

- Food and beverage combinations
- Sommeliers' perspectives and consumer patterns in Sweden

*This dissertation is dedicated to
all sommeliers out there doing combinations*

*The Connoisseur does not drink wine but tastes its secrets
Salvador Dali*

Örebro Studies in Culinary Arts and Meal Science 14



HENRIK SCANDER

Food and beverage combinations
– Sommeliers' perspectives and consumer patterns in Sweden

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Abstract

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As beverage intake can play an important part of choosing a healthy diet, it is important to increase awareness of the contribution of beverages to overall energy intake for consumers.

The professional sommelier has for a long time served as a cultural intermediary, providing guests with good food and beverage combinations. Here, a clear gap was identified between health and the current practice of sommellerie.

The aim of the thesis is to develop knowledge about food and beverage combinations by investigating the consumption patterns of a Swedish population. The thesis will also explore the sociocultural understanding of taste and the practices of professional sommeliers.

The understanding of energy contribution and beverage patterns were linked to health, which led to the suggestion that sommeliers should gain from nutritional knowledge – in particular focused on beverage. Furthermore, sommeliers talk about 'good' combinations as a matter of refined taste, acquired through long-term practical engagement with wine and food. Foods expressed as 'unrefined', could also be becoming legitimate as cultural capital when combined with the right beverage. Also, performing food and beverage combinations was a routinised activity surrounded by rules, competence and materiality and was driven by the will to satisfy guests. It was also a part of shaping of sommeliers' identity through a continuous striving for improved competence.

Altogether, nutritional knowledge, acquisition of taste, goods re-evaluation and legitimacy as well as identity shaping gives sommeliers an extended knowledge when combining food and beverage, providing guests with not only the desired taste but also the possibility of serving healthier combinations. This extends the range of workplaces for sommeliers in the restaurant industry, but also to elderly care, hospitals and the like, as all people in those environments should have the opportunity to enjoy good meals according to both taste and health considerations.

Keywords: Bourdieu; craft drinks; food pairing; meal; restaurant; riksmaten; sommelier; practice theory.

Henrik Scander, School of Hospitality, Culinary Arts and Meal Science
Örebro University, SE-701 82 Örebro, Sweden, henrik.scander@oru.se

List of appended papers

The present thesis is based on the appended papers listed below. In the thesis they are referred to by their Roman numeral.

- Paper I Beverage consumption patterns and energy contribution from beverages per meal type: results from a national dietary survey in Sweden. Scander, H., Monteagudo, C., Nilsen, B., Tellström, R., & Yngve, A. (2018). *Public Health Nutrition*, 21(18), 3318-3327. doi:10.1017/S1368980018002537
- Paper II Food and beverage dinner combinations, patterns among Swedish adults. Scander, H., Monteagudo, C., Nilsen, B., Tellström, R., & Yngve, A. (2018). *International Journal of Gastronomy and Food Science*, 14, 20-26. doi.org/10.1016/j.ijgfs.2018.08.003
- Paper III Acquiring taste: Sommeliers on “good” food and beverage combinations. Scander, H., Neuman, N., Tellström, R., & Yngve, A. (2019). *Appetite*, in progress, resubmitted.
- Paper IV Sommeliers’ food and beverage combinations – social conventions and professional identity. Scander, H., Neuman, N., & Tellström, R. (2019). *Journal of Gastronomy and Tourism*, accepted 31 July 2019.

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INTRODUCTION

This section will introduce the reader to the fields of beverage consumption and food and beverage combination research, and will provide an introduction to the subject of Culinary Arts and Meal Science, as the overarching theme.

Starting points

When starting out writing this thesis, ‘Good food and beverage combinations’ was the provisional title. Prior to my doctoral studies, I had several years of experience working with sommeliers, as a sommelier, and teaching sommellerie, so the word ‘good’ did not trouble me at all. Today, I look differently upon the definition of ‘good’ combinations.

The first part of the thesis work included describing consumption patterns of various combinations and describing them in the context of total intake and energy contribution, pointing out the importance of certain beverages for different meal types and how the choice of beverage related to food consumption. Throughout this time, I saw that good combinations could be beneficial to health. However, the term ‘healthy’, in relation to food, is far from unambiguous and is one of the most semantically broad words in the English language, according to Rousseau (2012). As I am new to this field, this thesis does not attempt to provide recommendations regarding health; rather my ambition is to increase knowledge among sommeliers regarding beverages in general and healthy choices in particular. This thesis is based on the recommendations in Nordic Nutrition Recommendations (2014); and World Health Organization (2004); World Health Organization (2018) My experience of sommellerie has led to the continuing development of my thoughts on how healthy choices can be implemented from a gastronomic point of view.

Furthermore, as I discussed my thesis with colleagues, telling them it was about good food and beverage combinations, some told me that taste is subjective. But what interested me most was when someone asked me – knowing that I knew a great deal about food and wine combinations – for wine recommendations for certain dishes. I have for a long time been intrigued by the fact that while taste is often seen as subjective, there is still a demand for expert knowledge of good combinations. This is how sociocultural aspects of taste became important to me.

Taste has been a subject for many sociologists in the past. Arguably, the first to make consumption the focus of sociological analysis was Veblen, in

his seminal theory of the ‘leisure class’ (Veblen, 1899/2008). The leisure class, he argued, expresses its difference through noticeable displays of wealth – what he called “conspicuous consumption”. Soon thereafter, Simmel stated that fashion follows class patterns, with an avant-garde elite whose fashion is imitated by society’s lower strata, leading to its devaluation and thus to the formation of new fashions and sustained class segregation (Simmel, 1904/1957). Later on, Bourdieu wrote his thesis *La Distinction* (Bourdieu, 1979/1984), which proposed his theory of class reproduction through cultural distinction. *La Distinction* is a classic work in sociology on how to understand judgement of good taste. As I was troubled by the dichotomy between individual subjective taste and structural culturally determined taste, Bourdieu’s relational ontology became the answer to how to approach this scientific puzzle. Thus, with Bourdieu’s theories in mind, I gathered a group of sommeliers, asking them for their thoughts on good food and beverage combinations. That said, I have challenged Bourdieu’s theories throughout this process, and adapted his theories to current times. This will be clarified in the theoretical framework of this thesis, where I will also explicitly clarify the notion of ‘good’. Opinions related to what people believe is good taste, or even what people think they ought to like, can be problematic, normative, judgemental or, as Bourdieu might put it, distinctive. I believe these are the reasons why ‘good taste’ has interested sociologists for a long time and why it needs to be explored further. At this point, it is important to stress that my own view on good taste is irrelevant; it is only my *interest* in good taste that is relevant. In this thesis, the focus is on understanding what constructs and legitimises taste as good, because an understanding of this can and will benefit the restaurant industry.

Professional Sommeliers

‘Sommelier’, ‘sommelière’ and ‘sommellerie’ are words that can be both hard to pronounce and to spell. The last referring to the profession and the first two to the performer, male and female respectively, i.e., a sommelier and a sommelière perform sommellerie. The definition of the profession is more unclear, and there is no ambition in this thesis to define it.

Still, ‘sommelier’ is a widely used term for wine specialists, wine waiters or wine stewards (Robinson, 2006), whose job is to ensure that wines are served correctly and to help with food and wine matching. Most of the sommelier’s focus is on tracking customer preference when recommending wines to customers, but also finding wine providing value for money for the

restaurant, keeping track of beverage inventory, and understanding wineries' reputation and beverages in general (Muñoz et al., 2018). There are different ways of becoming a sommelier, and these tend to differ due to cultural aspects and differences in training programmes. These various training programmes offer different diplomas, credits or degrees, but formal education is not always needed as long as one possesses relevant knowledge for the specific situation or work. Thus, the term 'sommelier' here refers to someone who is professionally engaged in providing food and beverage combinations.

Swedish sommellerie is thriving and multiple sommelier training programmes have been established in the private sector, by trade organisations and in higher education, producing more than 100 sommeliers every year in recent decades. Furthermore, this development has resulted in multiple Nordic and European Champions and two Worlds Champions in Sommellerie (*Svenska Sommelierföreningen*, 2016). As wine becomes more popular and guests more knowledgeable, the sommelier plays an even more important role.

As a profession, sommellerie dates back to the beginning of the 19th century, with the opening of big restaurants and hotels. The sommelier profession expanded during the '60s and '70s, had a number of bad years during the recession, but in recent years has flourished. Sommeliers entered Swedish gastronomy in the 1980s, influenced by French haute cuisine. As the interest in wine was increasing, the Swedish Sommelier Association, founded in 1986, connected to the International Association of Sommellerie in 1989 (*Association de la Sommellerie Internationale*, 2018), and has today around 300 members. Knowledgeable sommeliers, who gained a higher profile during the latter part of the gastronomic revolution of the 1990s, are held in high regard. Due to sommeliers following the trend led by chefs, performing at different competitions such as the Bocuse d'Or, the sommelier profession now has its own world championship, where Sweden has twice won the gold medal with Andreas Larsson in 2007 and Arvid Rosengren in 2016 (*Svenska Sommelierföreningen*, 2016).

It is also important to emphasise the importance of scientific publications in showing the impact of the sommelier, both in terms of increased restaurant profit and customer satisfaction (Dewald, 2008; Manske & Cordua, 2005). Furthermore, professional sommeliers have been shown to play an important role in improving the dining experience in restaurants, (Muñoz et al., 2018). The professional sommelier has for a long time served as a cultural intermediary (see Bourdieu, 1979/1984; Smith Maguire, 2010) in

restaurants, providing guests with good taste combinations. Therefore, it is interesting to add sommeliers' work to the debate on taste. Sommeliers do not only serve 'good' food to the guests but also combine it with the 'right' beverage, which is one of the sommelier's main tasks (Dewald, 2008; Manske & Cordua, 2005). This is central to the discussion of how to understand a 'good' combination, as it is a prolonged debate on how objectivity in taste stands in relation to the subjective preference of taste. Still, within gastronomy, this is something that sommeliers seem to practice on a daily basis.

AIM

General aim

The aim of the thesis is to develop knowledge about food and beverage combinations by investigating the consumption patterns of an adult Swedish population. The thesis will also explore the sociocultural understanding of taste and the practices of professional sommeliers.

Specific aims

Paper I. To describe the beverage consumption and the contribution of beverage energy (including alcohol energy) to total energy intake according to gender, region of living, meal type and day for a Swedish adult population.

Paper II. To explore the reported food and beverage combinations by dinner time, recorded by an adult Swedish population.

Paper III. To explore how knowledge of ‘good taste’ in food and beverage combinations is acquired by sommeliers.

Paper IV. To deepen the understanding of the role of professional practices in the art of good food and beverage combinations.

SUMMARY OF THE APPENDED PAPERS

In this section, the intention is to give the reader a quick overview of the papers included in the thesis to provide a better understanding of the thesis framework from methodological and theoretical perspectives; this will facilitate the understanding of the choices made in the research process. The appended papers will be summarised, including the aim, methodology, data analysis and findings, and publication status.

Table 1: Overview of papers I, II, III, IV.

	Paper I	Paper II	Paper III	Paper IV
Title	Beverage consumption patterns and energy contribution from beverages per meal type: results from a national dietary survey in Sweden	Food and beverage dinner combinations, patterns among Swedish adults	Acquiring taste: Sommeliers on "good" food and beverages combinations	Sommeliers' food and beverage combinations – social conventions and professional identity
Aim	The study aimed to describe the beverage consumption and the contribution of beverage energy (including alcohol energy) to total energy intake according to gender, region of living, meal type and day for a Swedish adult population	This article explores the relationships between food and beverage combinations at dinners, recorded by a Swedish adult population.	This paper explores how knowledge of 'good taste' in food and beverage combinations is acquired by sommeliers	The aim was to explore how professional sommeliers perform food and beverage combinations as a social practice.
Method	Secondary analyses of the national dietary survey <i>Riksmaten</i> , 2010-2011.	Secondary analyses of the national dietary survey <i>Riksmaten</i> , 2010-2011.	Focus group interviews of sommeliers in Sweden, with different work experience in sommelierie.	Explorative design based on focus group interviews.
Data analysis	Statistical descriptive analysis, Mann-Whitney U test.	Combinations of beverage and food were analysed using cross tabulation. Correlation coefficients for non-parametric variables were used to determine the association power. Predictive factors for more important beverage and food combinations were explored by logistic regression analysis.	A qualitative thematic analysis was performed by applying Bourdieu's concepts of taste and capitals.	Content analysis was conducted in line with Graneheim and Lundman (2004) using practice theory.
Findings	A considerable part of total energy intake comes from beverages – especially for men. Beverages can contribute to a more enjoyable diet, but at the same time can provide energy, sugar and alcohol	Our results show correlations in the reported consumption of food and beverages that explain the occurrences of specific patterns of combinations of food and beverage. Our findings offer a useful	It is demonstrated that sommeliers' talk about 'good' combinations is a matter of delicate and refined taste acquired through long-term practical engagement with wine and food. The paper contributes to debates on how to	We provide new insight on food and beverage combinations, bridging the gap between objective taste and individual subjectivity. It was shown that performing food and beverage combina-

	Paper I	Paper II	Paper III	Paper IV
	in amounts that do not promote optimal health.	understanding to culinary professionals of some everyday choices that can guide their food and beverage pairing.	understand sensory and sociocultural taste and the development of sommeliers' social and cultural capital while performing their profession	tions is a routinised practice surrounded by conventions of pairing, culinary competence and sommelier identity, which is driven by professional pride. In addition to previous food and beverage combination research, it is shown that the convention of separate taste and dishes and/or beverage in hole plays an important role in how to understand a combination.
Co-authors	Celia Monteagudo Bente Nilsen Richard Tellström Agneta Yngve	Celia Monteagudo Bente Nilsen Richard Tellström Agneta Yngve	Nicklas Neuman Richard Tellström Agneta Yngve	Nicklas Neuman Richard Tellström
Co-authors and my own role	I did most of the data preparation and statistical work. The writing and presentation of the paper was done through the collaboration of all authors.	Celia and I did most of the data preparation and statistical work. The writing and presentation of the paper was done through the collaboration of all authors.	I did all the empirical work and the analysis. The writing and the discussions of the results presentation were done by all authors.	I did all the empirical work and the analysis. Me and Nicklas did most of the writing. The discussions about the analysis and the presentation of results were done by all authors.
Publication	Public health nutrition, 2018, 21.18: 3318-3327.	International Journal of Gastronomy and Food Science, 2018, 14: 20-26.	Appetite, Submitted, 2019, 26 Feb. Revision due date 27 April. Resubmitted 22 April, 2019. Resubmitted 25 July, 2019.	Journal of Gastronomy and Tourism, Submitted May, 2019. Accepted 31 July 2019.
Conference presentation	9th International Conference of the Culinary Arts and Sciences (ICCAS) 2015, Mont Clair, New Jersey, USA. Poster presentation.	12th European Nutrition Conference 2015, Fens, Berlin, Germany. Oral presentation.	11th International Conference of the Culinary Arts and Sciences (ICCAS) 2019, Cardiff, Wales. Oral presentation. Tore Wretman-dagen 17 October, Gustavianum, Uppsala, Oral presentation.	International conference on health communication, Uppsala, 28-30 August, 2019. Poster presentation.

Paper I: Beverage consumption patterns and energy contribution from beverages per meal type: results from a national dietary survey in Sweden

In the first paper, the focus was on beverage consumption patterns and the energy intake contribution from beverage by type of meal. The data used in this paper were taken from the national dietary survey *Riksmaten* (2010-2011), collected by the Swedish National Food Agency. In Sweden and internationally, many studies have been published on food intake, but few have focused on beverage consumption. Therefore, the aim of this paper was to describe beverage consumption in Sweden and the contribution it makes to overall energy intake, as well as recording the energy from sugar and alcohol. In addition to previous studies published in *Riksmaten* (2010-2011), the data (including the *Riksmaten* study) on the categorisation of reported food and beverage items were categorised as ‘eaten’ or ‘drunk’, instead of just food and beverage categories. Thereafter, we presented descriptive statistics of gender, region and weekday/weekend.

The results showed that water, followed by coffee, were the most consumed beverages by volume, and that the highest energy intake came from milk (for both genders). Gender differences were found; for example, there were higher intakes of juice, soft drinks, beers and spirits among men, while women had a higher consumption of tea and water. The regional data showed higher consumption of wine in the biggest cities. Total energy intake – food energy as well as beverage energy – was higher on weekend days than on weekdays. Furthermore, men did not only have a higher intake of food, beverages and total energy, but interestingly also a higher percentage of beverage energy intake in relation to total intake. The highest beverage percentage stemmed from ‘other meals’ (other than breakfast, lunch and dinner), and the lowest percentage was during lunch.

We found differences in beverage energy intake according to gender, region and meal type. Furthermore, comparing these results, we saw that women tended to have a healthier meal pattern than men. This is mostly due to men consuming more ‘empty calories’ from sugary and alcoholic beverages. The results indicated a risky consumption of alcohol for 25% of the studied population for both genders, according to Nordic Nutrition Recommendations.

As for the methodological difficulties, no specific alcohol content of beverages was reported in the survey, thus the standard average alcohol content from the national food database was used. According to contemporary al-

cohol sales, the alcohol content included in the database probably underestimated the level for red wine and beer. Also in regards to conscious or subconscious under-registration, avoidance or underestimation, the reported figures are most probably lower than the factual.

Choice of beverage is an important factor in a healthy diet, and it is important to increase awareness of the energy contribution from beverages – especially now we are overwhelmed by new food and beverage trends, including beer and wine with higher alcohol content and new types of juices, soft drinks and smoothies.

Paper II: Food and beverage dinner combinations patterns among Swedish adults

The second paper followed the first paper's findings on beverage energy contribution to meals, by looking at how beverages were combined with foods in the dietary records for dinners. As research on food and beverage combinations has mainly been centred on sensory science and evaluating predetermined combinations, this paper aims to explore the food and beverage combinations recorded in a dietary survey of a sample of the Swedish adult population. The data of *Riksmaten* (2010-2011) were analysed by categorising dinner food and beverage categories. The categories were analysed by cross tabulation, and correlation coefficients for non-parametric variables were used to determine the strength of association. Subsequently, combinations with the highest association power were explored by logistic regression analysis.

The results showed that water was the most commonly consumed beverage at dinner. Moreover, two of the three strongest correlations contained alcoholic beverages (spirits and white wine). The most important predictive factors for combinations were where the dinner took place, age and employment of the consumer.

This provided information on correlations in reported consumption of food and beverage as combinations, which can explain the occurrence of specific patterns. Therefore, these findings offered a new understanding of everyday food choices and could be useful in guiding culinary professionals in their food and beverage pairings, as well as for optimising restaurant experiences.

Paper III: Acquiring taste: sommeliers on ‘good combinations’ of food and beverages

This paper draws attention to the matter of taste in regards to food and beverage combination. As previous research is dominated by sensory science, where taste is turned into quantifiable characteristics, this paper explores how knowledge of ‘good’ taste combinations is acquired by sommeliers in Sweden. In the sommelier profession, food and beverage combination practice is a central part of everyday professional life, and sommeliers were a natural choice of subject to understand food and beverage combinations more deeply.

The study was performed using a thematic analysis, applying Bourdieu’s concepts of taste and capitals to focus group interviews of 21 sommeliers. The legitimate competence and taste were predominantly expressed as a matter of acquired resources. This justifies the use of Bourdieu as one way to conceptualise the stories told by our respondents. Bourdieu’s way of theorising resource accumulation of groups in society was to develop a battery of capital concepts. According to Bourdieu, capital can present itself in three fundamental forms: economic, social and cultural (Bourdieu, 1986). The latter, cultural capital, is divided into three forms: the embodied state, the objectified state and the institutionalised state.

The analysis resulted in three thematic categories: *understanding ‘good’ combinations, from lowbrow to highbrow – the role of materiality and embodied skills* and *acquiring competence through capital conversion*. According to the respondents, there was some knowledge that seemed to be initial and some that was more complex in understanding combinations. These latter competences were described as ‘internalised’, as a deeper understanding through social and cultural capital, starting out by learning the rules of food and beverage combination, and then by working together with other professionals, learning how to apply these rules in different situations.

This paper argues that providing advice on food and beverage combinations is driven by the notion of good taste. This is a form of distinction for the sommeliers, making them capable of re-evaluating lowbrow goods into highbrow ones through the combination. This is one aspect that creates the possibility of creating gastronomically sophisticated meals. This also points to a trajectory of accumulating distinctive competence for the sommelier.

Paper IV: Food and beverage combination as a professional practice – a qualitative study of sommeliers

Due to the results from Paper III, which show how sommeliers understand food and beverage combinations, this paper focuses on the practice of *creating* them. While food and beverage combination research has mainly concentrated on sensory evaluations of product characteristics or customer preferences, this paper focuses on the professional practices involved in their creation of such combinations. The data come from in-depth focus group interviews conducted with Swedish sommeliers. The study explores how sommeliers perform food and beverage combinations as a social practice.

The qualitative content analysis resulted in two main categories: *conventions of combining* and *the sommelier identity*, which showed that performing food and beverage combinations is a routinised activity surrounded by rules, competence and materiality driven by the will to satisfy guests. This gives the sommelier the opportunity to personally benefit both emotionally and economically. The conventions of combining food and beverages in ‘correct’ ways included ‘rules’ of understanding texture, the changing and intensification of flavour and taste, and different philosophies around combinations depending on the restaurant profile. The conventions were also routinised into more or less automatic ways of doing it, and these conventions were likely to be formed in the socialisation of taste. It was found that the professional sommelier uses more or less explicit rules as a heuristic framework in order to verbalise the materiality of taste experiences formed in combinations. The sommelier expresses this *know-how* as a flexibility to utilise this materiality differently according to the combination. Similar phenomena have been studied (Wellton, Jonsson, & Svingstedt, 2018) and described as ‘getting a feel’ for service, which connects to the identities driven by inspiration and pride in producing professional combinations and expressing oneself, for example, in competitions and blind tasting events. The ability to perform ‘honest’ or ‘objective’ evaluations of wine was expressed as central to their identity. The sommelier enrolls in their practices, with their level of commitment changing from introductory stages to in-depth involvement as a part of a career (Warde, 2005), and this evolves through the learning processes and acquisitions of taste as detailed in Paper III. And, as Warde (2005) points out, practices can be developed within groups, thus forming a social identity communicating what ought to be seen as good or not within that circle, is an important part of how the sommelier works with ‘good’ combinations.

These findings bridge the gap between ideas of objective taste and individual subjectivity, and have practical implications for the restaurant business, as they reveal norms of behaviour in the profession as well as potential drivers of sommeliers in their professional and individual development.

Structure of the thesis

This thesis is a comprehensive summary and extension of the four appended papers described later in this chapter and is structured as follows:

Introduction – In this section, an introduction to the theme of the thesis is presented, as well as a description of how the ideas and project have evolved.

Disciplinary background of the thesis – In this chapter, the theoretical approach is outlined to give an understanding of the relational stance. It then details the disciplinary background of Culinary arts and meal science, and food and beverage combination research. Other areas of relevance mentioned are nutritional recommendations and dietary guidelines, followed by a sociological approach.

Method and Materials – Here, the methods and material are presented together with my inside perspective, in order to give a clear view of the possibility of drawing conclusions from the data.

Results – In this section, a brief summary of the appended papers' results is presented.

Discussions and contributions – The results are here discussed, extended and further developed. In this section, results originating from the appended papers are also discussed, as are the empirical and theoretical contributions, potential implications, and suggestions for further research.

Appendix – This section is where the four papers that form the basis of this thesis can be found.

DISCIPLINARY BACKGROUND OF THE THESIS

This chapter will give a disciplinary background in regards to Culinary arts and meal science and food and beverage combination research. Other areas of relevance to better understanding the project are nutritional recommendations and dietary guidelines, and a sociological approach providing a theoretical foundation.

Culinary arts and meal science

This is the 14th publication in the field of Culinary arts and meal science at Campus Grythyttan, Örebro University, which started out as a research subject in 2004.

The first thesis written at our campus, *Sensory Evaluation and Consumer Preference of Wine and Food Combinations* (Nygren, 2004), has been cited as one of the first scientific approaches to the field of food and beverage combinations. Previous theses have touched on my perspective of the meal, both as food and beverage combinations from a sensory science perspective, as well as from a cultural eating perspective including political meals (Tellström, 2006), practical knowledge (Jonsson, 2004; Wellton, 2017) and nutrition (Nilsen, 2018). However, no thesis has used this dual perspective of both qualitative and quantitative methodologies combining health and nutrition with gastronomy from the practitioners' point of view, which was one of the ideas founding the subject of Culinary art and meal science (I.-B. Gustafsson, 2004).

Today, Culinary arts and meal science is expressed as a multi- and interdisciplinary subject, resting on an integrated knowledge base of science, craft and aesthetic design, where applying a more broad-based interface with other research fields is encouraged. Integration with other research fields provides new perspectives to the subject of Culinary arts and meal science. Therefore, my thesis is mainly focused on food and beverage combinations from a beverage perspective (Gustafsson, Öström, Johansson, & Mossberg, 2006), using both nutrition and sociology as clear starting points, resulting in an interdisciplinary thesis. Meals are complex, as pointed out by I. B. Gustafsson (2004); Gustafsson, Öström, and Annett (2009) thus, a combination of the Five Aspect Meal Model's different parts is needed to provide a more holistic understanding of meal research.

Theoretical perspectives of taste and consumption

To be clear, this thesis is not an attempt to find out what a 'good' food and beverage combination is for all people at all times, nor in our cultural context today. Rather, I am interested in how we can understand good combinations as an expression for taste, culturally, in an attempt to bridge the gap towards healthy eating patterns.

To be able to approach the research problem methodologically, an epistemological idea is outlined. Since food and beverage combinations can be seen as a part of a contingent social action, filled with sociocultural taste and performed as practical manual work, practice theory enables the possibility of emphasising activities that comprise the use of things, such as food and wine, organised with a shared common understanding. Food and beverages are, for me, certainly socially constructed based on practices and affected by power relations. Still, I believe that, through time, existing or recurrent structures also affect taste.

Furthermore, Bourdieu's theory of practice enables this duality to co-exist by linking behaviour to social structures through the three main concepts essential for understanding practice: habitus, field and capital. Therefore, I argue that a good food and beverage combination is always to be seen as relational (Bourdieu, 1979/1984) to other combinations that are not good, and that the professional understanding of good combinations is based on acquired social taste (Scander, Neuman, Tellström, & Yngve, 2019), which discerns the cultural taste and doings in food pairing practices. As food is an important part of the special and conspicuous, as well as the mundane and ordinary (Neuman, 2019), a theoretically engaged study is important for the advancement of both the research field and the gastronomic sphere. Many scientific papers on eating practices that have used Pierre Bourdieu's concepts are presented in *Distinction: A Social Critique of the Judgement of Taste*, which is a collection of theoretical and empirical studies on the theme of Bourdieu's contributions in the field of food (Sato, Gittelsohn, Unsain, Roble, & Scagliusi, 2016). In the review of Sato et al. (2016) 38 peer reviewed papers were categorised by food choice and provisioning, taste, social class, food symbolism, the body, and the scientific field of food and eating. Even if none of the papers related to food and beverage combinations, the taste of luxury and the taste of necessity were broadly applied, showing that Bourdieu's theories are still relevant to understanding contemporary consumption of food and beverages.

Forms of capital

In Bourdieu's theory of practice, he introduces and conceptualises actions as outcomes of a relationship between habitus capital and field. I will return to habitus and field later, but will start out with capital, which is central to my thesis. An important premise for using Bourdieu's forms of capital is that food has the potential of being at the intersection of the material and symbolic aspects of our lives. Therefore, food and beverages are essential for us in regards to nutritional energy, but also sustain us in other ways. Eating also functions as a mark of belonging, as it is a social practice bringing meaning to humanity. Capital in that sense is understood as accumulated labour, either incorporated or as materialised form, which he calls *embodied form* (Bourdieu, 1986). Capital is accumulated over time as the capacity to make profit and being increased or reproduced. Due to the distribution of capital forms and its subtypes, at any given moment in time it represents the immanent structures of the world. As the capital is dependent on the field in which it functions, capital can present itself in three fundamental guises: economic, social and cultural (Bourdieu, 1986). Economic capital is the most straightforward type of capital and is commonly associated with power in the forms of money and wealth. Social capital accrues from networks and relationships, e.g., family and colleagues. Cultural capital is divided into three forms: the embodied state, as long-lasting dispositions of the mind and body; the objectified state as cultural goods (literature or wine bottles, etc.); and the institutionalised state as a form of objectification resulting in educational qualifications, e.g., a university degree (Bourdieu, 1986). The intention to use Bourdieu's theoretical framework by identifying capital forms hopefully gives an understanding of how sommeliers' practice of combining food and beverages defines society's 'good taste'.

Importantly, capitals are not independent of each other, but interact and can be converted from one to the other. For example, knowing the 'right' people can result in a higher-paid job, which means that social capital is converted into economic capital. Cultural capital, such as being conversant in arts and music, can be converted into social capital through contacts with people having the same interests. This thesis will show how the concept of capital is useful in understanding the process of acquiring taste in the gastronomic world, and how social capital can be converted into cultural capital in the sense of knowing the 'right' people.

From Bourdieu and the turn to practice theory

Theories of practice, which are a multitude of different social theories taking practices as the unit of social analysis, have grown, developed and differentiated greatly during the 21st century.

The overall picture of different practice theories from a sociological perspective is derived from Bourdieu and Giddens, both of whom had the ambition to overcome the problem of the structure/agency dichotomy (Bourdieu, 1990; Giddens, 1984). Thus, as Reckwitz (2002) suggests, all practice theorists might be more or less well-disguised successors of the sociological tradition of theory of action, founded by Max Weber, as “all ‘practices’ form structures of action, which in some way are treated by all kinds of social theories” (Reckwitz, 2002, p. 244).

In addition, Bourdieu built his theory on the basis of the concept of field – that social life is based on symbolic and cultural belief systems with specific beliefs called *doxa*, which have their own value systems and dominance, such as the fields of science, culture or gastronomy (Bourdieu, 1990). Within each field, there is a predominant order or *doxa* – a belief in the ‘natural’ order, that is, what is true or right. When employing Bourdieu's theory, the field should not be perceived as a single structure, but rather as a series of smaller fields of social practice. In this case, professional food and beverage practices operate within layered fields – each conferring different levels of influence on the collective within them. Bourdieu researched social practices in a specific context, namely Algerian agricultural communities. He examined everyday social practices, how they arose and what they meant. Through his work, he developed a theory of how to understand everyday societal practices relationally in social and symbolic arrangements. These *doxas* can be seen as objective social structures that both guide and limit social actions, of what is considered appropriate or not, that is, what is natural or unnatural. Based on these structures, a uniform system of dispositions is created for perception, thinking and action by the individual embodied. It is a kind of incorporated history, but at the same time provides guidance in the present and in continued action in a practical sense. This system of dispositions is called *habitus* (Bourdieu, 1990). In *The Logic of Practice*, Bourdieu defines *habitus* as:

systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their

outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. Objectively 'regulated' and 'regular' without being in any way the product of obedience to rules, they can be collectively orchestrated without being the product of the organizing action of a conductor. (Bourdieu, 1990, p 53)

The important thing for Bourdieu's definition of practices is that it is a relational practice that stretches between the objective and subjective. Thus, the way of overcoming this false dichotomy is through theory of practice, through which one can escape from the realism of the structure and situate oneself within the 'real activity' or 'in the practical relation to the world' (Bourdieu, 1990, p. 52). Still, without falling back to subjectivism, which Bourdieu claimed was incapable of giving an account of the necessity of the social world.

Therefore, practice is the result of the relationship between one individual's habitus, different forms of capital, and the field of action, where the field is an analytic definition of a network, of objective relations between positions. To put it more clearly, a field (e.g., the economic/scientific/gastronomic field) is a particular social space of institutions and forces. Our practical sense is specific to the field in which we are acting at any given moment. A field is a site of tension, contradiction, and social struggle, and hence a site where different forms of capital are produced and reproduced.

For Schatzki, practices as entities are nexuses of sayings and doings based on shared understandings and meanings, routines, social conventions, embodied and cognitive competences, (formal and informal) rules and instructions, and normative orientations (Schatzki, 1996). Moreover, a central part of contemporary theories of practice, including Schatzki's, is the central role of the material in all of social life (see Reckwitz, 2002). From the point of food and beverage combinations as a practice, the materiality is both in the actual combinations such as the wine or food itself and also in our bodies as the ability to taste or smell. There are also certain competences regarding different rules in the process of pairing described by Harrington (2006), and meanings such as having the role of a sommelier (Dewald, 2008), which all are based on certain competences and knowledge regarding beverages and their origin and production, as this affects taste but not their cultural value. Here, we use practices as an entity connected to both sayings and doings with explicit rules, instructions and understandings (Schatzki, 1996; Warde, 2005). These entities are separated from practices as performance, as the

practices are performed regularly where it is of importance for the practitioners to have the ability to perform the practices and reproduce them as entities (Schatzki, 1996; Shove, Pantzar, & Watson, 2012). That is why the saying and doing are only practices if those who perform them have the understanding of their rules, meaning and structure (Schatzki, 1996). In this way of understanding practices, the body and the practices are closely related, and to be skilled in performing the practices, it is important to learn the movements and habits associated with them. Alan Warde (2005) has extended Schatzki's theory of practices into the sociology of consumption, arguing that individuals' enrolment in practices is to be seen as a career, changing from an introduction to the practice to in-depth involvement. From his perspective, it is important that practices are developed within groups, as it can be hard for others on the margins of the relevant segment of the practice to understand the intended meaning. Furthermore, there are different views on how important practices are in the formation of identity. Here, Warde (2014) asserts that practice theories emphasise routine over actions, and embodied practical competences over expressive virtuosity in the fashioned presentation of self. Still, Smith Maguire (2018b) shows the legitimization of taste for the particular is made explicit as an accepted part of habitus.

Objectivity and subjectivity of taste qualities

Objective and subjective are often presented as dichotomies of food quality (Brunsø, Fjord, & Grunert, 2002), where objective qualities are presented as physical characteristics which exist in the food objectively, while subjective qualities are something perceived only by the consumer. Brunsø et al. (2002) present something they call the *Total Food Quality Model*, which is based on different food quality criteria: product-oriented quality, process-oriented quality and quality control. These criteria can be said to constitute objective quality, as they measure aspects of a product and the production process, while user-oriented quality constitutes subjective quality, since it can only be measured at the consumer level, and can differ for the same product between users.

Another classification for food quality is into categories of: hedonic, health-related, convenience-related and process-related (Grunert, Bech-Larsen, & Bredahl, 2000). Hedonic quality relates to sensory pleasure and is therefore mainly linked to taste, smell, and appearance. Health-related quality concerns ways in which consumption of the product will affect consumers' physical health. Convenience-related quality relates to the time and

effort that has to be expended while buying, storing, preparing and consuming the product. Finally, process-related quality refers to the characteristics of the production process in which consumers have taken an interest (Grunert et al., 2000).

But, as turning to performing taste, there is more to the understanding of food quality – that taste is an activity and not a passive or determined state (Teil & Hennion, 2018). Teil and Hennion (2018) are especially interested in expertise or *great amateurs*. This is not because their knowledge of the product is greater than people with a lack of concern or interest in what they eat, but because their reflexive activity on the object of their passion more clearly reveals the diverse forms and devices, gestures and timings, training and guides needed for such an involved sense of taste to develop. There is also a debate about objectivities and the regimes of existence of objects (Teil, 2012), and if ‘real’ objects only fit into the form of data or things. Teil argues that wines are given a particular taste and typicity due to the complex combinations of viticulture wine-making practices and agro-climactic factors, summed up as *terroir*. The problem here lies in scientists being unable to produce a stable list of determining factors, therefore claiming *terroir* to be an imaginary social construction, while the producers and intermediaries consider *terroir* a real entity. Manzo (2010), studying the subculture of ‘coffee geeks’, highlights connoisseurship through the lens of ethnomethodology as a way of looking into the perspective of taste as something derived from the members’ own displayed understanding of the topic in hand. This analytical perspective is the opposite of Bourdieu (1979/1984), who instead emphasised a priori the social structural characteristics of connoisseurs.

Furthermore, reflexivity has a lot to offer to the analysis of taste, as objects of taste then are not present and not in our service, but give themselves up and impose themselves through a continuous elaboration of procedures that put taste to the test (Hennion, 2007). Thus, studies of objectivation practices (Lieberman, 2016) show how participants intimately involved in practices of, for example, coffee tasting, pattern after each other, pick up ways of formulating and ways of knowing that follow from the previous speaker, and convert occasioned accounts and formulations into objective forms that can be relied upon by parties for organising the local orderliness of their affairs.

Research on food and beverage combinations

In the gastronomic field, there are different ways of understanding and using food and drink combinations. Bode (1992) and Simon (1996) propose a link between the enjoyment of food and wine together, by comparing food menus with wine to two spouses in a marriage. Furthermore, food and wine pairing can be seen as a way to enhance the dining experience (Wine and Spirit Education Trust, 2011). Moreover, Harrington (2006) describes how combinations work by adding balance or contrast in flavors, texture and components, but also as being refreshing, neutral or providing synergy. Some basic rules, varying in quality or varying on different evidentiary bases such as the scientific level, practice experience, or storytelling, are well known (Bode, 1992; Hanni, 1991; Robinson, 2006; Simon, 1996), e.g., recommending red wines with meat, white with fish and heavy wine with heavy food. There are also expectations in the pairing of food and beverages, as Pettigrew and Charters (2006) find that wine most often is regarded as a beverage consumed with food, while beer is more likely not to be highly associated with food pairing, and could be consumed with any food, or even without food. Whereas wine is seen as a beverage consumed for pleasure or aesthetic ends, and as complementing specific foods.

Taste preference or appreciation are considered subjective properties, which ultimately limit the ability to investigate optimal food and beverage combinations. In recent years, food and beverage combinations have been investigated from different angles, mainly from a sensory perspective (Bastian, Collins, & Johnson, 2010; Campbell, 2005; Donadini, Fumi, & Lambri, 2012; Harrington & Hammond, 2005, 2009; Harrington, McCarthy, & Gozzi, 2010; Jackson, 2000; Nygren, Gustafsson, Haglund, Johansson, & Noble, 2001; Nygren, Nilsen, & Öström, 2017; Paulsen, Rognsa, & Hersleth, 2015; Pettigrew, 2003).

Food and beverage combination guidance is practiced within the culinary field by wine or cheese experts, chefs or sommeliers, who recommend ideal combinations, often based on their long experience and tacit knowledge (A. P. F. Herdenstam, Hammarén, Ahlström, & Wiktorsson, 2009), but also according to their passion for the products (Nygren, Gustafsson, & Johansson, 2003b). Since identifying the need for controlled studies in the field, research has mainly concentrated on sensory science, where combinations have been quantified and measured objectively. This work initially started out by looking at how to assess the quality of combinations (Nygren et al., 2001; Nygren, Gustafsson, & Johansson, 2003a), assessing a limited number of examples of basic tastes (Nygren, Gustafsson, & Johansson,

2002; Nygren et al., 2003b). Later on, by using a broader understanding of the complexity of combination (Harrington, 2006; Nygren et al., 2017), and in even later research a more complex assessment was made by adding the setting (Donadini, Fumi, & Lambri, 2013) and pedagogical perspective (A. Herdenstam, Nilsen, Öström, & Harrington, 2018). Still, these are under a more positivistic ontology. So, all this adds up to the view of food and beverage combinations as something measurable, in regards to preference.

My approach to the health perspective in consumption patterns in papers I and II (Scander, Monteagudo, Nilsen, Tellström, & Yngve, 2018a, 2018b), combined with new research in sociocultural taste through Bourdieu's notion of capital for sommeliers' acquired taste (Paper III) and sommelier practices (Paper IV), proposes a new turn in the research on how to understand food and beverage combinations. This new approach includes the maintenance of already known areas of taste combinations, furthering knowledge on professional development and adding new perspectives on consumer choice, health and sustainability.

Consumption patterns and dietary guidelines in general

What we eat influences our health, and the World Health Organization (WHO) recommends in its *Global Strategy on Diet, Physical Activity and Health* that governments formulate and periodically revise national guidelines on food and nutrition (World Health Organization, 2004). As an example, in the recently developed dietary guidelines in Canada, dietary risk is highlighted as one of the three major leading risks of disease burden, measured by death and disability combined (Government of Canada, 2019). The two other health risks mentioned in the document are linked to tobacco use and a high body mass index. Chronic diseases influenced by diet are: ischemic heart disease, stroke, colorectal cancer, diabetes, and breast cancer – the leading causes of premature death (Feigin et al., 2016) involving a direct health care cost.

It has been shown that food environments influence food and beverage choice through, for example, availability at home, in retail stores and in restaurants. This can have a big influence on what we eat and drink (Herforth & Ahmed, 2015). A pronounced interest in understanding how the food environment impacts health-related outcomes (particularly obesity risk) has been developed (Lytle & Sokol, 2017). There is a constant stream of messages bombarding us with different views on healthy eating and dieting, which can be confusing or lead to stress and/or a lack of continuity in the diet.

The foundation of a healthy diet in the new Canadian, US and Swedish guidelines is to stick to more vegetables, fruits, whole grains and more protein from plant-based foods. Furthermore, fat should preferably come from unsaturated sources, and finally, water should be the choice of beverage (Government of Canada, 2019; Swedish Food Agency, 2018; US Department of Health and Human Services; US Department of Agriculture, 2015).

Guidelines on drinking

The adequate level of water intake is based on the total required to prevent dehydration and, in addition to beverages, water also comes from foods like fruit, vegetables and soups, as well as from the normal metabolism of nutrients (Popkin, D'Anci, & Rosenberg, 2010). However, some foods and beverages that contribute to water intake also contain sodium, sugar and saturated fat, which is why processed foods and beverages should be consumed with caution (Martínez Steele, Popkin, Swinburn, & Monteiro, 2017; Popkin & Hawkes, 2016). Furthermore, as there are health risks associated with alcohol consumption, it undermines healthy consumption patterns (Griswold et al., 2018) so a restricted intake of alcohol is recommended (Government of Canada, 2019; Swedish Food Agency, 2018; US Department of Health and Human Services; US Department of Agriculture, 2015).

However, as we look at the dietary guidelines giving recommendations about different nutrients, food groups and dietary components, it is important to stress that people do not consume food groups and nutrients in isolation but rather in combinations during meals. This was pointed out in the latest edition of *Dietary Guidelines for Americans* (US Department of Health and Human Services; US Department of Agriculture, 2015) and the *Dietary Guidelines for Brazil* (Ministry of Health of Brazil, 2014). These publications also point to the interactive and cumulative effect of eating patterns, and that eating patterns can be tailored to fit individual preferences. Thus, guidelines should not be seen as a prescription but as an adaptable framework where individuals can enjoy foods that meet their personal, cultural and traditional preferences.

Something that stands out in the Brazilian recommendations is the focus on avoiding processed foods in favour of natural or minimally processed foods and freshly made dishes and beverages (Ministry of Health of Brazil, 2014). This is also mentioned in the American and Canadian guidelines, but not as thoroughly.

The Mediterranean diet is associated with a lower all-cause mortality and morbidity and has been linked to numerous health benefits, including a

lower risk of cancer, cognitive and cardiovascular disease, as well as metabolic syndrome, obesity, and type 2 diabetes (Martinez-Gonzalez et al., 2009). In the Mediterranean diet, moderate amounts of wine are included.

Meal and beverage patterns in the Swedish context

All empirical data used in this thesis were collected within a Swedish context. The *Riksmaten* data relate to a representative adult Swedish population and the sommeliers represent a small professional group in a specialised field in Sweden. The development of gastronomy in Sweden has been outstanding in recent decades, providing considerable support for the development of food and drink professionals. In 2008, the Swedish Government launched the policy initiative *Culinary Sweden* (Ministry of Agriculture, 2008) to support the expansion and growth of food markets, while eating habits have been influenced by tourism as well as immigration to Sweden. This is expressed as a nation of culinary excellence (Neuman, 2016). These developments, based on the French culinary tradition, have led Sweden to become a new culinary nation (Neuman, 2018). Thus, on one hand, we have the culinary development of Sweden and, on the other hand, we have the nutritional guidelines. One might ask if these trends are compatible, or, as I will discuss later in this thesis, how can we combine them.

One study looking at the changes in the social context and conduct of eating in four of the Nordic countries between 1997 and 2012 (Holm et al., 2016) shows that individualisation and informalised ways of eating are becoming more common. According to the study, Nordic people's primary location for eating remain the home and the workplace, while eating in haste and watching television has increased and the use of tablets, computers and smartphones while eating was frequent in 2012. Holm and his co-workers also note that the propensity to eat alone has increased a bit in Denmark and Norway, but decreased in Sweden. While such practices vary with socioeconomic background, it is common across the Nordic populations. However, the new practice of using tablets, computers, and smartphones while eating is strongly associated with younger age. Furthermore, these practices vary in relation to different types of meal. Holm et al. (2016) conclude that, while changes in social organisation of eating are not dramatic, there are signs of individualisation and informalisation.

Furthermore, consumption patterns follow certain rhythms, which has been emphasised from a Nordic perspective (Lund & Gronow, 2014) showing specific national rhythms, but also a tendency to adopt an unsynchronised eating pattern. This could be a sign of a destructuralisation of meal

culture or an expression of a new sociocultural pattern. However, skipping meals and a later start to the eating day contradict a healthy eating pattern (Lund & Gronow, 2014), which raises the question of destructuralisation as a new form of eating practice. The current vogue for applying theories of practice to consumption highlights the question of whether today's eating habits resemble more the traditional home-based, family-centred ideal, or are increasingly characterised by individualisation such as 'grazing' (Caplan, 2013) or 'vagabond eating' (Poulain, 2002), where food intake is split up into very frequent eating. Fischler (1990) notes the paradox of the necessity of eating a broad range of food biologically and culturally by eating items of symbolic value. He says that we are living in a state of 'gastro-anomie', where cultural eating norms have either disappeared or become more incoherent, and no longer offer enough guidance on everyday eating. So, even if there is a change in eating patterns, the changes are not isolated from other changes in food processing, family organisation, gender roles and the nature of social bonds that have also undergone profound change. Thus, food and beverage combinations change as society changes, not to mention the issues of climate change and sustainability (Willett et al., 2019). Furthermore, beliefs about eating are also important for how individuals form meal patterns (Potter, Griggs, Brunstrom, & Rogers, 2019). One such common belief is that eating three meals a day is healthy and that skipping meals can be detrimental. Potter et al. (2019) reveal how beliefs about healthy eating can play an important role in shaping dietary patterns, which means that interventions in people's beliefs about healthy eating can change people's meal patterns.

In the study of a healthy Nordic diet compared to a Swedish reference group, the key differences were the higher intake of fruits, berries, vegetables, root vegetables and potatoes, legumes, fish and eggs, fat and oil, and a lower intake of meat products, poultry, dairy, sweets and desserts and alcoholic beverages (Adamsson et al., 2012). The Nordic diet is a diet that fulfils current dietary recommendations regarding intake of micro- and macronutrients, and includes food items readily available in most grocery stores in Sweden.

Two different dietary patterns for Swedish adults have been identified that apply to both sexes. First, a healthy pattern positively related to the consumption of vegetables, fruits, fish and seafood, and vegetable oils, and negatively to refined bread and fast food consumption. Secondly, a traditional Swedish food pattern, positively related to potatoes, meat and pro-

cessed meat, full-fat milk products, sweet bakery products, sweet condiments and margarine consumption. In addition, a light-meal pattern has been identified in women that is positive towards fibre-rich bread, cheese, rice, pasta and food grain dishes, substitute products for meat and dairy products, sweets and tea (Ax et al., 2016).

The importance of beverages

Beverages are important as a part of the total eating pattern and more specifically in regards to dietary quality and nutrient intake in general (Auestad, Hurley, Fulgoni, & Schweitzer, 2015; Dennis, Flack, & Davy, 2009; Paulsen, Myhre, & Andersen, 2016; B. Venci, N. Hodac, S. Y. Lee, M. Shidler, & R. Krikorian, 2015). Recent reviews point towards beverages providing an increasing proportion of the energy in the Western diet over the past 20 years (Poppitt, 2015; Randi, Edefonti, Ferraroni, La Vecchia, & Decarli, 2010; Wirfalt, Drake, & Wallstrom, 2013). Previous publications on energy intake from food and beverages point to an alarmingly high proportion of daily energy originating from beverages (Kumar et al., 2014; Poppitt, 2015).

High consumption of beverages with added sugar is linked to an increased risk of excess weight gain and type-2 diabetes in both epidemiological and randomised controlled trials (Nordic Nutrition Recommendations, 2014), pointing out that reduced consumption of sugar-sweetened beverages could contribute to increased micronutrient density and reduced risk of dental caries. Therefore, the recommended upper level of added sugar is combined with the food-based recommendation to limit sugar-rich food and beverages. Public health policymakers, including those in Europe, are considering measures to limit the intake of added or free sugars in light of data showing high intakes of sugar (Azaïs-Braesco, Sluik, Maillot, Kok, & Moreno, 2017) with beverages as one of the major contributors.

Several food surveys including also beverage intake have been published in Sweden (Ax et al., 2016; Swedish National Food Agency, 2012a) and other Nordic countries (W Becker, 1994; W. Becker, Lindroos, Nalsen, Warensjo Lemming, & Ohrvik, 2016; Bjeremo et al., 2013; Ohrvik et al., 2016; Warensjo Lemming et al., 2015; Winkvist et al., 2009), but only a few have analysed choice of beverage at each meal and their contribution to energy intake (Ax et al., 2016). Certain beverage choices, such as tea, have been shown to be important for the intake of certain nutrients, in reducing obesity and controlling diabetes, in the prevention of cancer, reducing heart and vascular disease, protecting teeth and bones, and as antioxidant and

antibacterial agents (Hayat, Iqbal, Malik, Bilal, & Mushtaq, 2015; Monobe, 2018; Ng et al., 2018). Studies have also looked at the optimal brewing conditions for tea to obtain the best balance between sensory preferences and health effects (Perez-Burillo, Gimenez, Rufian-Henares, & Pastoriza, 2018). Other beverages, such as milk, have an important role for the intake of calcium (Coudray, 2011; Huth, Fulgoni, Keast, Park, & Auestad, 2013; Rothenberg, Tognon, Lissner, Petrolo, & Sundh, 2017). In Sweden, there have also been studies looking at juice as a source of folate and milk as an important source of several nutrients (Monteagudo, Scander, Nilsen, & Yngve, 2017; Swedish National Food Agency, 2012a). Sugar-sweetened beverages (soft drinks) contributed almost entirely to the intake of added sugar and rarely to other nutrients (Huth et al., 2013).

In recent years, researchers in several countries have shown that high beverage contribution of energy to the overall energy intake can increase the risk of ill-health (An, 2016; Gibson & Shirreffs, 2013; Nikpartow, Danyliw, Whiting, Hyun, & Vatanparast, 2012; Paulsen et al., 2016; Popkin & Hawkes, 2016; Rothenberg et al., 2017; Wang, Lemon, Olendzki, & Rosal, 2013). Previous studies have also shown different patterns of beverage consumption for weekends and weekdays (Paulsen et al., 2016), and for gender (An, 2016; Gibson & Shirreffs, 2013; Nikpartow et al., 2012). Beverage consumption data have also been published from different sources, showing an increasing consumption of sugar-sweetened beverages in Sweden, while milk consumption is decreasing (*Statens Jordbruksverk*, 2013).

The consumption of soft drinks (sugar-sweetened beverages including sodas and cordials) has increased over the last decade (Swedish National Food Agency, 2012a) in the Western world, accounting for up to 9% (US) of total energy intake (Wang et al., 2013). Soft drinks are thus significant sources of energy in the diet (An, 2016; Wang et al., 2013) and can contribute to obesity and to non-communicable diseases such as type 2 diabetes and cardiovascular disease (V. S. Malik et al., 2010). Also, according to previously published data from the *Riksmaten* study (Swedish National Food Agency, 2012a), the Swedish population consumed a mean (SD) of 112 (196) ml/d of soft drinks, and the total mean sugar intake from soft drinks was 7.7% of total energy. This is an amount that significantly contributed to the total sugar intake, which was above the recommended level (Nordic Nutrition Recommendations, 2014). An increased consumption of water has also been observed, especially bottled water (Popkin, 2010), and in Norway in

particular women and young age groups have a high consumption of bottled water (Paulsen et al., 2016).

Alcoholic beverage consumption patterns

Alcohol consumption varies enormously, not only between countries but also over time and among different populations (Alcohol Public Policy Group, 2010). A high alcohol intake is associated with many different health and social problems, such as chronic disease, injuries and crime (Rehm et al., 2010; Rehm et al., 2017; Sherk et al., 2018).

Men are more likely than women to be drinkers and drink more heavily, with larger quantities per occasion than women (Wilsnack, Wilsnack, Kristjanson, Vogeltanz-Holm, & Gmel, 2009). Although there is substantial evidence of these alcohol-related problems, high levels of consumption persist and alcohol remains one of the primary causes of preventable death and injury worldwide according to the World Health Organization (2018).

One way of decreasing consumption of alcohol is by limiting its availability, which would be expected to result in improvements to public health (Sherk et al., 2018).

In Sweden, alcohol consumption has gone down by 8% in the period 2007 to 2016 (C.A.N. Rapport, 2017) to a total consumption above nine litres per year, counted as pure alcohol.

The daily intake of alcohol should be limited to at most 10 grams per day for women and 20 grams for men; for perspective, one bottle of beer (33 cl, 5% alc.) contains 15 grams of alcohol and one glass of wine (15 cl) about the same (Nordic Nutrition Recommendations, 2014).

Wine and beer consumption has been increasing in Sweden in recent decades, while the total consumption of alcohol has gone down (C.A.N. Rapport, 2017). In a previous report from *Riksmaten* 2010-11, the total mean (SD) alcohol intake for the Swedish adult population amounted to 13 (16.9) and 7.3 (10.5) g/d for men and women respectively (Swedish National Food Agency, 2012a).

Even though this thesis is based on data relating to adults, it will be interesting to follow the development of the new trend of alcohol consumption among adolescents, which seems to show a decreasing consumption. The proportion of non-drinking 9th graders (15–16 years) more than doubled from 15–20% in the 1990s to 60% in 2017 among Swedish adolescents (Thor, 2017). Still, however, it seems as if studies on how alcohol intake patterns are related to the consumption of food are missing out; hopefully, this study can help to fill that gap.

METHODS AND MATERIALS

Doing a dual methodology thesis

As this thesis has dual methods incorporating various quantitative and qualitative strategies, papers I and II will be presented separately from papers III and IV in order to discuss quantitative and qualitative methods separately and then brought together to see how they complement each other. An overview of the choice of methods is presented in Table 1.

Table 2. Overview of the methods used in papers I-IV.

Paper	Method
I	Descriptive and analytical statistics – Mann-Whitney U test
II	Analytical statistics – correlations and logistic regression analysis
III	Focus group interviews – qualitative thematic analysis of Bourdieu’s notions of capital
IV	Focus group interviews – qualitative content analysis with practice theory

Papers I and II

The first two papers in the thesis were conducted using a secondary analysis of the national dietary survey *Riksmaten* (2010-11), which was done by the Swedish National Food Agency (Swedish National Food Agency, 2012a) to provide detailed information on beverage and food consumption patterns from a consumer perspective.

Study population

The study population was based on the study *Riksmaten* (2010-11), which used a representative sample of 5000 adult participants, aged between 18 – 80 years, living in Sweden. Data collection took place between May 2010 and July 2011. *Riksmaten* included three parts: diet registration, questionnaire, and sampling of blood and urine (Swedish National Food Agency, 2012b).

Diet registration was the inclusion criterion to be a part of the study. A total of 1797 subjects who reported everything they ate and drank during four consecutive days, were included. This sample was equally distributed over twelve months and, to ensure that all days of the week were covered,

all starting days were randomly distributed. All participants got oral and written information for the food registration, a portion guide notebook, and an information folder on how to record dietary intake. Moreover, the registration specified the portion size, meal type, time, day of the week and venue, and was recorded in a web-based food diary created by the National Food Agency. A validation study of the *Riksmaten* methodology was performed to compare the web-based food registration tool and the food frequency questionnaire with an objective assessment method (Nybacka et al., 2016).

In order to study the population according to social, demographic, economic, lifestyle and health characteristics, some variables from the questionnaire were considered, such as educational level, age, gender, geographic location, regional characteristics, employment, smoking and body mass index (BMI).

Ultimately, 115 subjects were excluded from Paper I because they did not complete the survey and 44 subjects were excluded from Paper II since they did not report any dinners. Therefore, the study sample was 1682 (57% women) and 1753 (53% women) Swedish adults for Paper I and Paper II, respectively.

Estimations of food and beverage consumption and energy and alcohol intake

Household measures, number of portions (cups, glass, pieces, slices) and grams were used in the *Riksmaten* registration to estimate the amounts eaten. Energy and alcohol intakes were calculated using the Swedish food composition table (Swedish National Food Agency, 2012b).

Beverage consumption was recorded in ml and kcal per day according to the gender and H-region, for 12 different types of drink: juice, coffee, tea, soft drinks, diet soft drinks, wine, beer, cider, spirits, low-alcohol beer, water and milk.

The total energy intake was divided into energy from beverages (expressed as a percentage of total energy intake and kcal per day) and energy from food (expressed as kcal per day) according to gender and day of the week (categorised as weekdays or weekend days). All fluid food items consumed by drinking (such as a glass of milk or milk in coffee) were included as beverage energy, while those consumed by eating (such as milk used in cooking) were categorised as food energy. The argument for categorising ‘by eating’ and ‘by drinking’ was a strategy to get closer to the understanding consumption, instead of investigating the food and beverage items.

Alcohol intake was described in gram and kcal per day, but also as a percentage of total energy intake.

Food and beverage dinner combinations

In order to analyse the food and beverage dinner combinations in the second paper, beverages were categorised into 12 groups: water, milk, soft drinks, diet soft drinks, coffee, tea, drinks, beer $\leq 3.5\%$, beer $> 3.5\%$, white wine, red wine and spirits. Food groups were categorised into 9 groups: sandwich/buffet, Asian/spicy, vegetarian, fish/shellfish, pork, poultry, beef/lamb/game, pizza/cheese and desserts/sweets. Beverage and food categories were based on groups described in food and beverage combination advice developed by sensory experts (*Systembolaget*, 2018). This categorisation was a pragmatic choice due to the general recommendations of food and beverage combinations provided by the Swedish alcohol retail monopoly, *Systembolaget*.

There are, of course, methodological limits to this broad generalisation of categories; still, the aim of the paper was not to search for specific combinations, but rather to explore general patterns. In order to do these categorisations, the focus was set more on taste instead of actual content. Thus, sweets and candy were groups together with desserts, and dishes as pie, pizza pirogues and cheese could be joined in one group. This also worked for the beverage categorisation as sparkling wines rosé and white wines was grouped together as well as beverages such as liquors brandy and fortified wines were categorised in the spirits group.

Data analysis and statistics

In the first paper, the means and standard deviations were calculated for beverage consumption, energy and alcohol intakes. Adjustment for total beverage intake was made by dividing individual intake of each beverage category in ml/d by the total beverage intake. These non-parametric variables were studied according to gender, region and weekday vs. weekend day using the Mann–Whitney U test (non-parametric alternative test to compare two independent samples). Initially, the Student t-test was used in the calculations due to the sample size, as a larger sample would have compromised normality. But, after calculating normality, the choice was non-parametric variables even if the results were similar.

The mean consumption was always higher than the median in a positive skewed distribution. Thus, to use the mean numbers turned out to be problematic for non-parametric tests, with large standard deviations, percentiles

were added to give more insight on the data results. Boxplots were proposed as another option, though with this amount of categories, presenting percentiles gave a more detailed picture of the results.

For the second paper, combinations of beverage and food categories were analysed using cross tabulation. The correlation coefficient for non-parametric variables (Kendall tau b) was used to determine the association power between the categories of food and beverage. Food and beverage dinner combinations with the highest correlation coefficients were selected as dependent variables to analyse predictive factors using a logistic regression model. Predictive factors included in the model were: gender, age, drinking and eating venue, region, type of day, BMI, education level, employment, vegetarianism and smoking – all of them dichotomised, and odds ratios (OR) and 95% confidence intervals (CI) values were given for all factors. The level of statistical significance was set to $p < 0.05$. Still, using significance levels is based on the fact the sample is representative and drawn from a defined population – in this case the adult Swedish population. In this case, there were some problems according to the low participation rate of 36% in *Riksmaten*.

Regional characteristics were used to categorise different types of regional difference. These homogenous regions (H-regions) were based on population density (Swedish National Food Agency, 2012a). These H-regions were dichotomised into the three biggest cities (Stockholm, Gothenburg and Malmö) and all other types of regions.

All data analyses were performed using the IBM Statistical Package of Social Science (SPSS) version 23 (SPSS Inc. Chicago, IL, USA).

Papers III and IV

The two last papers were based on qualitative methodology, using focus group interviews to deepen the understanding of food and beverage combinations as a professional practice culturally.

Recruitment and data collection

The focus group interviews were designed to capture professionals' discussions about the meanings and practices of good food and beverage combinations, rather than individual stories. In order to facilitate the conversation, rather homogenous groups of professionals who acquainted with each other were created (Denzin & Lincoln, 2011; Kitzinger, 1995). They were all more or less acquainted with me, due to my background as a sommelier

working in the restaurant trade and from my history of competing and arranging competitions within the sommelier sphere.

When forming the groups, a combination of purposive sampling and snowballing methods was used (Moser & Korstjens, 2018). Initially, one group was formed to pilot test the interview guide and recording equipment. As it turned out, the pilot interview was successful enough to be included in the analysis. The interviewees were then asked to suggest other people who might be interested in participating, who met the inclusion criterion of being an experienced sommelier. Each focus group consisted of four to six people, with a total sample size of 21 people. The interviewees ranged from 24 to 59 years old, with varying levels of knowledge, from having only brief restaurant experience to a “lifetime” of experience. The educational backgrounds also differed, including no formal education or autodidact, a shorter sommelier diploma or wine course, a bachelor’s degree in culinary arts and meal science, and even a PhD. They also had different positions in restaurants including waiter, headwaiter, sommelier, restaurant manager or owner, and there were also sommelier lecturers, wine importers, and employees at *Systembolaget*. But most interviewees had had several of these positions, e.g., a sommelier had often had a position as a waiter as well as offering wine tastings as a complementary income. The interviews were conducted in different parts of Sweden to allow for more regional perspectives, i.e., one of the biggest cities, one large city and one smaller village.

An in-depth and semi-structured interview guide (see appendix 1) was designed with open-ended topics based around four different key themes. The focus groups took place at various times of the day and in the evening, according to interviewees’ availability, and lasted between 73 and 115 min. Initially, the members of the focus groups were asked to reflect upon their favourite food and beverage combination for different meals and occasions. The second theme covered how they had learned about combining and pairing, from whom and where they got their inspiration and knowledge. The third theme focused on their professional work in creating good combinations. The last theme covered how they presented their ideas for food and beverage combinations to the guests.

All interviews were video recorded to capture both verbal and non-verbal communication, which helped transcription and analyses. When addressing food and beverage combinations, wine bottles were used as conversation stimuli. The wines were selected with the assistance of other sommeliers and wine professionals (not interviewees). The ambition was to include wines representing ‘traditional’ and ‘modern’ styles, resulting in a Bordeaux and

a modern wine from la Mancha. This choice was based on discussions after the pilot interview and on arguments from literature, arguing that distinctions of taste are nowadays expressed more in terms of authenticity and exoticism rather than through univocally French products in (Johnston & Baumann, 2007). This was supposed to give the interviewees inspiration to food and beverage combinations, but from two different point of styles. The wines were served in room temperature, and not in recommended temperature according to the producers or general wine literature. Therefore, the wines were served in slightly higher temperature than the recommendations, in order to provoke a discussion on temperature.

Analysis

Different approaches were used in papers III and IV, although both were formed after content analysis inspired by Graneheim and Lundman (2004). For both analyses, the process was presented as linear, even if the research analysis was more of an iterative and reflexive process. Still, first all transcriptions of the interviews for paper III and IV was done. This resulted in approximately 150 A4 pages.

Paper III was formed as a thematic analysis and performed using a hybrid approach of inductive and deductive coding and thematic development (Fereday & Muir-Cochrane, 2006) inspired by content analysis (Graneheim & Lundman, 2004) in order to achieve trust worthiness. First, the transcription of each interview was read through several times to become familiar with the content. Second, meaning-carrying units about sommeliers' experience of food and beverage combinations were extracted and divided into meaning units according to Bourdieu's concepts of taste and capitals. Third, the meaning-carrying units were condensed and abstracted into codes. To identify similarities and differences, the codes were compared and then sorted into categories. Comparisons were then made with the context in each step of the analysis to verify the empirical basis of the data (Graneheim & Lundman, 2004).

Paper IV's analysis was conducted in line with Graneheim and Lundman (2004) content analysis. After transcription and readings in line with the aim, meaning-carrying units related to food and beverage combinations were extracted, condensed and abstracted into codes, also in line with Graneheim and Lundman (2004). To identify similarities and differences, the same procedure was followed as detailed above, where the codes were compared and sorted into subcategories and overall categories.

For both analyses, I as a culinary arts and meal researcher, together with experienced scholars of food culture and public health nutrition, participated in both the research design and data analysis process. In order to increase the trustworthiness of the study, I conducted the first two steps of the analysis and then had a discussion with the other authors before the last steps were performed. In this process the themes and categories were discussed and changed on order to extract the most interesting parts of the interview content in regards to the different aims.

Talking about practices

In this thesis, interviews have been used to talk about practices. The study of talk exclusively means that the actual performances of practices remain unobserved. This is a limitation, for example because one cannot analyse embodied enactments. However, Hitchings (2012) argues that people are able to talk about relatively mundane actions that usually are performed without deliberation – even if he points out that it might differ according to what routinised practices are being discussed. Hitchings’ point is that it is better to try than to dismiss certain research endeavours as impossible without trying. He warns that one should not assume that professional practices are easy to talk about, but states he was surprised that other groups had so much to say about their mundane matters. Despite this critique, talk-based methods remain one of the most commonly used empirical tools to gain understanding of everyday life and consumption (Hitchings, 2012). And even if focus group interviews have not been used widely in regards to ‘practices’, still they can enable different conversations around social practices and everyday life (Browne, 2016). Doing practice-based research using interviews and even through questionnaire have showed valuable results, and therefore my intention of doing focus group interviews to explore the possibilities of how food and beverage combinations could be understood studied in this way.

Credibility

The scarcity of research in the culinary arts in relation to food and wine combinations has been demonstrated above. This thesis can contribute not only to health-related food eating patterns, but also to understanding taste as a way of making better choices. Through the process of triangulating population patterns, statistical analysis and cultural analysis of professionals’ views, a relational view of understanding consumption is provided. All data, statistical calculations and qualitative analysis transcriptions, together

with the transparency of interpretation and quotations from the interviewees, contribute in line with the recommendations of Denzin and Lincoln (2011); Guba (1981); Lincoln (1995) for trustworthiness in research. I hope that my approach can increase the variety of research in this field and blur the lines between methodologies, extending and strengthening the field of culinary arts and meal science. As suggested by Silverman (2015), reliability and validity are the two main ingredients of any credible study. These concepts have been discussed as being unsuitable in the context of qualitative studies, as belonging to quantitative methodologies (Lincoln & Guba, 1985), but in line with both Silverman (2015) and Malterud (2001) I would argue that reliability and validity can and should be assessed in qualitative research, and could be joined with credibility, reflexivity and transferability.

Reflexivity

Reflexivity emerged from the structure-agency problem. It was through reflexivity that Bourdieu saw the solution to it (Bourdieu, 1990), arguing that social scientists are inherently laden with biases, and only by becoming reflexively aware of those biases can they be free of them and aspire to the practice of objective science. For Bourdieu, therefore, reflexivity is part of the solution, not the problem (Telling, 2016).

As the background of the researcher always will affect what is chosen to study and how it is studied, reflexivity is central not only for qualitative studies but in general. Thus, the presentation of myself is important as a starting point and autobiographical reflection (Maton, 2003). According to Maton (2003), the next step is to think reflexively about one's research practice. Therefore, self-awareness about one's social identity is important throughout the research process, and my intention has been to attend systematically to the context of knowledge constructions throughout it. In research, therefore, especially with qualitative inquiry, the researcher affects the research process, so I openly share my research process and how it was affected. Moreover, unwelcomed or concealed bias in any of the papers is therefore acknowledged, even if it is not removed. Due to the duality of qualitative and quantitative research, two radical examples described as *hermeneutic narcissism* and *authorship denial* (Maton, 2003) are to be avoided. In regards to *hermeneutic narcissism*, it has been important for me to work with transferability in order to avoid ending up only talking about the sommeliers. Therefore, it is important to implement a sociological usefulness theoretically and broaden the perspectives for the sommeliers. On the other hand, especially in regards to the quantitative papers, I do not

attempt to be a ‘natural conduit’ only presenting the observed results. As a sommelier, I am driven by an interest in beverages – wine especially. Thus, all interpretation of different beverage categories is in need of reflexivity due to my existing knowledge of the field.

Transferability

In academic research, transferability is a metaphor for external validity, showing the range and limitations of the study’s findings in other contexts (Malterud, 2001). The internal validity asks whether the study investigates what it is meant to, whereas the importance of the sampling process is closely related to the validity of the study. For papers I and II, the internal validity is connected to how representative the sample is in relation to the Swedish population. In papers III and IV, no statistical validity can be accounted for, though that was not the purpose. Instead, the intention was to expose participants’ knowledge of the subject of food and beverage combinations using a combination of the purposive sampling and snowballing methods (Moser & Korstjens, 2018) recommended for obtaining qualitative material (Malterud, 2001). It was important to work together with a range of scholars in the analysis of all papers, as it gave us a variety of perspectives from different fields, such as nutrition and the humanities. This interdisciplinary strategy was also important for transferability. In regards to trustworthiness which also includes the question of transferability, the group of interviewees has been described (Graneheim & Lundman, 2004) as extensively as possible but without risking their identity.

Inside perspective

Starting out in the restaurant business in 1996 has given me the opportunity to work in many different positions in the restaurant industry. These positions have mainly been in service, namely in waiting and in wine and sommelierie, together with two periods living in France, studying and working. This experience provides me with an insider perspective when doing research on the restaurant industry, and it can ease the process of entering other people’s life worlds while holding on to one’s own analytic capacity as a researcher (Brewer, 2000). There can also be a tendency for the researcher to become engulfed in the culture of the field being researched (Merton, 1972) and this can reduce the capacity to explain, theorise and even criticise the studied culture; *reflexivity* is one way of bringing attention to this. As Hammersley and Atkinson (2007) put it, reflexivity acknowl-

edges that the orientations of researchers will be shaped by their socio-historical locations, including the values and interests that these locations confer on them. Hammersley and Atkinson (2007) also argue that reflexivity is a process that brings discourses as well as the researchers' and participants' common-sense ways of knowing the world to the surface for analysis. Looking at the process of writing this thesis as a continual internal dialogue and critical self-evaluation of my positionality has been invaluable (Pillow, 2003).

Ethics

The data used in papers I and II came from *Riksmaten* (2010-2011) – a secondary study done in collaboration with the Swedish National Food Agency. *Riksmaten* was approved by the Ethical Board of Uppsala, Sweden (Ref. 2010/060) and its data were anonymised. Only the requested data relevant to our study were received from the Swedish National Food Agency. In accordance with the conditions set out by the Ethical Board of Uppsala, this study did not include any biological material or any sensitive information in line with the act concerning the ethical of research involving humans (Ministry of Education and Cultural Affairs, 2003).

All participants in papers III and IV gave their informed consent in line with the Swedish Research Council's guidelines and were informed that their participation was voluntary and that they could withdraw whenever they wanted. A formal written consent letter was sent to the participants in advance and collected at the time of the interviews.

In the interviews, wine tasting was used as a way of making the interviewees feel at home. It was used to inspire discussion of food and beverage combinations. Only tasting samples were provided and spittoons were always available.

The fact that most of the interviewees were already acquainted with each other and the interviewer may constitute a methodological problem due to power relations. On the other hand, it was important to have representatives with different gastronomic backgrounds as interviewees, and the personal relationships facilitated my access to this specific field (Suh, Kagan, & Strumpf, 2009). The Swedish sommelier field is quite small, therefore a study with people who do not know each other would not only be scientifically unfavourable but also practically impossible. All interviewees and other people and restaurants mentioned in the data have been anonymised.

RESULTS

In this section, a brief summary of the appended papers results is presented.

Paper I

In Paper I, the result showed that the most consumed beverage by volume (ml/d) was water, followed by coffee for men as well as women, according to the four-day registrations. For both genders, the largest beverage energy intake (kcal/d) was from milk.

Furthermore, wine consumption was significantly higher for both genders in the biggest cities. Men from the biggest cities had a higher consumption than women. Total energy intake, energy from foods, and energy from beverages were significantly higher during weekend days than weekdays for both genders and for each meal. The highest alcohol intake came from beer for men and wine for women. Men had a significantly higher alcohol intake from beer, spirits and low-alcohol beer than did women. Men also reported a significantly higher total alcohol intake (g/d and kcal/d) than women. Out of the total sample, 26% of men and 28% of women had a mean alcohol intake of >20 and >10g/d, respectively. Also, 5% of men and 3% of women had a reported alcohol intake above 48 and 36g/d, respectively.

Paper II

In Paper II, the results showed that water was the most frequent choice in combination with all food categories. Non-alcoholic beverages were positively correlated with sandwich/buffet, spicy food, vegetables, pork, poultry and desserts/sweets. The most relevant correlations for non-alcoholic beverages were between milk, coffee or tea with sandwich/buffet. Furthermore, alcoholic beverages were significantly correlated with all categories of meat and fish consumption. The most relevant/highest correlations for alcoholic beverages were white wine with fish/shellfish and spirits with desserts/sweets.

From a beverage perspective, the results indicate that individuals who tend to drink a lot of water with their meals tend to have more vegetarian choices and poultry and less sandwich/buffet, pizza/cheese and desserts/sweets. Red wine correlated with a higher consumption of pork, poultry and beef/lamb/game and a low consumption of sandwich/buffet, vegetarian, fish and desserts/sweets. A high intake of soft drinks was found among individuals with a high intake of Asian food and sweets. A high intake of soft drinks also indicated a low consumption of fish. For diet soft

drinks, the only correlation found was a high consumption of Asian/spicy foods. Beer $\leq 3,5\%$ and beer $> 3,5\%$ had inverse correlations with sandwich/buffet and desserts/sweets, but only beer $\leq 3,5\%$ had any direct correlation, and that was to pork.

The food and beverage combinations that presented the strongest correlations (highest association power) were influenced by several socioeconomic and lifestyle factors. Non-alcoholic combinations (milk or tea with sandwich/buffet) were more prevalent at home, while alcoholic combinations (white wine-fish/shellfish and spirits-desserts/sweets) were more likely consumed out of the home, although combining red wine with beef/lamb/game occurred more at home and coffee with sandwich/buffet was more common out of home. Red wine and beef/lamb/game combinations were also more likely for those over 50 years old, living outside the three biggest cities, with a university education and at the weekend.

Paper III

This study showed what a group of sommeliers in Sweden saw as fundamental competences when combining food and beverages, but also how a deeper understanding is internalised through the accumulation of social and cultural capital. Notions of ‘good taste’, primarily in the sociocultural meaning of the term, but also its sensory meaning, permeated all the stories.

The findings suggested that *understanding “good” combinations* are learned through experience, in a two-step learning process. Firstly, learning the basic knowledge and skills, such as cause and effect of basic taste and flavour matching. Secondly learning to apply these rules, which demands a deeper understanding provided through long-term engagement. This second step of the learning process also suggests a way to distinguish oneself as a hard-working and skilled professional.

Moreover, the interviewees provided another story suggesting that beverage can act as an intermediary to give food legitimacy. *from lowbrow to highbrow – the role of materiality and embodied skills*. Thus, in this case beverage is central for the sommelier, and the combination itself is what provides legitimacy for both goods. This is done through the competences of the sommelier and the way they use the cultural capital of the beverage such as authenticity in the origin of wines to legitimise ordinary taste. Thus, the findings provided evidence for how ‘lowbrow’ food is re-valued when combined with ‘highbrow’ wine.

Lastly the sommeliers acquire their competence through capital conversion. Here social networks are fundamental for how social capital is converted to cultural capital. Thus, by knowing the ‘right’ people one acquires ‘good’ taste. The findings suggested that social and cultural capital does not only facilitate an understanding of what a good combination is, but that social and cultural capital can, in time, be acquired both in a sensory and cultural capacity. This is the process of acquiring the competence that experienced sommeliers are supposed to have as they work with combining food and beverages.

Competence and taste (cultural capital) were also expressed as being acquired through relationships with important people – a network of actors opening doors to legitimate competence. In theoretical terms, social capital was described as being converted into cultural capital – a resource of value in their everyday engagement with customers.

Paper IV

Through the analysis in Paper IV, two categories for understanding wine and food combination practices emerged: *conventions of pairing* and *the sommelier identity*, together with six subcategories.

The result contributed to the discussion on food and beverage combinations, though the practices bridging the gap between objective taste and individual subjectivity. The findings revealed that performing food and beverage combinations is a routinised practice surrounded by conventions of pairing and a sommelier identity driven by inspiration and pride in performing professional food pairings. The conventions of pairing as a practice seemed to largely be governed by social conventions. The pairing rules entailed understanding texture, the changing of flavour and taste, intensifying flavours, and different philosophies around combinations depending on the restaurants’ focus.

The conventions of pairing were described as being affected by the conventions of rules stemming from the learning process of getting the acquired taste. This could seem to be a fixed set of rules, such as assuming that a combination is better due to a balance or contrast in flavours, textures or other components. However, the findings revealed that the professional sommelier actually uses these rules as a heuristic framework to verbalise the materiality of taste experiences formed in combinations, and to revalue the combination as a tool to present his/her ambition to the receiver.

Furthermore, according to these rules, these seem not only to be transferable for all types of beverage when combining them with food, but also as

a way to form an equality between different beverages' value when used in combination with the same dish. This was expressed as especially true for non-alcoholic beverages, which did not always have the same status as the 'real' combinations to which non-alcoholic beverages were an alternative. In order to achieve that effect, thinking outside the box was an expression of how the practices were revalued from the routines and rules as markers for the importance of culinary know-how.

DISCUSSION AND CONTRIBUTIONS

In this section, the results from the appended papers will be discussed and I will try to develop the most valuable results. Further, I will discuss the empirical and theoretical contributions as well as the potential implications and suggestions for further research.

Pros and cons of beverage energy contribution

As shown in the results from Paper I, the population showed significant variations in beverage intake according to gender, day, meal and region of living. Comparing our results, we can also see that beverages were contributing a substantial amount to total energy intake and that beverages play an important role in regard to dietary quality and nutrient intake in general, in line with previous studies (Auestad et al., 2015; B. Venci, N. Hodac, S.-Y. Lee, M. Shidler, & R. Krikorian, 2015). In regards to the Nordic Diet, where juice and low-alcohol beer consumption is suggested to be no more than 4 dl/week and 33 cl/day, respectively (Adamsson et al., 2012), the findings in Paper I, 30% of the men had a higher juice consumption than the recommended level. But for low-alcohol beer, the reported consumption was about the same as the recommendation.

The findings revealed the consumption of tea, wine, water and juice was higher for the participants in the biggest cities, while consumption of coffee and soft drinks was higher in smaller cities. A small number of international studies have identified geographical and regional differences in beverage consumption. These studies were focused on rural and urban comparisons, where Sharkey, Johnson, and Dean (2011) discovered rural adult populations had a significantly higher consumption of sugar-sweetened beverages (SSB) than their urban counterparts, which was related to more frequent fast food meals, infrequent breakfast meals, and a low fruit and vegetable intake. They suggest that new strategies are needed for educating consumers, not only about how to moderate their SSB intake, but also how to simultaneously reduce unhealthy eating and promote healthy alternatives. Other interesting factors associated with higher consumption of SSBs were lower education and less social capital (Johnson, Sharkey, & Dean, 2010). As we see similar patterns of SSB intake among our participants, it is important to follow the beverage energy contribution patterns in Sweden as the reported consumption of SSBs is contributing greatly to the intake of added sugar (Huth et al., 2013). It is important to highlight the risk factors related to high SSB energy intake (Vasanti S Malik et al., 2019; V. S. Malik

et al., 2010; Nikpartow et al., 2012; Popkin & Hawkes, 2016; Rothenberg et al., 2017; Wang et al., 2013) as it is one of the risk factors for ill-health.

Additionally, there have been financial conflicts of interest reported in the food industry, as it was revealed that industry research appeared biased in regards to underestimating the adverse health effects of SSBs, potentially delaying corrective public health action (Litman, Gortmaker, Ebbeling, & Ludwig, 2018). This can serve as a reminder of the importance of critical thinking and to restaurateurs and sommeliers responsible for purchasing and recommending beverages to others.

Moreover, the findings in Paper I also revealed higher consumption of alcohol in the biggest cities, in line with previous studies, e.g., a study of alcohol consumption across the urban and rural areas of the United States that showed abstinence was particularly common in the rural south (Borders & Booth, 2007). According to Booth and Curran (2006), these variations could be explained by social and cultural factors, especially related to religious norms, which could be more established in rural areas or smaller cities.

Comparing the findings to the Nordic Nutrition Recommendations (2014), it was found that participants of both genders in Paper I were equally at risk of having a consumption of alcohol exceeding 20 and 10g/d respectively. A rather large proportion of the study population was at risk of being above the recommended daily alcohol intake, where it contributes more than 6 and 4% of the total energy intake for men and women, respectively. The alcohol energy intake percentage should, according to Nordic Nutrition Recommendations (2014), not be higher than 5%. As many as 26% of men and 28% of women had a mean alcohol intake of >20 and >10g/d, respectively and 5% of men and 3% of women had a daily alcohol intake exceeding 48g and 36g on occasions, which is seen as a high-risk consumption level (Andréasson, Allebeck, Leifman, & Statens, 2005). The alcohol intake mainly came from wine (9g/d) for women and beer (7g/d) and wine (9g/d) for men. This was in agreement with previous studies among adults, where wine consumption for men and women was similar for both genders, and where men also added beer to the consumption (An, 2016; Drewnowski, Rehm, & Constant, 2013; Gibson & Shirreffs, 2013; Nikpartow et al., 2012; Paulsen et al., 2016). Still, Swedish consumption of alcohol has been reported as below average for Europe (World Health Organization, 2014).

Beverages such as fruit juices can also contribute micronutrients such as folate. However, a number of foods have been shown to be more important

as folate sources (Swedish National Food Agency, 2012a), for example pulses, vegetables and fruit (Monteagudo et al., 2017) and there is some ambivalence regarding high intake of fruit juice due to the high content of natural sugars. In any case, the findings in Paper I point to a relatively low intake of juice in general.

Milk stood out as the highest contributor of energy, providing also fat and proteins. Sweden, as a milk-drinking society (Larsson, Virtamo, & Wolk, 2012), gets a large proportion of its daily intake of calcium, riboflavin and vitamin D from dairy products (Swedish National Food Agency, 2012a). It was also noticed in the findings from Paper I that a lot of the milk was consumed in coffee. Sweden is following the decreasing trend of milk consumption, but is still one of the highest milk-consuming populations in the world (Singh et al., 2015).

Wine is traditionally a beverage that has been associated with both healthy and harmful effects. Concepts like the so-called ‘French paradox’ or the beneficial impact of the Mediterranean diet suggest benefits (Estruch et al., 2013; Martinez-Gonzalez et al., 2009). Wine has a complex composition, which is affected by whether it is red or white, or by other variables like the variety of grapes. Alcohol and phenolic compounds are thought to play a role in the benefits attributed to wine. Alcohol has been extensively studied, but the key question is whether wine offers *additional* benefits. Resveratrol – a non-flavonoid compound – and quercetin – a flavonol – have received particular attention (Artero, Artero, Tarín, & Cano, 2015).

Numerous studies over the years have concluded that moderate alcohol consumption is a potentially preventative agent against heart disease – studies also warning that excessive drinking removes the health benefit. But recently a new publication came out arguing that no level of alcohol consumption improves health (Burton & Sheron, 2018), pointing out that the negative effect of any alcohol consumption outweighs the perceived positive effects of moderate consumption. Despite all these claimed pros and cons of beverage consumption, it seems fair to say that a healthier beverage intake pattern could be correlated with a healthier overall dietary pattern (Duffey & Popkin, 2006; Hedrick, Davy, & Duffey, 2015). Thus, it is of interest to continue this discussion to see how the combination patterns of food and beverages seem to be correlated.

Good combinations for better health

The findings from Paper II showed that the most important predictive factors for food and beverage combinations were the place of consumption for

non-alcoholic combinations, and age and employment for alcoholic combinations, which validates the idea of existing eating patterns (Ax et al., 2016; Holm et al., 2016) and that food and beverage combinations are a part of these patterns. Not only is the choice of beverage important for the choice of food and vice versa, but the location, such as eating place or where you live, also has an impact on how you choose to combine your food and beverages, which Pettigrew and Charters (2006) link to social meaning. Many of the combination correlations found in Paper II could be linked to the traditional way of combining food and beverages, such as pairing white wine with fish and red wine with meat, which used to be recommended combinations or a way of avoiding bad combinations (Bode, 1992; Hanni, 1991; Robinson, 2006; Simon, 1996). Other interesting correlations found in Paper II were between Asian/spicy food, soft drinks, and diet soft drinks, which have previously been discussed by several researchers as being good combinations, due to taste, sugar content and the ability to reduce the burning sensation (Harrington, 2006; Nygren et al., 2003b; Wine and Spirit Education Trust, 2011). This is interesting in regards to what one wants to achieve in a combination. As one could also use this the other way around, creating a burning sensation if that would be aim. This would be interesting to further investigate in regards to preference and other cultures. Combinations of non-alcoholic products could also be discussed with attention to the alcoholic rules for restaurants in Sweden, as many cafés and fast food restaurant still do not have the rights to sell alcoholic beverage.

The traditional alcohol-containing combinations of red wine with meat and white wine with fish, were less likely for people with the lowest educational level, who were more likely to combine milk and sandwich for dinner. As pointed out by Fischler (2011) socio-demographics and lifestyle factors are part of our food identity and, in relation to educational level, the findings in Paper II on the group of university educated people – who Bourdieu (1979/1984) would say had a higher amount of cultural capital – were consistent with having a higher consumption of red and white wine combinations with cooked dinners. Those with a lower level of education tended to combine, or even replace, the more substantial, cooked dinners with sandwich and milk combinations.

As for gender differences, men tended to have more combinations involving beer, milk and spirits than women, which is confirmed in Paper I, and men had a higher intake of those beverage in general. These beverages have a higher viscosity than wine and water, which were more frequent combination choices for women. Whether these patterns were due to preference,

ease of access, forming an identity in beverage choice or hierarchies among the participants in this study, or a combination of several factors, is hard to tell. But in comparison to sensory studies based on predetermined combinations, these findings offer new knowledge on how people actually choose combinations of food and drink for dinner – at home or elsewhere. Different studies have pointed out different ways of analysing preference (Donadini et al., 2013; Nygren et al., 2017; Paulsen, Ueland, Nilsen, Öström, & Hersleth, 2012), but Paper II cannot distinguish whether people eat what they like or what they have access to. Repeated exposure to specific items leads to increased preference (E. B. Goldstein & Brockmole, 2016; Mela, 2001), but one can also reasonably assume consumption on a daily basis is voluntary. However, this method of investigating people's choices or habits could be another approach to understanding food and beverage combinations in a society with increasing demands, since 'liking' is only one reason for consuming a specific food or beverage; thirst, ease of access or appropriateness are other reasons (Mela, 2001). This type of information can contribute to gastronomic science when using reported or registered food choices instead of a predetermined or given combination in, e.g., sensory science.

Daily, when we eat, we choose to eat things we like, what is available, what is acceptable from a sociocultural or traditional view, (de Graaf et al., 2005) but also other reasons such as creating a form of identity (Fischler, 1988). All the different patterns shown in the findings in Paper II could be seen as indications of the complexity of understanding food and beverage combination in meals. Due to this complexity, different methods of investigation should be used in an authentic setting as discussed in Nygren et al. (2017). From a food and beverage pairing point of view, these findings should be seen as authentic or at least taken from an everyday life situation, in terms of how the data were collected.

Paper I showed that the energy intake was higher at weekends than weekdays for food as well as beverages. Therefore, we might say that weekday combinations represent more of a *functional consumption* (Bourdieu, 2010; 1978) more commonly including non-alcoholic combinations compared to the weekend-day consumption, which could be seen as more *pleasurable* eating with higher energy intake and more wine, beer and spirits combined with food (shown in Paper II).

Beverages play an important role as a part of dietary behaviours. They also influence health outcomes and, as Duffey and Popkin (2006) stated,

there is probably a correlation between healthier eating and healthier drinking patterns. Therefore, it is important to increase awareness of the contribution of beverages to overall energy intake. As wine consumption has increased relative to beer consumption, and wine has a higher alcohol content than beer, it is particularly important to increase awareness about the consequences of alcohol and energy intake. As sugar sweetened soft drinks have a high sugar content and could contribute to a high sugar intake, we should also be concerned with high soft drink consumption. In Paper II, findings regarding participants who had a BMI ≥ 25 kg/m² reported more frequent combinations of milk with sandwich/buffet, while those with normal weight preferred tea, which ought to be interesting in regards to health. An additional result not shown in the submitted paper was that the total percentage of beverage contribution (E%) per day was 9,5 for men and 7,8 for women, representing a significant difference between the genders.

Furthermore, the alcohol content and sales of both wine and beer have increased in most consumer products, which is emphasised in Paper I. Thus, understanding how people make their food and beverage choices on a daily basis could be a way of understanding what makes a healthier meal pattern. As there are correlations between particular combinations of beverages and food, and that these are dependent on socio-demographic and lifestyle factors, I argue for more studies on choice of beverage to describe the patterns of intake and to understand the mechanisms behind beverage choice in different settings, cultural situations, and lifestyle backgrounds – obviously keeping in mind the importance of a sound energy intake in the light of sensory enjoyment.

As food and beverage pairings are important for the retail and hospitality sectors (Paulsen et al., 2015), culinary professionals and consumers should be given general guidance on how food and beverages could be, and are, combined in everyday life. In ethnology and sociology, the methods of survey investigations, theories and studying eating as a social practice make it possible to achieve more knowledge about the choice of combinations and what patterns are important for different societal groups and the change within them. Thus, I will now address culinary professionals' views on how to understand good combinations.

Food and beverage pairing as good taste

As previously discussed, and shown in Paper I, wine has become more popular and, as restaurant guests become more knowledgeable, the role of the

sommelier is becoming increasingly central. This was more profound as specific combinations pattern of food and beverage consumption were identified (Paper II).

Moreover, as sommeliers have grown more important to the restaurant business, statistics demonstrate that restaurants employing sommeliers increase sales and customer satisfaction (Dewald, 2008; Manske & Cordua, 2005). Sommeliers can function as cultural intermediaries and bearers of crucial competence in the gastronomic sphere. As such, understanding how sociocultural taste and competence in is acquired by sommeliers could tell us more about the creation of pleasurable meal experiences. Sommeliers can also be helpful in creating healthier consumption patterns through the idea of good taste.

The findings in Paper III showed how the understanding of good combinations is learned by experience, through a two-step learning process: first, to learn the basic rules of combination, and secondly learning how to apply them. According to the interviewees, there is some knowledge that seems to be basic and some that is more complex in understanding combinations. In all focus groups, basic tastes were mentioned as being easy to understand and that all sommeliers should have a deeper understanding. This was expressed especially as matching sweetness or acidity, but also when talking about the right weight, temperature and matching flavours. These rules of combination are in line with previous studies investigating sensory perspectives (Bastian et al., 2010; Campbell, 2005; Donadini et al., 2012; Harrington & Hammond, 2005, 2009; Harrington et al., 2010; Jackson, 2000; Nygren et al., 2001; Nygren et al., 2017; Paulsen et al., 2015; Pettigrew, 2003). What seems to be missing, is how to apply this knowledge in different situations, and that is what is addressed in Paper III.

Thus, in paper III the sommelier discussed what they saw as fundamental competences when combining food and beverages, and these competences became a deeper understanding as internalised through an accumulation of social and cultural capital. The notion of 'good taste' in both the sociocultural meaning and in its sensory meaning was something that all sommeliers in the focus groups brought up throughout the interviews. Social and cultural capital, therefore, can not only facilitate an understanding of what a good combination is, but also can, in time, be acquired both sensorially and culturally. This is the process of acquiring the competence that experienced sommeliers expressed as what one is supposed to have as working with combining food and beverages professionally.

In the findings of Paper III, it was clear that the sommeliers considered some foods as unrefined. But these foods could be considered legitimate, or as cultural capital, when combined with the right beverage. The findings therefore provide evidence for how 'lowbrow' food is revalued when combined with 'highbrow' wine. Competence and taste (cultural capital) were also expressed as being acquired through relationships with important people – a network of actors opening doors to legitimate competence. In theoretical terms, social capital is converted into cultural capital – a resource of value in their everyday engagement with customers. This provokes a discussion that could describe the sommeliers' expressions of taste as omnivorous (Peterson, 1992; Peterson & Simkus, 1992) due to the fact that they seemed to like both highbrow and lowbrow consumption. This would thus be to jump in to conclusion, cause since that was more a form of distinction. The sommeliers made it a clear distinction between the ordinary taste and their taste of what was good. Thus, taste is clearly a matter of discrimination between good and bad (Bourdieu, 1979/1984) through cultural distinction in the expression of taste, or as an expression of Bourdieu's structural outcomes as 'sense of the game'. So, for the sommeliers they had clearly their sense of game, not only expressing that red wine is good with meat, but in the way that did it. As when showing their understanding of the usage of 'right' glasses, vintage or temperature and how to adjust these matters dependent on the food combined.

Therefore, it could be argued that there are still 'right', or at least more 'refined' ways of combining food and beverages, and there also exists a trajectory of accumulating distinctive competence for the sommelier.

Moreover, the findings suggest that such competence and taste are acquired through socialisation rather than derived from objective characteristics of what is consumed. This finding is interesting in regards to previous research on food and beverage combinations where chemical properties and sensory qualities have been in focus to 'good' combinations. This does not suggest that the chemical properties are not important, or that there is no biological basis for the pleasure derived from eating and drinking. On the contrary, such aspects have been shown to be very important. But what the findings in Paper III showed, in line with the cultural and sociological insights from Bourdieu, is that what is considered highbrow or lowbrow is a product of social relations, and is therefore relevant to the debate of health in regards to forming one's identity.

The sommeliers expressed their identity as teachers and culinary influencers. In contrast to mundane wine drinking and eating, sommeliers are

trained in ‘conscious’ dining, where each element in a meal serves a pre-established purpose. This form of identity was expressed explicitly as “we who have tasted a lot and who have the mind-set, so to say, who do not eat and drink without thinking, ... we will have these thoughts [about good combinations] in our mind”. As the sommeliers discussed individuality and that all people have subjective taste, they were simultaneously convinced that they could accomplish good combinations and make people like something that they initially did not. In other words, the cultural capital internalised through learning by doing and converted from networks of ‘right’ people (i.e., social capital), is further conveyed to the guest. The sommeliers’ quest to acquire legitimate competence could also be seen as a quest for social identity (Jenkins, 2008) – as a way of living, being defined as a sommelier, and adapting a particular attitude towards food and beverage intake. The internalisation of knowledge is a prerequisite of being able to communicate an authentic image of oneself as a sommelier.

I studied patterns of beverage consumption in Paper I and combinations of food and beverages in Paper II in a Swedish adult population, and the results demonstrated a great variety of drinking patterns in everyday life. Though, even with individual variations of sensory taste and a potential democracy of sociocultural taste (Peterson & Kern, 1996; van Eijck & Barge-man, 2004), common patterns in food and beverage combinations still seemed to be largely structured in predictable ways, e.g., consuming white wine with fish, red meat with red wine and spirits together with sweets as discovered in Paper II.

What is more, the sommeliers seemed quite sure that their interaction with guests has an impact on the pleasure of the meal. Hence, through the exchange of economic capital – buying a meal – cultural and social capital is accrued from the interaction with skilled sommeliers. This point has important implications for the trade: the guest is not only purchasing a sensory experience (although this is also very important), s/he is also paying for the accumulation of social and cultural capital. Therefore, it is important for restaurant professionals to understand the importance of letting guests be involved in their meals in this way. Therefore, I would like to emphasise how sommeliers act as cultural intermediaries, using their sense of taste (Smith Maguire, 2018a), letting the guest shift their focus towards understanding the explanation of a combination and accumulate social and cultural capital from the sommelier as the holder/bearer of ‘good taste’.

With this understanding of how sommeliers internalise their embodied knowledge through the process of capital conversion, an understanding of

the importance of educational training can be assumed. A. Herdenstam et al. (2018) argue that wine students trained in a university setting learn to develop a common language, which aligns with the finding in Paper III, that competence is accumulated by social and cultural capital, as well as through the conversion of social to cultural capital. Apart from getting the academic degree (understood as institutionalised capital) they also establish relationships with other experienced sommeliers when learning their, which could also explain the importance of learning by doing, as expressed by the sommeliers. Therefore, I will now examine the sommeliers' practices and how these are performed, to further deepen the understanding of how sensory and sociocultural taste are acquired and shared with customers, in line with the recommendations by Neuman (2019) who suggests more research on everyday routine practices in food studies.

Practices of food and beverage pairing

Through the analysis in Paper IV, two categories for understanding wine and food combination practices emerged: *conventions of pairing* and *the sommelier identity*.

This result contributed to the knowledge of food and beverage combinations through practices bridging the gap between objective taste and individual subjectivity. Performing combinations was described as a routinised practice surrounded by conventions of pairing and the sommelier identity, which was driven by inspiration and pride in performing professional food pairing. The conventions of pairing as a practice, combining food and beverages in 'correct' ways seems to largely be governed by social conventions. The pairing rules entail understanding texture, changing of flavour and taste, intensification of flavours, and different philosophies around combinations depending on the particular restaurant's focus.

The conventions of pairing, which are arguably affected by the conventions of rules arising from the learning process, such as getting the acquired taste, are shown in Paper III. This could seem to be a fixed set of rules, assuming that a combination is better due to a balance or contrast in flavours, textures or components. However, the findings revealed that the professional sommelier uses these rules as a heuristic framework to verbalise the materiality of taste experiences formed in combinations, in order to revalue the combination or as a tool to present their ambition to the receiver, as a part of their sommelier identity.

Furthermore, according to these rules, these seem not only to be transferable for all types of beverage in combination with food, but also as a way

to form an equality between different beverages' value in combination with the same dish. This was expressed especially for non-alcoholic products, which have not always had the same status as an alternative to the 'real' traditional combinations. In order to achieve that effect, thinking outside the box was an expression of how the practices were revalued from the routines and rules as a marker of culinary know-how. This showed not only that goods were revalued, but *how* they were revalued. This is, of course, a complex set or bundle of practices (Schatzki, 1996). First of all, the re-evaluation of a good must be provided with good taste – which is connected to what Bourdieu (1979/1984) refers to as field – as the relationship between different positions is central. Paper III showed how good taste is acquired through social and cultural capital, and how this is done is understood through the practice of combination. Paper IV showed how we can understand combinations as a practice, and how this contributes to the notion of good taste. The revaluation of a good is a performance of different practices, providing symbolic capital to a combination or even the understanding or liking of that combination. The sommelier adds value to other goods through the practice of combination and the materiality of the goods, competence and meaning. Still, this cannot be done without the acquired good taste bound to that specific field, since that is what creates trust between the guest and the sommelier.

This can be exemplified by the serving of crisps and champagne, where the sommelier provides these materialities associated with different flavours, serving them in relation to a certain context, bringing different meaning to the materialities in combination. The sommelier could, for example, explain the aim of this combination, e.g., balancing the earthy flavours of potato with mature champagne, or contrasting different textures such as bubbles and crispiness. Here, the sommelier is working with sensory perception, but is also showing that s/he has scientific knowledge about food and beverage combinations, which provides the sommelier with cultural capital. Additionally, the sommelier can use other materialities such as glassware, providing cultural capital as an objective state in the serving of the combination. This gives the sommelier the opportunity to further enhance the experience, providing information on how taste can be enhanced depending on the shape, quality and thickness of the glass. Furthermore, the pouring of the champagne can also be done in different ways in order to show competence, e.g., pouring several glasses without any spillage and providing the same amount in all glasses, or even explaining why champagne should be poured in a certain way. Then, other stories about the

crisps or the champagne can be added to provide different appeals to exoticism and authenticity, which is supported by a previous study (Johnston & Baumann, 2007). What should not be forgotten here is that these stories can also be left out purposely, saying that the combination speaks for itself, implicitly invoking an unspoken agreement on objective good.

This is the core argument for how to understand the objectively good combination, as the objectivity lies and is formed by the practice. One might also say that the combination can be good theoretically, which is what Harrington (2006); Koone, Harrington, Gozzi, and McCarthy (2014) argue. Still, what is shown in my research is that, if we change our understanding away from the dichotomy of subjective or objective taste, and instead see them as relational, as proposed by Bourdieu, we can understand how sommelier practices make good combinations, by being an intermediary of good taste (Smith Maguire, 2010).

Sommeliers as intermediaries of taste

In his classic work, *Distinction* (Bourdieu, 1979/1984), Pierre Bourdieu proposes the concept of cultural intermediaries. He points out that attitudes towards eating and drinking are indications of class standing. He identifies differences in taste indicating “taste of necessity” for the lower classes and “taste of luxury” for the upper class. Bourdieu identifies how food and beverages are important markers for lifestyle and class positions, and that they are related to economic and social capital. In the aftermath of Bourdieu’s work, food consumption has been widely studied as an important part of social status and self-identity (see Johnston & Baumann, 2007). Even if food and beverage was not on the agenda in Bourdieu’s work as he discussed the increasing group of cultural intermediaries, as these did not represent the cultural industries of that time, such as e.g. music and clothing, there has been a change in that matter.

Ocejo (2014a) points to the decline of traditional food and drink cultures, such as French cuisine and European wine, as dominant culinary authorities in society; moreover, the emergence of “cultural omnivorousness”, high-status groups with a taste for lowbrow consumption (Peterson & Kern, 1996), and the increasing trend towards authentic and artisanal and local food as indicators of value and taste.

Ocejo (2014a) points to the ‘democratisation’ of consumption practices, where formal cultural rules are more loose, and new relationships form between lifestyle and status. Here, more attention is given to production processes and the origins of food and beverages, and this has resulted in new

cultural intermediaries that construct and add value to products and services, and communicate their symbolic meaning to customers, shaping consumer taste and preference (Ocejo, 2010, 2012, 2014b). This has been an important development in the food and beverage industries, turning service workers into cultural intermediaries. Previously, most of these service workers were not expected to need cultural knowledge concerning their products or specialised forms of service.

Here is where sommeliers and wine experts stand out. They have for a long time served as cultural intermediaries for the wine industry – generally in higher end restaurants. The sommelier has provided guests with the ‘right’ beverages using cultural knowledge as well as the ordering process (Smith Maguire, 2010). The process of mediation works through interaction and dialogue, where information is gathered on their guests’ tastes, and with their cultural knowledge sommeliers provide them with the ‘right’ beverage while educating them in their field and their own preferences.

Contributing to the understanding of this process is one of the central contributions of the thesis, together with providing sommeliers with an upgrade for the future ‘Sommelier 2.0’.

The Sommelier turn

Sommeliers’ work has, as described earlier, long been focused on taste and providing sensory experiences to guests. I suggest extending that work towards an awareness of health. Good health and good taste should not be mutually exclusive. It would therefore be interesting to extend the sommeliers’ role from being the bearer of cultural taste in wine to actually providing healthy options. With sommeliers’ basic knowledge on combinations and the skill to apply it in different situations, new areas could be explored. Adding an understanding of nutrition to the role of the sommelier could provide not only good new combinations according to taste, but also according to health and possibly even sustainability.

Healthy recommendations of beverage and combination patterns

As looking at dietary guidelines about different nutrients, food groups and dietary components, it is important to underline that people do not eat food groups and nutrients in isolation but in combinations, and this has been pointed out in the latest edition of *Dietary guidelines for Americans 2015-2020* (US Department of Health and Human Services; US Department of Agriculture, 2015). The publication also points to the interactive and cumulative effect of eating patterns, and that eating patterns can be tailored

to individual preferences. Since sommeliers can cater to individual preferences and objective good taste through their practices, they could be useful in this role. Most beverages consumed are not beneficial from a nutritional point of view, mainly due to sugar and alcohol content. The healthy components of drinks such as vitamins and antioxidants in wine are more efficiently provided by a variety of foods, which leaves space for low-calorie beverages such as water, tea and coffee. Water is a healthy choice as long as it is not excessively consumed, though tap water should be preferred to bottled water transported long distances. Tea has in fact been proven to have some beneficial health effects due to its fluoride, antioxidants and more, while not increasing the calorie intake, but could decrease iron uptake (Hayat et al., 2015; Monobe, 2018). Both tea and coffee have been free of guilt as diuretic beverages (Ruxton, 2009), and even coffee does appear to provide other health benefits (Gökçen & Şanlıer, 2019). Most interesting for the sommelier is how brewing time, temperature and quantity affect both health benefits and taste (Perez-Burillo et al., 2018). In addition to recommending non-caloric beverages such as tea, drinking a variety of beverages will vary the micronutrient intake, give a broader taste experience and of course inspire curiosity.

So, what kind of tea or coffee are we talking about? Both these beverages are consumed in various ways and varieties. Thus, the sommeliers competence becomes extra important, knowing not only about nutritional content but also understanding production conditions, and other questions on sustainability.

In the study of a healthy Nordic diet compared to a Swedish reference group, the most apparent differences were the higher intake of fruits, berries, vegetables, legumes, fish, eggs, fat and oil, and a lower intake of meat and poultry, dairy products, sweets, desserts and alcoholic beverages (Adamsson et al., 2012). The Nordic Diet is a diet that fulfils current dietary recommendations regarding the intake of micro- and macronutrients as it suggests energy should come from food and not beverages. So, the argument here is that needs of fibre, minerals and antioxidants will be fulfilled by an increase of berries and vegetables, instead of getting a large proportion of the energy from sugar-containing beverages and alcoholic beverages. Thus, if sommeliers begin to work with a healthier product profile, it is important that such knowledge is included in sommelier training programmes.

As shown in Paper I, one quarter of the group reported an alcohol intake higher than the Nordic recommendations, both men and women, and the actual numbers were likely higher due to underreporting. Therefore, the

sommelier should be aware of risky levels of consumption – especially binge drinking. Overconsumption is actually one thing that the sommelier can help to avoid in restaurants by providing more and better quality non-alcoholic products, while still avoiding sugar-sweetened beverages.

Furthermore, apart from looking at health as purely nutritional, it is important to emphasise the benefit of pleasure. Low alcohol consumption is recommended generally, but when consumption of alcoholic beverages takes place, putting a focus on quality, variation and taste brings you pleasure. Here, sommeliers can help as they are experts in combining beverages with food, but can also be open minded to new trends.

In addition, it is also important to point out some warnings and not take every trend as a good thing. For example, the fruit juice trend increases sugar intake without dietary fibre, though it tastes good and is easy to consume.

Sommelier practices to promote healthy combinations

As belief is also important for how the individuals form meal patterns (Potter et al., 2019), it is of interest to try out implementing the belief in good taste as a way of promoting healthier consumption patterns. Potter et al. (2019) reveal how beliefs about healthy eating can play an important role in shaping dietary patterns, by which they mean that interventions in people's beliefs about healthy eating are one way of changing people's meal patterns. Therefore, one strategy for implementing healthy new patterns could be to implement the conventions of good taste combinations.

As the conventions of pairing are arguably affected by the conventions of rules coming from the learning process, such as getting the acquired taste (Paper 3), implementing good taste as a tool to create healthy combinations is good both in terms of health and taste.

There seems to be fixed set of rules, such as assuming that a combination is better due to a balance or contrast in favours, textures or other components. However, the findings reveal that the professional sommelier instead uses these rules as a heuristic framework to verbalise the materiality of taste experiences formed in combinations, to revalue the combination as a tool to present their intention to the receiver (the guest). The argumentation in Paper IV suggests that the heuristic rules of combining food and beverages should be more clearly offered to consumers, to inspire them and give them the ability to make more rational choices.

Furthermore, since the rules seem to be transferable to all types of beverage, thoughts on how combinations are done for all meals should get more

attention. Thus, beverages as part of the whole meal should be given more attention as they contribute a significant part of the total meal energy. So, for example, this could involve recommending suitable teas for different meals and different consumers due to the huge price variation for different varieties, qualities and preparations of tea. Harrington (2006) pyramid could be a good way to make an objective presentation of how combinations ought to work, complemented by explaining the *terroir* of the plants, the year of harvesting the leaf, and how the flavour of the tea has evolved through the production methods, and how it has been specially prepared to accompany the dish – all this would add value to one of the most healthy beverages on the market.

This is also a way to form an equality between the different beverages that could be used in combination with the same dish. This was expressed especially for the non-alcoholic products, which had not always had the same status as an alternative to the ‘real’ alcoholic combinations. In the analysis, it was found that cultural and social capital was central to the formation of acquired taste, though economic capital was not an important factor. This is interesting for the discussion of the equal value of different products; it seems that the price of the product is not connected to its cultural value in food and beverage combinations. Though many high price wineries and wines were mentioned during the discussions, it was not according to their price, but their cultural value, which is important to understand in the formation of new combinations. So, for the sommeliers be able to make healthy combinations according to good taste, the understanding of cultural values seems to be more important than economic ones. Still, in the long run, economic values are of course central to any businesses. Here, the conversion of capital is central as capitals are not independent of each other, but interact and can be converted from one to the other. All capital forms are accumulated over time as the capacity to make profit, and are being increased or reproduced (Bourdieu, 1979/1984).

Methodological strengths and weaknesses

A low participation rate was observed in *Riksmaten*, which may have jeopardised the representativeness, especially among younger men, of papers I and II. However, some of the advantages of using data from *Riksmaten* were the large number of participants, the use of a validated methodology (Nybacka et al., 2016) for data collection, the registration of time points for intake and meal type, and the gathering of data over a full year to avoid seasonal effects.

In Paper I, we could not take different levels of dilution of, e.g., cordial, lemonade and juices into account due to lack of information. A decreased willingness to report unhealthy intake might also have affected the results. Also, the precise alcohol content of alcoholic drinks was not asked for in the survey and, in the national food database, the average alcohol content of wine and beer was restricted to very few choices. The alcohol content in the database was also probably too low for many red wines (12%), since the mean alcohol content for red wine is 13.5% according to figures from the Swedish alcohol retail monopoly, *Systembolaget* (Adamsson et al., 2012). The alcohol content for white wine and beer in the national food database were 12.5% and 5.5% respectively, while the mean alcohol content according to *Systembolaget* was 12.2% for white wine and 5.5% for beer, with huge variations from 5.5% to $\leq 20\%$ for wine and 3.5% to $\leq 18.2\%$ for beer. This means that actual alcohol intake may be considerably higher than our estimates due to portion size underestimation, underreporting due to social acceptability, and alcohol content underestimates in the database. So, for a mean consumption of 5g alcohol/day from red wine and a 1.5% higher alcohol content, this would 0,075g more alcohol per day. The potential underestimation of alcohol intake due to this discrepancy in the food database was calculated and showed 1% and 1,6% less alcohol (E%) for women and men respectively (Swedish National Food Agency, 2012b). Still, underreporting is one of the typical methodological problems in food registration (Nybacka et al., 2016).

Furthermore, in Paper I, mean consumption is reported, which is problematic – especially with skewed data; therefore, percentiles have been added to give a clearer picture of how the data were spread. Another way of comparing different groups could have been by working with effect size; this would have told us how important the result was, instead of showing significance that tells us how likely it is that a result was due to chance. While standard deviation includes how many group members there are, effect size compares differences between different group sizes more fairly (Gail M. Sullivan & Richard Feinn, 2012).

The H-regions that were used to show regional differences were dichotomised into the three biggest cities (Stockholm, Gothenburg and Malmo) and then all the rest. In this way, two groups of similar size could be compared. Of course, there were some difficulties comparing these groups, especially since the group of “the others” consisted of everything from larger cities in Sweden (over 90 000 inhabitants) to the smaller villages (under 27 000 inhabitants). Still, all categories from the larger to smaller cities and

rural areas were more similar compared to the three biggest cities, when treated in their own categories. Therefore, no other differences occurred as the H-regions were dichotomised.

In Paper II, there were some methodological challenges interpreting the data, such as when water was reported together with another beverage, water was classified as a complementary beverage to the other beverage, therefore the same food could have two combinations, i.e., water and wine. This was also the case for coffee consumed at dinner, where the dinner was then separated into two different meals, i.e., the main course and coffee together with dessert. All this meant there were more combinations than registered dinners. There was also the case when milk or other liquids had been used in cooking or when milk was added to coffee in a meal, then size/amount were to decide if it was in the coffee or a separate beverage.

A decreased willingness to report unhealthy intakes might also have affected the results, although the second paper does concentrate on the combinations. Still the risk of more combinations with water and less with alcoholic beverage is considered.

Furthermore, the way the beverages were reported did not separate different kinds of wine or beers, which might have been of interest to anyone with a big interest in beverages. Anyway, we were concerned only with analysing how people reported their actual food and beverage combinations. If the categories had been broken down too small, the samples would have been without any statistical power.

Furthermore, the registration of meal types allowed us to use only 'dinner' as a category, although the informants themselves registered what they defined as dinner, i.e., there was no formal definition of what counted as a dinner.

In papers III and IV, I worked with semi-structured focus group interviews with people in my own field of sommellerie. They were wine professionals with experience in the restaurant industry, and the overall aim was to deepen the understanding of how good combinations are constructed. As the interviewees were a homogenous group in the same profession, it was important to have a researcher with an insider perspective of the field in line with Suh et al. (2009), who point out that having a social relationship with interviewees can help create a trustful environment to speak freely, which is essential for doing credible qualitative research. We prepared the design process to first ask the right questions. After that, it was important that the interviewer had competence in the gastronomy field; my already knowing about important people and different restaurants led to a discussion more

instantly focused on the subject itself than first explaining about different people or restaurants. Finally, it was important for the results that we were able to distinguish between analyses with cultural competence and those without, and thereafter compare and continue the final process of analysis. My long experience in the field was of course an advantage, which is something that Suh et al. (2009) do not dispute, but they would still say that there were different competences working together. In my case, I did not only have the competence of that culture, but some bonds to some of the interviewees. Being a former lecturer and colleague gave me access to the group thanks to my cultural competence and social relationships. It was also important for me to see the group as an elite group within the culinary field, and these can be particularly difficult to access (Smith, 2006). Even though sommeliers are not an elite in the usual sense, there are similarities.

The difference between 'elite' interviewees and other interviewees is based on conceptions of power. Interviewers often have a certain power over interviewees due to their professional position as the researcher, but in this case the interviewees possessed a certain power over the researcher. Therefore, in this case, I argue that a balance was struck in the power relations due to my cultural competence and their elitism. There were, however, some problematic power related problems with former students being interviewed by their lecturer/researcher.

In elite cases, thorough preparation of the questionnaire is important since elite groups not are fond of closed-ended questions (Aberbach & Rockman, 2002; K. Goldstein, 2002). Therefore, we prepared questions where they had the opportunity to freely articulate their views and explain their beliefs. To be able to gain validity and reliability in the data, as previously mentioned, we gathered researchers from different fields to conduct the analysis of the transcriptions (Suh et al., 2009). Berry and Politics (2002) point out some complementary ways to ensure validity through asking interviewees to critique their own responses, for example, by asking them to explain why not everyone else have a problem understanding their case.

Practice theory is about doing and saying; therefore, something needs to be said about talking about doing. Even if there is some critique of talk-based methods, this is still one of the most widely used empirical tools to get a deeper understanding of everyday life and consumption (Halkier, Katz-Gerro, Martens, & Jensen, 2011; Hitchings, 2012). Focus group discussions are even more rare but, in line with Browne (2016), the discussion of food and beverage combinations in papers III and IV frame social prac-

tices as a part of the interviewees' everyday life. Both tasting wines and talking about how to combine them with food, seemed to encourage curiosity amongst the others in these focus groups. They also expressed an interest in each other's ideas about combinations and they really tried to understand how to apply them in their own work. This was explicitly done though questioning the social norms about what a good combination can or cannot be.

As some parts of practice theory originate from Bourdieu, the shift from working with his capital forms to practice theory has been rather smooth. These have also contributed to each other in the search for new understandings of food and beverage combinations. In regards to consumption, the focus of this thesis is the enjoyment of goods and services, which is in line with what Warde (2005) regards as the potential of practice theory perspectives for analyses of consumption. Bourdieu and his outline of the relational stance and reflexivity has been criticised (Maton, 2003; Telling, 2016). Since his approach to sociological research is based on social space and culture, the location of the actor within the social space is relational to the field of practice. Thus, I as a researcher am relationally situated within my field, and this position also determines my viewpoint of both my field and that of others. Accordingly, to Bourdieu, I only have a partial view of the situation, and therefore act accordingly in the struggle for status and other resources. Here, Maton (2003) raises the critique of how to do research without struggling for economic or symbolic capital. Bourdieu's epistemic reflexivity explains this through the different relations between the knower, knowledge and what is known. Bourdieu emphasises the relationship between the knower and the known, making the objectifying relationship itself the object for analysis. In my case, making me as a researcher and food and beverage combinations an objectified relation.

CONCLUDING REMARKS

The discussion will now examine the role of sommeliers' food and beverage combinations in the promotion of healthy lifestyles. It will also consider how to bridge the gap between healthy recommendations and 'good taste' food and beverage combinations, assessing how the notion of good taste could be a way of introducing healthy lifestyle choices focusing on high-quality products.

Contributions for the sommelier profession

Paper I: Here, the understanding of energy contribution and beverage patterns were linked to health. There were some methodological difficulties in measuring intake of alcoholic beverages. The alcohol sales figures compared to alcohol content in the database was problematic – especially for red wine and beer, as these were too low. This was detected due to the interdisciplinary nature of the thesis, combining sommellerie and nutritional knowledge. Furthermore, choice of beverage has been shown to be an important factor in a healthy diet, and it is important to increase the awareness of the energy contribution of beverages. Here, a clear gap was identified between health and the current practice of sommellerie, which led to the question of whether sommeliers coming from the university should have a solid grounding in nutritional knowledge – in particular a focus on beverage energy. This would give sommeliers an extended knowledge when combining food and beverage, providing customers with not only the desired taste but also the possibility of serving healthier combinations.

Furthermore, this would also extend the range of workplaces for the sommelier – not only in the restaurant industry or import divisions, but to elderly care, hospitals and the like, as all people in those environments should have the opportunity to enjoy good meals according to both taste and health considerations.

Paper II: The second paper discussed correlations and patterns in the reported consumption of food and beverage combinations. It also provided information about professional recommendations of food and beverage combinations, and the results were in line with the same recommendations given in food and beverage combination literature. This raises the question of whether we should eat combinations that have been recommended to us or whether we should recommend combinations that we usually eat. Any-

way, however these correlations occur, the results show differences in consumption according to gender, age, place of consumption and socio-demographics.

These findings offer a new understanding of common everyday food choices and could be useful to culinary professionals in guiding their food and beverage pairings. The reason for consuming certain food and beverage items is dependent of various factors, such as availability and sociocultural or traditional norms. Still, liking is one factor that cannot be neglected as the fact is that people tend to eat what they like (de Graaf et al., 2005). Repeated exposure to specific items also leads to increased preference (E. B. Goldstein & Brockmole, 2016; Mela, 2001) and this tells us that food eaten every day shouldn't be disliked at least. Thus, all these patterns observed in the second paper show us the complexity of understanding food and beverage combinations. Therefore, it is important that we further investigate different views on food and beverage combinations in order to shed light on meals as a whole. From this perspective, it shows that the professional sommelier has a lot to gain from a higher level of education, as that will provide not only facts and guidelines for pleasurable meals, but also for how to be a critical and reflective practitioner.

Paper III: This paper contributed empirical evidence of how sommeliers understand good combinations and acquire the competence of offering them to their guests. By using the theories of Bourdieu in the analysis of the empirical data, it was shown this understanding and competence as acquisition of taste. It seemed from the results that the sommeliers had a common understanding of what good combinations were and how they were performed. The combinations were grounded in a theoretical argument taste on sensory experienced taste driven by what was expressed as the basic rules which were learned and then applied. This paper explored some key aspects of how to achieve this competence of applying the basic knowledge. It was shown that this is accomplished through the acquisition and conversion of social and cultural capital. Cultural capital related to the knowledge of good taste in regards to wines or beverages that are (or ought to be seen as) good or better than others, which was related to social capital since good taste was always shared and distinctive among groups (Bourdieu, 1979/1984). In this case, the sommelier got confirmation from others and, by knowing the 'right' people, they were also given the symbolic capital needed to set the standards of good combinations, as the knowledge has to come from the right sources to be accepted by the right people. And through this acquisi-

tion of taste they could offer their combinations to guests, as they had acquired the competence. Furthermore, to be able to serve a good combination, the sommelier, restaurant (or institution) had to have the right symbolic value in relation to the field and the guest. This could be a way to understand how certain complaints arise. Here, I would argue that you do not like what you do not agree upon, just as you do not agree to the field to which you do not have access. Thus, if you do not have access to or identify with certain people or restaurants, it could be harder for people to trust your sense of ‘good taste’, as you do not want or are not allowed to the same field of taste.

Food and beverage combinations are driven by the notion of sommeliers’ good taste, which makes them capable of revaluing lowbrow goods into highbrow goods through the combinations they create. This is one aspect that creates the possibility of making gastronomically sophisticated meals, and there also exists a trajectory for the sommelier to accumulate distinctive competence. But the essence here is to get sommeliers to understand first the notion of good taste and secondly how to use this knowledge in their interactions with guests. I believe that most of my respondents had this ability. Even if this belief is not theoretically grounded, it is a form of know-who, used in the meeting with guests when offering combinations fit for each context. Still, a higher education could provide a theoretical framework for the sommelier to gain knowledge as a reflective practitioner.

Paper IV provided the evidence to bridge the gap between objective taste and individual subjectivity and had practical implications for the restaurant business that revealed norms of behaviour in the profession as well the potential motivations for sommeliers in their professional and individual development. It revealed the sommelier to be a critical and reflective practitioner with the ability to bend the rules of food and beverage combinations, and apply them to both individual and collective tastes. By understanding that food and beverage combinations are based on conventions that are driven by identity, future sommeliers have an advantage in profiling the restaurants and themselves. This could be of value in times where health is on the agenda, where professional sommeliers can spread out from the restaurant industry to new areas business areas, such as providing good food and beverage combinations both for health and taste in hospitals, elderly care facilities, or school kitchens. This underlines the importance of education, not only in getting an initial education, but continuously to stay motivated and inspired in daily work.

Contributions to Culinary Arts and Meal Science

Even though beverages such as wine, beer and soft drinks may contribute to a more enjoyable diet, there is a challenge to understand how beverages can be part of a healthy diet without contributing too much energy, sugar and alcohol. The public needs to be more aware of the contribution from sugar and alcoholic beverages to total energy intake, as these drinks do contribute to an increased risk of ill-health (An, 2016; Gibson & Shirreffs, 2013; Popkin & Hawkes, 2016; Rothenberg et al., 2017; Wang et al., 2013). Moreover, the results from Paper II also showed correlations in reported consumption of food and beverages that explain the occurrences of specific patterns of combinations of food and beverages. This, together with Sweden being part of the New Nordic Cuisine phenomenon with its political vision “Sweden – the new culinary nation” (Neuman, 2018; Neuman & Leer, 2018), a generally increasing public interest in gastronomy and eating out (Jönsson, 2012), plus an increased interest in wine (C.A.N. Rapport, 2014, 2017), all this gives culinary art and meal science an opportunity to combine culinary arts with nutritional health, and thus make better meals in regards to both health and taste.

These findings offer an understanding of some common choices to culinary professionals, which is useful for their food and beverage pairing, and their role of enhancing restaurant experiences. As the tradition of culinary arts and meal science rests on an integrated knowledge base of science, craft and aesthetic design (Gustafsson et al., 2009), this emphasises the importance of craft and science flourishing side by side. Thus, craftsmanship provides knowledge through self-reflection in the practice of, e.g., a waiter (Eriksson year?), while scientific knowledge provides the theory of practice (Reckwitz, 2002) specifically for food studies (Neuman, 2019), and the aesthetics are closely bound to the understanding of good taste (Gronow, 2002). Therefore, it is important not only to see these side by side, but also integrated and related to each other. One way of increasing the understating of these as relational is to back up to the initial intention of Bourdieu when outlining his theory of practice (see Bourdieu, 1972/1977).

This thesis provides the subject of culinary arts and meal science with a relational stance, which not only bridges the gap between agency and structure as identified by Bourdieu, but also between good health and good taste. Furthermore, this stance could be an opportunity to remedy any dichotomous problem, since no problem is truly black or white. But also, important here is to add that this stance is not a solution for the subject of culinary

arts and meal science in general, but an additional stance that offers certain knowledge that will provide pieces to in an interdisciplinary subject.

Implications and further research

With a deeper understanding of how sommeliers internalize embodied knowledge through the process of converting social and cultural capital, we can understand the importance of educational training to the restaurant industry. By taking seriously the restaurant workers' practices, which are deeply connected to competence and knowledge, it will not only be profitable in terms of their educational value, but can also contribute to the increased status of a growing low-income sector. By providing and securing good experiences on an individual level, the restaurant industry will benefit with increased profit and better-educated professional workers. Furthermore, by increasing status through education, better salaries, profits, and work conditions will result. This will have a knock-on effect, as better work conditions and increased status will also attract more people to the industry, which today is screaming for more competent professional workers.

As more professional workers grow and stay longer in the industry, we will see a wider range of work places for these people. This is where competence in providing good taste becomes maybe even more relevant, in fields such as elderly care, hospitality or in other public sector environments. In these places, it is important for nutritional requirements to be met in combination with good taste.

The next step is to further deepen the understanding of consumer patterns, which would entail further interviewing people about their food and beverage combination choices. Therefore, I suggest further studies on the Swedish population's food choices are carried out, providing us with more knowledge regarding the notion of taste, but also providing a deeper understanding on how we can understand combination practices. As our understanding of our population's habits deepens, it will help us all to make healthier life choices.

SAMMANFATTNING PÅ SVENSKA

Måltiden är något som påverkar alla, ett område som påverkar inte bara maten utan också det vi dricker, vilket ofta sker i kombination. I den här avhandlingen har jag undersökt hur två olika perspektiv på mat- och dryckeskombinationer i Sverige – en kring konsumtionsmönster och en kring sommelierer – kan förenas för att bidra till ny och djupare förståelse av ”goda” kombinationer. Detta har gjorts genom att fokusera på svenska konsumenters registrerade kostvanor, för att ge en bild av dryckers påverkan på det totala energiintaget för olika måltider och hur kombinationerna av mat och dryck ser ut och vad de är beroende av. Vidare har professionella sommelierer gett sina perspektiv på hur de arbetar med att kombinera mat och dryck.

I Sverige har vi sett en ökning av uteätande och ett ökat intresse för gastronomi, samtidigt som sommelieryrket vuxit i popularitet. En av sommelierens viktigaste uppgifter är att kombinera mat och dryck för att ge en ökad måltidupplevelse. Samtidigt som denna ”gastronomiska revolution” sker i Sverige ökar kostrelaterade hälsoproblem. Ändå finns det gott om underbyggda kostråd och näringsrekommendationer för hälsa på både kort och lång sikt men likväl ökar ohälsotalen på kostrelaterade sjukdomar. Det är klarlagt att vår konsumtion av både mat och dryck resulterar i hälsokonsekvenser.

Här har en klyfta mellan det goda för hälsan och den goda smaken identifierats. Genom detta har en relationell tanke uppstått kring att överbrygga detta gap.

Syfte och mål

Det övergripande syftet med denna avhandling är att utveckla kunskap om mat- och dryckeskombinationer genom att undersöka konsumtionsmönster bland vuxna svenskar. Vidare undersöker avhandlingen den sociokulturella förståelsen av smak och praktiker hos professionella sommelierer.

Specifika mål för de individuella artiklarna

- Att beskriva dryckeskonsumtion och hur drycker bidrar med energi i det totala energiintaget i förhållande till kön var man bor, måltidstyper och veckodag hos vuxna svenskar.
- Att undersöka rapporterade mat och dryckeskombinationer i middagar, hos vuxna svenskar.

- Undersöka hur kunskap om ”god smak” i mat- och dryckeskombinationer förvärvas hos sommelierer.
- Undersöka hur professionella sommelierer utför mat- och dryckeskombinationer som en social praktik.

Metod och material

Avhandlingen är baserad på fyra artiklar. Materialet i de två första är baserat på Livsmedelsverkets kostdata Riksmaten, (2010–2011), som inkluderar 1797 vuxna svenskar som har registrerat sitt kostintag i fyra dagar.

I första artikeln sorterades kostregistreringarna i kategorier i form av mat och dryck och behandlades statistiskt för att beskriva olika dryckers energibidrag (kcal/dag) och mängd (ml/dag) samt det procentuella förhållandet av dryckers energi i förhållande till det totala intaget. Även energi från alkohol beräknades.

I andra artikeln korrelerades mat och dryckeskategorierna för att beskriva konsumtionen av mat och dryckeskombinationer. Vidare utfördes regressionsanalys för att beskriva vad de starkaste korrelationerna berodde på.

Artiklarna tre och fyra är baserade på kvalitativ innehållsanalys av fokusgruppintervjuer med 21 sommelierer med olika arbetserfarenheter i olika delar av Sverige. Först utfördes en pilotintervju för att samla intervjudeltagare samt för att se hur intervjuguide och metod skulle fungera. Deltagarna valdes ut genom snöbollsmetod som sattes igång i och med pilotintervjun, med kriterium att deltagarna skulle vara sommelierer erfarna inom mat och dryckeskombinationer. Intervjuerna hölls på tre olika platser i Sverige, och varade i snitt cirka två timmar. De deltagande sommeliererna hade olika erfarenhet allt från något års restaurangerfarenhet till ”en livstid” och var mellan 24–59 år. Utbildningsnivåerna skiftade från ”lärd av eller i branschen” till olika privata eller universitetskopplade sommelierutbildningar.

Analysen i tredje artikeln utgick ifrån den franska sociologen Pierre Bourdieus koncept gällande kapital och smak. Vidare analyserades fjärde artikeln med stöd i praktikteori. Dessa resultat illustrerar den professionella sommelierens kunskaper om kombinationer av mat och dryck, och hur kunskapen och förståelsen förvärvas och vilka praktiker som ligger till grund för detta.

Resultat och diskussion

I första artikeln beskrivs hur mat och dryckesenergi är fördelat i måltider och hur dryckesmönster för olika måltider har kopplat till hälsa. Resultaten visar att män får i sig mer energi procentuellt ifrån dryck än kvinnor. Detta sker genom en högre konsumtion av energirikare drycker i form socker och alkohol. Män hade en högre konsumtion av framförallt öl, sprit, läsk, medan kvinnor istället hade en högre konsumtion av te och vatten. Artikeln visade på några metodiska utmaningar vid mätning av intag av alkoholhaltig dryck. Dagens alkoholförsäljning jämfört med alkoholhalten i livsmedelsverkets databas skiljde sig åt. Detta uppmärksammades för rött vin och öl eftersom dessa var lägre än jämförda siffror från systembolagets försäljningsstatistik. Detta upptäcktes på grund av det tvärvetenskapliga angreppssättet, som kombinerar sommellerie och nutrition. Vidare har valet av dryck visat sig vara en viktig faktor för att välja en hälsosam kost och det är viktigt att öka medvetenheten om energibidrag från dryck.

Den andra artikeln visar korrelationer på mat- och dryckeskombinationer utifrån registrerad konsumtion, vilket kan förklara förekomsten av specifika konsumtionsmönster. Det ger också information som korrelerar med rekommendationer för professionella mat- och dryckeskombinationer, då resultaten pekar på samma rekommendationer som ges i litteratur kring mat- och dryckeskombinationer. Detta väckte frågan om vi äter kombinationer som rekommenderats eller om vi rekommenderar kombinationer som vi brukar äta. Hur som helst, visar dessa korrelationer skillnader i konsumtion utifrån kön, ålder, konsumtionsplats och veckodag. Därför ger dessa upptäckter ny förståelse för konsumtionsval och kan vara till nytta för serveringspersonal i deras vägledning kring mat- och dryckesrekommendationer som bidrar till restaurangupplevelsen. Anledningen till att vissa mat- och dryckeskategorier konsumeras är beroende av olika faktorer, såsom tillgänglighet, vad som är acceptabelt i specifika kulturer, utifrån tradition samt identitet. Samtidigt vet vi att människor också äter vad de tycker om. Med tanke på att upprepad exponering av specifika föremål också leder till ökad preferens, kan vi anta att det dagliga kostintaget i alla fall inte ogillas, eller att det gillas att konsumeras. Vidare visar dessa parametrar oss komplexiteten att förstå måltider och ännu mer specifikt mat- och dryckeskombinationer. Därför är det av samhällsintresse att vi ytterligare undersöker olika syn på mat- och dryckeskombinationer för att understryka vikten av att förstå måltiden som helhet. Tack vare detta framgår det att den profess-

ionella sommelieren har mycket att vinna på utbildning, särskilt i högre studier, eftersom det inte bara kommer att ge fakta och riktlinjer för goda måltider, utan hur man också kan kritiskt reflektera kring den.

Tredje artikeln bidrar med ny empiri kring hur sommelierer uppfattar "bra" kombinationer och hur de förvärvar kunskap och kompetens att erbjuda "goda" kombinationer till sina gäster. Användandet av den franska sociologen Pierre Bourdieus begrepp kring kapital i analysen av den empiriska data visar förståelsen och kompetensen som förvärvad. Som resultatet visar har sommelierer en gemensam förståelse för vad som ses som "goda" kombinationer och hur de skapas. Förståelsen för mat och dryckeskombinationer beskrivs genom sommeliererna som något som kommer i två steg. Först genom den teoretiska inläsningen av vad som kan beskrivas som grundläggande regler för mat och dryckeskombination. Dessa handlar främst om hur grundsmaker, texturer och aromer fungerar sensoriskt. I steg två beskrivs lärs sedan dessa regler att appliceras i olika situationer, vilket beskrivs som en tidskrävande process av djupt engagemang inom gastronomisk kultur. Vidare visar artikeln på de nyckelfaktorerna kring hur man uppnår denna kompetens och hur man tillämpar dessa kunskaper. Här ses förvärvandet av socialt och kulturellt kapital och hur dessa omvandlas med varandra som en förklaring av hur förståelsen uppnås. Kulturellt kapital rör kunskapen om den "goda" smaken när det gäller att förstå vilka viner eller drycker som är (eller borde ses som) bra eller bättre det andra. Detta är relaterat till socialt kapital eftersom den goda smaken antingen delas eller särskiljer grupper. I detta fall får sommelieren bekräftelse från andra och genom att känna de "rätta" människorna, ges de också det symboliska kapital som behövs för att få acceptansen att sätta standarder för "goda" kombinationer, eftersom kunskapen måste komma från rätt källor och därigenom accepteras av "rätt" personer. Genom förvärvandet av "god smak" kan de erbjuda sina kombinationer till gäster, eftersom de har förvärvat kompetensen. För att kunna servera en bra kombination måste sommelieren, restaurangen (institutionen) ha det rätta symboliska värdet i förhållande till fältet och gästen. Detta kan vara ett sätt att förstå hur vissa klagomål uppstår. Argumentet är här att du inte gillar vad du inte håller med om, eftersom du inte godkänner eller tillhör det fält som du inte har tillgång till. Om du inte har tillgång till eller identifierar dig med vissa personer, restauranger eller personer på restauranger kan det vara svårare att lita på deras smak, eftersom du inte vill ha eller du inte får tillgång till "smakfält".

Mat- och dryckeskombinationer drivs av den goda smaken genom distinktion. Det är genom kombinationen som sommelierer hör möjlighet att

omvärdera mat från låg status till hög status. Detta är en av orsakerna som möjliggör gastronomiskt sofistikerade måltider. Det finns också en utstakad bana för att ackumulera särskiljande kompetens för sommelieren. Kärnan här är att få sommelier att först förstå begreppet ”god smak” och sedan få dem att förstå hur det kan användas i mötet med gäster. Som det verkar har sommeliererna denna förmåga även om den inte är grundad i sociologiska teorier. Det är en form av know-how som används i mötet med gäster, där kombinationer erbjuds anpassat i olika sammanhang eller situationer. Fortfarande kan en högre utbildning ge en teoretisk ram för sommelieren, som en reflekterande utövare.

Den fjärde artikeln visar hur klyftan mellan objektiv smak och individuell subjektivitet kan överbryggas. Detta har praktiska konsekvenser för restaurangbranschen, då den åskådliggör de för givet tagna normer och beteenden som finns inom mat- och dryckeskombinering. Vidare visas också vad som kan vara drivande kategorier för sommelier i deras professionella och individuella utveckling. Det bidrar till att sommelieren kan vara en kritisk och reflekterande utövare med förmåga att böja reglerna för mat- och dryckeskombinationer samt tillämpa dem på både individuell och kollektiv smak. Artikeln visar på att praktikerna kring mat och dryckeskombinationer baseras på konventioner samt att de är drivet av skapandet av identitet. Detta kan framtida sommelier använda som en fördel när restauranger eller de själva som varumärken skall profileras.

Slutsats

Sommelierer är experter inom mat- och dryckeskombinationer och testas dagligen i utmaningarna kring den objektiva och subjektiva smaken. Detta har visats som något som de gör regelbundet i sitt dagliga arbete, eftersom de guidar individer att uppleva efterfrågade bra kombinationer.

Att tillhandahålla fynd som överbryggar klyftan mellan objektiv smak och individuell subjektivitet har praktiska konsekvenser för restaurangbranschen, eftersom de avslöjar för givet tagna regler och normer för en yrkeskår, men också vad som driver sommeliers professionella och individuella utveckling. Detta ger sommelieren möjlighet att vara en kritisk och reflekterande utövare med förmågan att böja reglerna för mat- och dryckeskombinationer och tillämpa dem för både individuell preferens och kollektiv smak. Att förstå att kombinationer av mat och dryck baseras på konventioner och att det drivs av identitet, kan framtida sommelier använda som en fördel i profilering av restauranger och sig själva.

I tider där hälsa är på agendan, identifieras en klyfta mellan hälsa och sommellerie. Här finns det potential för att professionella sommelierer kan utvidga sina arbetsområden både i och utanför restaurangbranschen. På så sätt kan alla ha möjlighet till måltider baserade på både goda kombinationer utifrån individuell smak men också utifrån hälsobehov. På det sättet understryker detta vikten av utbildning, men inte bara att initiera utbildning generellt utan att det också är av vikt att kontinuerligt utbilda samt fortbilda sig för att fortsätta vara motiverad och inspirerad i det dagliga arbetet.

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Appendix

Semi-structured interview guide *Sommelier*

Good Combinations

<p><i>Introduction</i> Who am I and what shall we do, talk about good combinations? Who are you? Presentation around the table.</p>	<p><i>Theme 1 Your favourites</i> First, I would like to hear about your favourite combinations. Why is it your favourite? What makes is good. How does good taste Ordinary combinations When are good combinations consumed? How does different contexts and environments affect? vacation travels... Are there bad combinations, how are they, describe? Do you have and embarrassing combinations. How is a good combination? Differences in tasting and experiencing combinations.</p>
<p><i>Theme 2 Learning about combinations</i> When did you start working professionally which combinations? How did you learn From who and where How did you develop Influencers Role models Ambitions</p>	<p><i>Theme 3 creating combinations</i> How do you work with your combinations? How do you create a combination? How many are you working with the creation How do you cooperate Do you agree Differences in will or favourites How about non-alcoholic combinations Longer menus vs shorter or ala carte Same beverage different food</p>
<p><i>Theme 4 Offering combinations</i> How are combinations offered to guests? How are they presented Suggestions Tasting How is individuality handled How much do you want to influence the guests? How about different guests women & men pair, single, friends or family</p>	<p><i>Rounding up</i> How do you look upon trends/mode as you combine food and beverage? What has been... How is it now... What will be... How do you work with market change? Demands and environment climate</p>

Thank you!

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