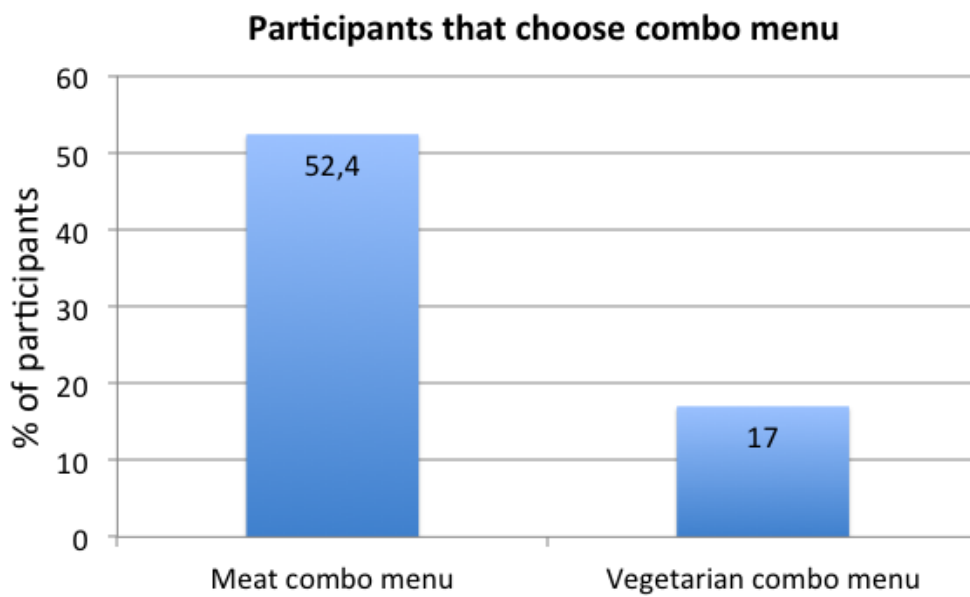
Participants that choose combo menu

Table 6: Score of statements in after dinner questionnaire

	Condition 1 'meat menu' (n=42)	Condition 2 'vegetarian menu' (n=47)	Condition 3 'no menu' (n=87)	Overall mean	P-value=
The menu looked attractive to me	4.0 (0.9)	3.9 (1.2)	4.2 (0.8)	4.1	0.54
The menu is value for money	4.2 (0.8)	3.8 (1.0)	/	4.0	0.13
Making a choice was very easy for me	4.2 (0.9) a	3.5 (0.9) b	4.1 (0.9) a	4.0	0.003*
There were enough vegetarian dishes to choose from	3.4 (1.1) a	3.8 (0.9) b	3.8 (0.9) b	3.7	0.04*
My experience today in this restaurant is positive	4.6 (0.8)	4.6 (0.8)	4.6 (0.7)	4.6	0.95

*Responses are measured on five-point scales, ranging from 1 (totally disagree) to 5 (completely agree,) *=P < 0.05.*
a= indicates the condition that is significantly different from the two other conditions.

Overall experience of the guests
To test the overall dinner experience, guests had to answer two statements, namely: 'making a choice was very easy for me' and 'my experience today in this restaurant is positive'. A Cronbach's alpha test showed that these two statements were not reliable to test the overall dinner experience. The first statement had an overall mean score of 4.0, so participants agreed with the statement that it was easy to make a choice. Guests found it most easy to make a decision in the 'meat combo menu' condition and the control condition. In the 'vegetarian combo menu' condition guests were less positive about the easiness of making a choice. This statement showed a main effect between the easiness of making a choice and the design of the menu card (F=(2.171)=6.0, p=0,003). This showed that it is harder for people to make a choice when a vegetarian combo menu is offered. A post-hoc test was used to prove this. This analysis showed a difference between the 'meat combo menu' condition versus the 'vegetarian combo menu' condition (p=0,002) and between the 'vegetarian combo menu' condition versus the control condition (p=0,004). No difference was found between meat combo menu' condition versus the control condition (p=0,53). From this test can be concluded that it is harder for people to make a decision in the condition when a vegetarian combo menu is offered.

The second statement 'my experience today in this restaurant is positive' scored even higher. The statement had an overall mean score of 4.6. This means that most participants agreed or completely agreed on the fact that their experience in the restaurant was positive. The statement did not show a significant effect between the three conditions (F=(2.171)=0.05, p=0,95). Meaning that the overall experience of guests was not dependent on the design of the menu.

Next to the overall experience the three mechanisms of the model 'perceived value for money', 'visibility' and 'attractiveness' were measured with the help of three statements in the questionnaire.

Perceived value for money
To test this hypothesis guests had to answer the statement: 'the menu Gastronomique is value for money'. This statement was only included in the questionnaires of the 'meat combo menu' and the 'vegetarian combo menu' condition, because there was no menu offered in the control condition. Overall, guests had a positive opinion about this statement. In the 'meat combo menu' condition this statement scored a 4.2. In the 'vegetarian combo menu' condition this score was 3.8. There was no significant difference between the 'meat combo menu' and the 'vegetarian combo menu' in these ($F=(1.78)=2.35$, p-value= 0.13). Hypothesis two: 'Adding a vegetarian combo menu to a menu card will increase the perceived value for money compared to a menu card without a combo option and therefore increase the relative number of vegetarian dishes sold' cannot be accepted.

In the questionnaires of the 'meat combo menu' condition and the 'vegetarian combo menu' the question: 'if you choose menu Gastronomique, would you also have chosen this menu if the price had been six euros higher?' was included. We included this question to correct for the price difference of a combo menu and three separate dishes on the menu. If guests chose three separate dishes on the menu card they paid six euros more. A chi-square test showed no significant main effect , $\chi=0,891$, df=1, p=0,345. This result showed that the price difference between a menu and three separate dishes was not of influence on the choice that guests made. The additional six euros that guests had to pay for three separate dishes did not influence their choice.

Visibility
Hypothesis three states: 'Adding a vegetarian combo menu to a menu card will increase the visibility of vegetarian dishes on the menu card compared to a menu card without a combo option and therefore increase the relative number of vegetarian dishes sold'. To test if this hypothesis can be accepted an item measuring 'visibility' was included in the questionnaire. Guests had to answer the statement 'there were enough vegetarian dishes to choose from'. A score of 3.8 showed that vegetarian dishes were most visible in the condition when the vegetarian menu was offered, in comparing to an overall mean of 3.7. Vegetarian dishes were least visible when a meat menu was offered in the menu card. There is a main effect of menu card design on the visibility of vegetarian dishes ($F=(1,78)=3.24$, p-value=0.04). A post-hoc test showed a difference between the 'meat combo menu' condition versus the 'vegetarian combo menu' condition (p=0,021). This analysis also showed a difference between the 'meat combo menu' condition versus the control condition (p=0,029). No difference was found between the 'vegetarian combo menu' condition versus the control condition (p=0,659). These results showed that vegetarian dishes are less visible for guests when a meat combo menu is offered.

Attractiveness
The last hypothesis is: 'Adding a vegetarian combo menu to a menu card will increase the attractiveness compared to a menu card without a combo option and therefore increase the relative number of vegetarian dishes sold'. This hypothesis was tested by the statement: 'the menu looked attractive to me'. The overall score on this statement was 4.1. In all conditions guests rated this statement positively. Adding a combo menu to the menu card did not make the menu card more attractive. All menu designs looked attractive to them. No main effect of the menu design was found on the attractiveness of the menu card ($F=(2,171)=0.61$, p-value=0.54). This means that also the last hypothesis cannot be accepted.

4.2 Cash register data of restaurant 'Le Debut'

Descriptive information participants and hypotheses testing
The cash register data contained all the data of all people that visited the restaurant during the days at which the experiment took place, except the guests that visited the restaurant as part of group of six people or more. The daily reports of the cash register data included the number of menus and the number of vegetarian dishes sold per condition. Results showed that the number of menus sold in the 'meat combo menu' condition was higher than the number of menus sold in the 'vegetarian combo menu' condition.

When a meat combo menu was offered 49 guests chose for this menu in comparing to 8 guests when a vegetarian combo menu was offered. These results showed the same outcome as the results of the after dinner questionnaires, the meat combo menu was more popular among guests than the vegetarian combo menu. In the weeks that a meat combo menu was offered 12 guests chose for a vegetarian main course. When the menu card offered a vegetarian combo menu it was expected that the sales of vegetarian dishes would increase, however in these weeks there were only 15 guests that chose for a vegetarian main course. In the control condition of the experiment 16 guests chose for a vegetarian main course. The share of vegetarian main courses in the total sales of main courses was calculated to correct for the difference in the number of guests per night. The difference in sales of vegetarian main courses between the three conditions was analysed by using ANOVA. In this study the dependent variable was the share of vegetarian dishes in total sales of dishes and the independent variable was the design of the menu. A general linear model showed no main effect of menu card design on the share of vegetarian main courses in the total sales of main courses ($F=(18,25)=0.89$ p-value=0.43). This means that bundling vegetarian dishes to a combo menu had no effect on the sales of vegetarian dishes. These results showed that the nudge of the menu design has not been strong enough to stimulate more vegetarian food choices in a restaurant. The first hypothesis: 'Adding a vegetarian combo menu to a menu card will increase the relative number of vegetarian dishes sold' has to be rejected.

Figure 6: Number of vegetarian main courses sold
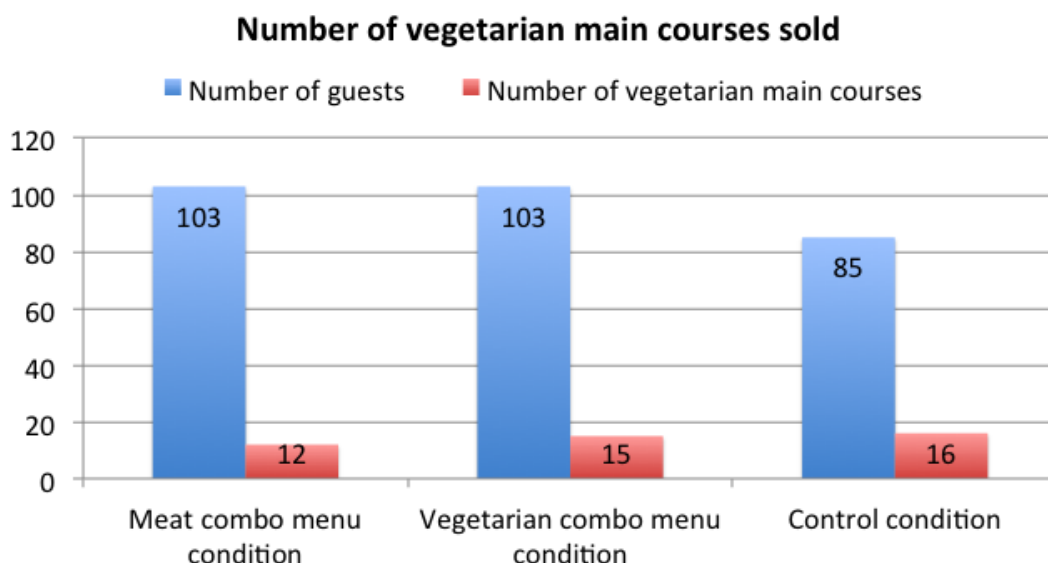
5. Discussion

The aim of this study was to investigate how menu design can be used as a nudge to stimulate more sustainable food choices in a restaurant setting. The nudge would be successful if the number of people that choose a vegetarian main course was significantly higher when a vegetarian combo menu was added to the menu card. In this study three menu card manipulations were tested. We tried to manipulate people's food choices by adding a meat combo menu on the menu card in one condition and a vegetarian combo menu in another condition. Next to these two manipulations, the study had a control condition in which restaurant did not offer a combo menu on the menu card. Across the three conditions guests could choose out of five a la carte main courses. The key dependent variable in this study was the relative number of guests that choose a vegetarian main course. It was expected that most vegetarian main courses were sold when a vegetarian combo menu was presented on the menu card. The number of people that chose a vegetarian main course was measured by two sources of data, namely the cash register data and the after dinner questionnaire data.

Results of this study showed no effect of the design of the menu card on the relative number of guests that choose a vegetarian main course for dinner. This lack of effect of the combo menu became apparent in both the cash register data and the data derived from an after-dinner questionnaire among guests. The cash register data did not show a difference in sales of vegetarian main courses across the three menu designs. There are a few potential explanations for this.

This may indicate that the nudge in this study was not strong enough to influence the food choices of guests in the restaurant. Only a small proportion of guests selected a vegetarian main course (on average 14,8%). The nudge might have been too gentle to convince guests to try something new. Another explanation might be the setting in which the food choices were made in this study. Nudging tries to manipulate the food choices of consumers unconsciously by changing the choice architecture. It is possible that our guests did make their menu choice conscious instead of unconscious, because they took the time to read the menu card and they had to pay €25,50 for the menu.

Another explanation can be the relative newness of meat substitutes. According to Hoek et al. (2011) people are still too afraid for the quality and taste of meat substitutes. They argue that almost no non-vegetarian person does already consider meat substitutes as a real alternative to meat. A study of Elzerman et al. (2011) argues that the appearance and shape of meat replacers should be very similar to real meat products for many consumers. For this reason we used a vegetarian dish of the vegetarian butcher in one period of this experiment. Meat substitutes of the vegetarian butcher are very similar to real meat products. However, no difference in the sales of vegetarian main courses was found between the period when a dish of vegetarian butcher was used and the period that a normal vegetarian dish was included in menu Gastronomique. The result of this study is also in line with the study of the Foodmonitor (2012), which showed that people still have a negative image in their mind about meat substitutes. It could be that we did not reach enough so-called 'flexitarians'; the group of consumers that tries to reduce their meat consumption, because we did not select participants on the basis of their eating habits.

Apparently, it was still too convenient for guests to choose out of the a la carte dishes on the menu card. This can explain why the results in this study differ from the study of Campbell-Arvai et al. (2014), in which a meat-free menu as default option resulted in higher sales of this menu. The different settings can also be important factors for the different outcomes. The study of Campbell-Arvai et al. (2014) is conducted in a canteen of a university in which people make food choices on a daily base. Participants in their study were informed that they were part of an experiment. This study had real life setting; participants could be influenced by the choices of other people at their table. Next to that, the participants in the study of Campbell-Artvai et al. (2014) could rate the dishes as appealing or unappealing. If we would have tested the appeal of vegetarian dishes beforehand, this might have improved the results as well. Furthermore, the dinner was a more special occasion for people than the canteen, which people visit on a daily base.

These argumentations can explain the big difference in sales of combo menus between the 'meat combo menu' condition and the 'vegetarian combo menu' condition in this study. Both data sources showed that the bundling of products in a combo menu was effective in the 'meat combo menu' condition. The sales of 'menu Gastronomique' were higher when the meat menu was added to the menu card compared to the menu design with the vegetarian combo menu. This study has shown that if a combo menu includes dishes which are familiar to people it is easier for them to choose the combo menu. This is in line with the study of the Foodmonitor (2012), which argues that people still do not accept meat substitutes. People were asked in the questionnaire if it was easy for them to make a choice during the dinner. Answers have shown that it is easier for people to make a decision in the 'meat combo menu' condition and even in the control condition. People indicated that it was harder for them to make a decision in the 'vegetarian combo menu' condition, probably because they are not familiar with the dishes in this menu or they have negative taste expectations. This explains the high sales of combo menus in the 'meat combo menu' condition.

Further, we tested if adding combo menu to a menu card would increase the attractiveness of the menu card. We expected that a menu card would be rated more attractive in the 'meat combo menu' condition and in the 'vegetarian combo menu' condition in comparing to the control condition. Next to that, we used a descriptive menu name, namely 'menu Gastronomique' to make the menu more attractive than the separate dishes on the menu card. Results of the questionnaire showed that the attractiveness of the menu was not influenced by the design of the menu card. Across conditions the attractiveness of the menu was similar, so adding a combo menu to the menu card did not increase the attractiveness.

In addition, we investigated whether the perceived value for money of a combo menu is different between a meat combo menu and a vegetarian combo menu. Results did not indicate a difference in the perceived value for money between the menu design with a meat combo menu and the menu design with a vegetarian combo menu. This suggests that both menus are equally good value for money.

Next to this, we expected that vegetarian dishes would become more visible when a vegetarian combo menu was added to the menu card. Results of the questionnaire showed an effect of the menu design on the visibility of vegetarian dishes. Vegetarian dishes were less visible for people when a meat combo menu was offered. When the menu card included a meat combo menu people were probably less focused on the vegetarian dishes and the meat menu was a dominant factor on the menu card. This can be due to the positive expectations that people already have of the meat dishes. They are familiar with the dishes and they know what to expect of it.

The overall dinner experience of guests was not influenced by the design of the menu. The results in all three conditions showed that dinning in restaurant Le Debut was a positive experience for guests. Next to that, results showed that it will still be a long process to seduce people to make more vegetarian food choices in a restaurant. The majority of consumers still thinks that meat makes their meal complete and does not consider a meat substitute as a replacement for this (Hoek et al., 2011). Meat replacers are typically seen as less tasty, due to the image of meat substitutes or prior experiences of consumers. At the same time, a dinner in a restaurant is seen as a indulge moment. This combination of these factors might explain why less than one-fifth of the participants in this study selected a vegetarian dish.

Limitations and further research

The strength of this study is the real life setting in which the experiment is conducted for six weeks. However, because of this setting there are some limitations that need to be acknowledged. The participants of this experiment could not be randomly assigned to one of the three conditions. It was possible for guests to visit the restaurant more than once during the period of the experiment, so it is not sure that every guest is a unique participant. People who participated more than once could be influenced by the repeated exposure to the menu design. Another limitation of this experiment is that guests could be influenced by the choices of other people at their table.

Important to acknowledge is that the restaurant is run by students, with help of their supervisors. Because of this real life setting it was sometimes hard to have control over the experiment. Students had to enter the guest's dinner choices in the cash register by themselves. Students may have made mistakes while entering this data. After every dinner a report of the cash register was sent to us and we checked the mistakes with the food & beverage controller of the restaurant. Students could also forget to give a questionnaire to the guests after their dinner.

For further research it is recommended that the researcher of the study is present every dinner to have full control over the experiment. In this experiment we chose to work with a meat replacer of the vegetarian butcher. The vegetarian butcher dish could have been to new for people and the gap from eating a meat dish to a vegetarian dish might have been too big. In a further study more information about the vegetarian dishes could be given to guests, to make them more familiar with these products and to increase their taste expectations. It could also be an option to select specific groups of consumers beforehand on the basis of their eating habits. In this way could be tested of the nudge becomes more effective by consumers who are already open minded for vegetarian options. Another option might be to use animal friendly meat instead of vegetarian dishes, to make the gap for consumers smaller.

Next to that, in a future study it would be recommended to make the price of a combo menu equal to the same unbundled products. By doing this guests are certainly not influenced by the price. Further we expect that the bundling of vegetarian dishes could have been more effective in a canteen setting. We expect that is easier to manipulate people's food choices in a setting where they come at a daily base.

In the future more research should focus on increasing the taste expectations of meat substitutes, to stimulate more vegetarian food choices among consumers.

Implications

This quasi-experimental field study provides insight into consumer behaviour and nudging.
It is unique that the experiment is conducted in a real restaurant for so many weeks. The results of this study are useful for restaurants and canteens, which want to encourage more sustainable food choices. This manipulation might be more effective in a canteen where the same group of people makes food choices on a daily base. Manipulating people's food choices in a canteen may be easier, because people's taste expectations will be not as high as in a luxury restaurant.

The results of this study have shown that the bundling of food products is less attractive for people when they are not familiar with the bundled products or when they have negative taste expectations. If a restaurant wants to promote vegetarian food choices it can be useful for them to use meat substitutes that are more familiar to people. Another option for them could be to give some more explanation about the vegetarian dishes to increase the taste expectation or to use animal-friendly meat.

Looking at the current impact of meat production on the environment, it is clear that our meat consumption has to change on the short-term. More light has to be shed on the quality of meat substitutes to increase consumers taste expectations and to stimulate more sustainable food choices among consumers.

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Appendix I Menu designs

Menu card Period 1 - week 1

MENU GASTRONOMIQUE
€ 25,50

Lamsham – oerwortel, kropsla, crostini met humus
Lamb ham – heirloom carrot, butter lettuce, crostini with humus

~~~

Runder ribeye – van de grill, gegratineerde aardappel, saus van eekhoorntjesbrood
Beef rib-eye – grilled, gratinated potato, sauce of cepes

~~~

Crème brûlée – citrusterrine en bloedsinaasappelsorbet
Crème brûlée – citrus terrine and bloodorange sorbet

VOORGERECHTEN / STARTERS
€ 7,50

Tongschar – gebakken filet, rode biet, currykletskop
Plaice – pan-fried fillet, beetroot, crispy curry cookie

~~~

Lamsham – oerwortel, kropsla, crostini met humus
Lamb ham – heirloom carrot, butter lettuce, crostini with humus

~~~

Caesar salad – Romeinse salade, Parmezaanse kaas, gepocheerd ei en mierikswortelcrème
Caesar salad – Romain salad, Parmesan cheese, poached egg and horseradish cream

~~~

Tarte tatin – ratatouille, tomatencompôte, pesto
Tarte tatin – ratatouille, tomato compôte, pesto

~~~

Knolgroenten – als proeverij geserveerd, krokante eidooier en kruidensalade
Root vegetable – served as tasting, crispy egg yolk and herb salad

HOOFDGERECHTEN / MAIN COURSES
€ 17,50

Runder ribeye – van de grill, gegratineerde aardappel, saus van eekhoorntjesbrood
Beef rib-eye – grilled, gratinated potato, sauce of cepes

~~~

Gildehoen – gebraden filet, couscous, krokante brique met abrikozen, jus van Vadouvan
Farmer chicken – roasted filet, couscous, crispy brique with apricots, jus of Vadouvan

~~~

Zeebaars – gerookte filet, parelgort van schaaldieren, saus van wilde tomaat en waterkers
Seabass – smoked filet, barley of shellfish, sauce of wild tomato and watercress

~~~

Groentenstrüdel – herfstgroenten, risotto, pastinaak en truffelsaus
Vegetable strüdel – autumn vegetables, risotto, parsnip and truffle sauce

~~~

Kip teri-yaki van de vegetarische slager – roerbakgroenten, wilde rijst, cashewnoten en soyasaus

Chicken teri-yaki from our vegetarian butcher – stir-fried vegetables, wild rice, cashew nuts and soy sauce

NAGERECHTEN / DESSERTS
€ 6,50

Witte chocolade – mousse, bramen, after-eightsorbet

White chocolate – mousse – blackberries – after eight sorbet

~~~

Frambozen – mousse, anijscake, sorbet van perzik

Raspberries – mousse, cake of anise, peach sorbet

~~~

Crème brûlée – citrusterrine en bloedsinaasappelsorbet

Crème brûlée – citrus terrine and bloodorange sorbet

~~~

Nederlandse kaas & Franse kaas

Dutch cheese & French cheese

(Supplement € 2,00)

MENU GASTRONOMIQUE
€ 25,50

Knolgroenten – als proeverij geserveerd, krokante eidooier en kruidensalade
Root vegetable – served as tasting, crispy egg yolk and herb salad

Kip teri-yaki van de vegetarische slager – roerbakgroenten, wilde rijst, cashewnoten en soyasaus

Chicken teri-yaki from our vegetarian butcher – stir-fried vegetables, wild rice, cashew nuts and soy sauce

Crème brûlée – citrusterrine en bloedsinaasappelsorbet
Crème brûlée – citrus terrine and bloodorange sorbet

VOORGERECHTEN / STARTERS

€ 7,50

Tongschar – gebakken filet, rode biet, currykletskop
Plaice – pan-fried fillet, beetroot, crispy curry cookie

~~~

Lamsham – oerwortel, kropsla, crostini met humus
Lamb ham – heirloom carrot, butter lettuce, crostini with humus

~~~

Caesar salad – Romeinse salade, Parmezaanse kaas, gepocheerd ei en mierikswortelcrème
Caesar salad – Romain salad, Parmesan cheese, poached egg and horseradish cream

~~~

Tarte tatin – ratatouille, tomatencompôte, pesto
Tarte tatin – ratatouille, tomato compôte, pesto

~~~

Knolgroenten – als proeverij geserveerd, krokante eidooier en kruidensalade
Root vegetable – served as tasting, crispy egg yolk and herb salad

HOOFDGERECHTEN / MAIN COURSES

€ 17,50

Runder ribeye – van de grill, gegratineerde aardappel, saus van eekhoorntjesbrood
Beef rib-eye – grilled, gratinated potato, sauce of cepes

~~~

Gildehoen – gebraden filet, couscous, krokante brique met abrikozen, jus van Vadouvan
Farmer chicken – roasted fillet, couscous, crispy brique with apricots, jus of Vadouvan

~~~

Zeebaars – gerookte filet, parelgort van schaaldieren, saus van wilde tomaat en waterkers
Seabass – smoked fillet, barley of shellfish, sauce of wild tomato and watercress

~~~

Groentenstrüdel – herfstgroenten, risotto, pastinaak en truffelsaus
Vegetable strüdel – autumn vegetables, risotto, parsnip and truffle sauce

~~~

Kip teri-yaki van de vegetarische slager – roerbakgroenten, wilde rijst, cashewnoten en soyasaus
Chicken teri-yaki from our vegetarian butcher – stir-fried vegetables, wild rice, cashew nuts and soy sauce

NAGERECHTEN / DESSERTS
€ 6,50

Witte chocolade – mousse, bramen, after-eightsorbet

White chocolate – mousse – blackberries – after eight sorbet

~~~

Frambozen – mousse, anijscake, sorbet van perzik

Raspberries – mousse, cake of anise, peach sorbet

~~~

Crème brûlée – citrusterrine en bloedsinaasappelsorbet

Crème brûlée – citrus terrine and bloodorange sorbet

~~~

Nederlandse kaas & Franse kaas

Dutch cheese & French cheese

(Supplement € 2,00)

VOORGERECHTEN / STARTERS
€ 7,50

Tongschar – gebakken filet, rode biet, currykletskop
Plaice – pan-fried fillet, beetroot, crispy curry cookie

~~~

Lamsham – oerwortel, kropsla, crostini met humus
Lamb ham – heirloom carrot, butter lettuce, crostini with humus

~~~

Caesar salad – Romeinse salade, Parmezaanse kaas, gepocheerd ei en mierikswortelcrème
Caesar salad – Romain salad, Parmesan cheese, poached egg and horseradish cream

~~~

Tarte tatin – ratatouille, tomatencompôte, pesto
Tarte tatin – ratatouille, tomato compôte, pesto

~~~

Knolgroenten – als proeverij geserveerd, krokante eidooier en kruidensalade
Root vegetable – served as tasting, crispy egg yolk and herb salad

HOOFDGERECHTEN / MAIN COURSES
€ 17,50

Runder ribeye – van de grill, gegratineerde aardappel, saus van eekhoorntjesbrood
Beef rib-eye – grilled, gratinated potato, sauce of cepes

~~~

Gildehoen – gebraden filet, couscous, krokante brique met abrikozen, jus van Vadouvan
Farmer chicken – roasted fillet, couscous, crispy brique with apricots, jus of Vadouvan

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Zeebaars – gerookte filet, parelgort van schaaldieren, saus van wilde tomaat en waterkers
Seabass – smoked fillet, barley of shellfish, sauce of wild tomato and watercress

~~~

Groentenstrüdel – herfstgroenten, risotto, pastinaak en truffelsaus
Vegetable strüdel – autumn vegetables, risotto, parsnip and truffle sauce

~~~

Kip teri-yaki van de vegetarische slager – roerbakgroenten, wilde rijst, cashewnoten en soyasaus
Chicken teri-yaki from our vegetarian butcher – stir-fried vegetables, wild rice, cashew nuts and soy sauce

NAGERECHTEN / DESSERTS
€ 6,50

Witte chocolade – mousse, bramen, after-eightsorbet

White chocolate – mousse – blackberries – after eight sorbet

~~~

Frambozen – mousse, anijscake, sorbet van perzik

Raspberries – mousse, cake of anise, peach sorbet

~~~

Crème brûlée – citrusterrine en bloedsinaasappelsorbet

Crème brûlée – citrus terrine and bloodorange sorbet

~~~

Nederlandse kaas & Franse kaas

Dutch cheese & French cheese

(Supplement € 2,00)

! ! ! ! !
Menu!Gastronomique!€!25,50!

Geroosterde bietensalade | wilde eend | truffelcrème
Roasted beetroot salad | wild duck filet | truffle cream
€ 7,50
Wine suggestion:

~~~

Hertenbout | rode kool | schorseneren | kweepeersaus
Venison steak | red cabbage | salsify | quince sauce
€ 17,50
Wine suggestion:

~~~

Ananas tarte tatin | passievruchtcake | caramelijs
Pineapple tart Tatin | passionfruit cake | caramel ice-cream
€ 4,50
Wine suggestion:

voorgerechten | starters

€ 7,50

!
!
Kabeljauw | Livarspek | zwarte linzen | mosterddressing
Codfish | Livar bacon | black lentils | mustard sauce
Wine suggestion:

~~~

Coquille | nieroogkreeft | avocado | grapefruit
Scallop | Dublin prawn | avocado | grapefruit
Wine suggestion:

~~~

Pompoensoep | scharrelhoender | gemberroom
Pumpkin soup | organic chicken | ginger cream
Wine suggestion:

~~~

Geroosterde bietensalade | wilde eend | truffelcrème
Roasted beetroot salad | wild duck filet | truffle cream
Wine suggestion:

!

hoofdgerechten | main courses

€ 17,50

Tarbot | pasta | kokkels | kreeftenschuim
Turbot | pasta | cockles | lobster foam
Wine suggestion:

~~~

Kalfsstaartstuk | gnocchi | cantharellen | paddenstoelenjus
Veal tail | gnocchi | chanterelles | mushroom sauce
Wine suggestion:

~~~

Hertenbout | rode kool | schorseneren | kweepeersaus
Venison steak | red cabbage | salsify | quince sauce
Wine suggestion:

~~~

Groentenstrüdel | herfstgroenten | risotto | pastinaak | truffelsaus
Vegatable strüdel | autumn vegetables | risotto | parsnip | truffle sauce
Wine suggestion:

~~~

Kip teri-yaki | roerbakgroenten | wilde rijst | cashewnoten | soyasaus
Chicken teri-yaki | stir-fried vegetables **|** wild rice **|** cashew nuts **|** soy sauce
Wine suggestion:

nagerechten | desserts

€ 4,50

Elstar appel | hazelnootmousse | Calvadosparfait
Elstar apple | hazelnut mousse | Calvados parfait
Wine suggestion :

~~~

Ananas tarte tatin | passievruchtcake | caramelijs
Pineapple tart Tatin | passionfruit cake | caramel ice-cream
Wine suggestion:

~~~

Nederlands | Frans van onze trolley
Dutch | French from our trolley
(Supplement € 3,50)
Wine suggestion:

!

!

Menu Gastronomique   € 25,50

Pompoensoep | pompoenchutney | gemberroom | pompoenpitten
Pumpkin soup | pumpkin chutney | ginger cream | pumpkin seeds

~~~

Groentenstrüdel | herfstgroenten | pastinaak | truffelsaus
Vegetable strüdel | autumn vegetables | parsnip | truffle sauce

~~~

Ananas tarte tatin | passievruchtcake | caramelijs
Pineapple tart Tatin | passionfruit cake | caramel ice-cream

voorgerechten | starters

€ 7,50
!
!
Kabeljauw | Livarspek | zwarte linzen | mosterddressing
Codfish | Livar bacon | black lentils | mustard sauce

~~~

Coquille | nieroogkreeft | avocado | grapefruit
Scallop | Dublin prawn | avocado | grapefruit

~~~

Pompoensoep | scharrelhoender | gemberroom
Pumpkin soup | organic chicken | ginger cream

~~~

Geroosterde bietensalade | wilde eend | truffelcrème
Roasted beetroot salad | wild duck filet | truffle cream

!

!
!

!

hoofdgerechten | main courses

€ 17,50

Tarbot | pasta | kokkels | kreeftenschuim
Turbot | pasta | cockles | lobster foam

~~~

Kalfsstaartstuk | gnocchi | cantharellen | paddenstoelenjus
Veal tail | gnocchi | chanterelles | mushroom sauce

~~~

Hertenbout | rode kool | schorseneren | kweepeersaus
Venison steak | red cabbage | salsify | quince sauce

~~~

Groentenstrüdel | herfstgroenten | pastinaak | truffelsaus
Vegetable strüdel | autumn vegetables | parsnip | truffle sauce

~~~

Kip teri-yaki | roerbakgroenten | noedels | cashewnoten | soyasaus
Chicken teri-yaki | stir-fried vegetables **|** noodles **|** cashew nuts **|** soy sauce

nagerechten | desserts

€ 4,50

Elstar appel | hazelnootmousse | Calvadosparfait
Elstar apple | hazelnut mousse | Calvados parfait

~~~

Ananas tarte tatin | passievruchtcake | caramelijs
Pineapple tart Tatin | passionfruit cake | caramel ice-cream

~~~

Nederlands | Frans van onze trolley
Dutch | French from our trolley
(Supplement € 3,50)

!

!

Voorgerechten | starters

€ 7,50
!
!

Kabeljauw | Livarspek | zwarte linzen | mosterddressing
Codfish | Livar bacon | black lentils | mustard sauce

~~~

Coquille | nieroogkreeft | avocado | grapefruit
Scallop | Dublin prawn | avocado | grapefruit

~~~

Pompoensoep | scharrelhoender | gemberroom
Pumpkin soup | organic chicken | ginger cream

~~~

Geroosterde bietensalade | wilde eend | truffelcrème
Roasted beetroot salad | wild duck filet | truffle cream

Hoofdgerechten | main courses

€ 17,50

Tarbot | pasta | kokkels | kreeftenschuim
Turbot | pasta | cockles | lobster foam

~~~

Kalfsstaartstuk | gnocchi | cantharellen | paddenstoelenjus
Veal tail | gnocchi | chanterelles | mushroom sauce

~~~

Hertenbout | rode kool | schorseneren | kweepeersaus
Venison steak | red cabbage | salsify | quince sauce

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Groentenstrüdel | herfstgroenten | pastinaak | truffelsaus
Vegetable strüdel | autumn vegetables | parsnip | truffle sauce

~~~

Kip teri-yaki | roerbakgroenten | noedels | cashewnoten | soyasaus
Chicken teri-yaki | stir-fried vegetables **|** noodles **|** cashew nuts **|** soy sauce

Nagerechten | desserts

€ 4,50

Elstar appel | hazelnootmousse | Calvadosparfait
Elstar apple | hazelnut mousse | Calvados parfait

~~~

Ananas tarte tatin | passievruchtcake | caramelijs
Pineapple tart Tatin | passionfruit cake | caramel ice-cream

~~~

Nederlands | Frans van onze trolley
Dutch | French from our trolley
(Supplement € 3,50)

!

!
!

Appendix II Questionnaires

Period 1 - Week 1

Wat vond u van uw maaltijd in dit restaurant?
Als afstudeerstudente van Wageningen Universiteit onderzoek ik de optimale vormgeving van menukaarten en hoe dit consumenten beïnvloedt in hun keuze van gerechten. Voor dit doel onderzoeken we de verkoopgegevens in dit restaurant. Graag horen we ook uw mening over uw ervaring vandaag. Alle gegevens zijn enkel bedoeld om inzicht te krijgen in consumentengedrag; er zijn geen commerciële doeleinden. De gegevens worden anoniem verwerkt en niet aan derden verstrekt. Heeft u vragen? Mail dan Renske (Renske.Hermans@wur.nl). **Deze enquête kan alleen ingevuld worden als u de menukaart daadwerkelijk gezien heeft.**

- *Ja, ik ga akkoord met het gebruik van mijn anonieme gegeven (menukeuze en vragenlijst)*

Handtekening: _____

Heeft u gekozen voor het '*Menu Gastronomique*'?
- *Ja, want* _____
- *Nee, want* _____

Zo JA, had u ook gekozen voor het 'Menu Gastronomique' als dit 6 euro duurder was geweest?
- Ja
- Nee

Zo Nee, voor welk hoofdgerecht heeft u gekozen?
- Runder Ribeye
- Gildehoen
- Zeebaars
- Groentenstrudel
- Kip teri-yaki van de vegetarische slager

Beschouwt u uzelf als vegetariër of veganist?
- Ja, ik ben vegetariër
- Ja, ik ben veganist
- Nee

Hieronder volgen een aantal stellingen. Kruis aan wat voor u van toepassing is.

	helemaal mee oneens	mee oneens	neutraal	mee eens	helemaal mee eens
De menukaart zag er aantrekkelijk uit					
Het 'Menu Gastronomique' biedt waar voor je geld					
Het maken van een keuze was zeer makkelijk					
Er waren voldoende vegetarische keuzes					
Mijn ervaring in dit restaurant vandaag is positief					

Wat is uw geslacht?   Wat is uw leeftijd?   .... jaar
- *Vrouw*
- *Man*

HOTELSCHOOL THE HAGUE
Hospitality Business School

Hartelijk dank voor uw deelname

Wat vond u van uw maaltijd in dit restaurant?

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- *Ja, ik ga akkoord met het gebruik van mijn anonieme gegeven (menukeuze en vragenlijst)*
  Handtekening: _____

Heeft u gekozen voor het '*Menu Gastronomique*'?
- *Ja, want _____*
- *Nee, want _____*

Zo JA, had u ook gekozen voor het 'Menu Gastronomique' als dit 6 euro duurder was geweest?
- Ja
- Nee

Zo Nee, voor welk hoofdgerecht heeft u gekozen?
- Runder Ribeye
- Gildehoen
- Zeebaars
- Groentenstrudel
- Kip teri-yaki van de vegetarische slager

Beschouwt u uzelf als vegetariër of veganist?
- Ja, ik ben vegetariër
- Ja, ik ben veganist
- Nee

Hieronder volgen een aantal stellingen. Kruis aan wat voor u van toepassing is.

	helemaal mee oneens	mee oneens	neutraal	mee eens	helemaal mee eens
De menukaart zag er aantrekkelijk uit					
Het 'Menu Gastronomique' biedt waar voor je geld					
Het maken van een keuze was zeer makkelijk					
Er waren voldoende vegetarische keuzes					
Mijn ervaring in dit restaurant vandaag is positief					

Wat is uw geslacht?   Wat is uw leeftijd?   .... jaar
- *Vrouw*
- *Man*

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HOTELSCHOOL THE HAGUE
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- Zeebaars
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Period 2 – Week 1

Wat vond u van uw maaltijd in dit restaurant?

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- o *Ja, ik ga akkoord met het gebruik van mijn anonieme gegeven (menukeuze en vragenlijst)*
  Handtekening: _____

Heeft u gekozen voor het '*Menu Gastronomique'*?

- o *Ja, want* _____
- o *Nee, want* _____

Zo JA, had u ook gekozen voor het '*Menu Gastronomique'* als dit 6 euro duurder was geweest?

- o Ja
- o Nee

<u>Zo Nee,</u> voor welk hoofdgerecht heeft u gekozen?

- o Tarbot
- o Kalfsstaartstuk
- o Hertenbout
- o Groentenstrüdel
- o Kip teri-yaki

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