



## The Social Shaping of Canteen TakeAway activitis

**Poulsen, Signe; Jørgensen, Michael Søgaard; Mikkelsen, Bent Egberg; Tetens, Inge**

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## The Social Shaping of Canteen TakeAway activities



Ph.D. thesis

Signe Poulsen

December 2011

## **Supervisors**

Associate professor, Ph.D. Michael Søgaard Jørgensen  
Dept. of Management Engineering, Section of Innovation and Sustainability  
Technical University of Denmark

Professor, Ph.D. Bent Egberg Mikkelsen  
Nutrition and Public Food Systems  
Aalborg University, Denmark

Professor, Ph.D. Inge Tetens  
Division of Nutrition, National Food Institute  
Technical University of Denmark

## **Evaluation committee**

Associate professor Christian Clausen  
Dept. of Management Engineering, Section of Innovation and Sustainability  
Technical University of Denmark

Head of prevention Kjeld Poulsen  
Steno Health Promotion Center, Steno Diabetes Center, Denmark

Professor Maria Lennernäs  
Kristianstad University College, Sweden

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Kgs. Lyngby December 2011  
Signe Poulsen



## Sammendrag

I de seneste årtier er forekomsten af overvægt og fedme steget på verdensplan. Mange faktorer har haft betydning for denne udvikling, en af disse er ernæring. Med det formål at forbedre det ernæringsmæssige indtag har interventioner været forsøgt i forskellige typer af settings. Disse interventioner har vist at arbejdspladsen kan være en effektiv setting i forhold til at påvirke kosten.

Samtidig har studier vist at manglende tid kan være en barriere for at tilberede sund mad i husholdningen. Med baggrund i arbejdspladsen som en effektiv setting, samt at det kan være svært at finde tid til at tilberede sund mad, er Kantine TakeAway (KTA) konceptet udviklet som et tilbud fra arbejdspladsen til deres medarbejdere om at købe mad med hjem. Formålet med denne afhandling har været at opnå viden om udformningen af KTA-ordninger, samt at forstå de processer og resultater som er relateret til formningen. Afhandlingen er baseret på casestudier på to hospitaler, en finansiel arbejdsplads og en industriarbejdsplads. Teoretisk tager afhandlingen afsæt i teorier om design som samspil mellem udvikleres forestillinger om potentielle brugere og brugernes afvisning eller tilpasning af løsninger (inskriftion og domesticering) samt teori om politiske processer i organisationer for at kunne analysere såvel brugerperspektiver som produktionsperspektiver af KTA.

Resultaterne viser, at KTA i alle fire cases bliver etableret som et forsøg på at skabe bedre balance mellem arbejdsliv og privatliv for de ansatte. I to cases udvikles KTA også til at være en løsning, som tilbyder mad til de ansatte på aftenhold.

Udformningen af den enkelte ordening er således afgørende for hvem der kan integrere ordningen i deres hverdagsliv. Studiet viser at antallet af brugere af KTA er begrænset, hvilket kan skyldes manglende overensstemmelse mellem det problem som KTA antages at skulle løse og den KTA-løsning som bliver udviklet på de enkelte arbejdspladser. I særdeleshed synes bestillingsdeadline og pris at være væsentlige for om ansatte benytter sig af ordningen. Derudover vægter brugerne af KTA også sundhed og kulinariske aspekter højt. I tre cases har dette primært betydning når medarbejdere er blevet brugere af ordningen, mens ønsket om store portioner og højt kødindhold var afgørende for accepten af ordningen på industriarbejdspladsen.

Produktionen af KTA integreres i den eksisterende køkkenproduktion ved reduktion af andre services til medarbejderne, KTA-salg få gange om ugen eller salg af samme måltid som frokostmåltidet. Strategierne har indflydelse på hvor ofte KTA tilbydes til de ansatte samt hvilken type måltider der tilbydes.

Afslutningsvist konkluderes at KTA-ordninger er formet af samspillet mellem KTA-konceptet, den lokale kontekst og dennes normer og værdier for sundhed, arbejdstagerrettigheder m.m. Ph.D-projektet kan anvendes til at sikre fokus på særlige lokale forhold ved design af lokale KTA-ordninger gennem et brugerorienteret designforløb, hvor potentielle brugere involveres i tilrettelæggelsen af en ordening samtidig med at driftserfaringer løbende drøftes med henblik på at tilpasse ordningen til potentielle og nuværende brugeres behov i relation til bestillingsmåde, portionsstørrelser, valgmuligheder m.m.

## Summary

During recent decades, the prevalence of overweight and obesity in the world has been increasing. Many factors are influencing this development, one of which is nutrition. In order to improve dietary intake, interventions have been carried out in different settings. Such interventions have shown that the worksite can be an effective setting for influencing dietary intake.

Lack of time is found to be perceived as a barrier for preparation of healthy meals in the households. Based on the findings that the worksite has been found to be an important setting for health-promoting initiatives, and that people find it difficult to find time to prepare healthy meals, the concept of Canteen TakeAway (CTA) was developed. CTA is offered by worksites to their employees as ready-to-heat meals they can take home. The aim of this thesis has been to gain knowledge of how such CTA schemes are shaped, and to understand the processes and results related to the shaping.

The thesis is based on case studies at two hospitals, a financial company and an industrial worksite. Theoretically, the thesis draws on theories about design as the interaction between developers' conceptions about potential users and the users' rejection or adjustments to solutions (inscription and domestication), together with theory about political processes, in order to capture both user perspectives and production perspectives of CTA.

The results show that in all four cases CTA is established as an attempt to create a better work-life balance for the employees. Furthermore, in two of the cases, CTA is also linked to providing employees working irregular hours with a meal solution. The shaping of the scheme is thus decisive for who that can integrate the scheme into their everyday life.

It is found that number of users of CTA are limited, which could be a result of a discrepancy between the identified problem and the related solution. Particularly the ordering deadline and the price seem to be crucial for whether the employees choose to become CTA users. Users also consider healthiness of the meals and culinary aspects to be important. In three cases this has primary importance after the employees have become users. The wish for big portions and a great amount of meat was important for the acceptance of the scheme at the industrial worksite.

The production of CTA is integrated into the existing food production by a reduction in other services for the employees, sale of CTA a few days a week or by using the lunch meal as CTA meal. The strategies influence how many times a week CTA should be offered and what type of meals should be prepared.

Finally, it is concluded that the CTA schemes are co-shaped by the CTA-concept and the local context and its norms and values about health, employee rights etc. The Ph.D project can be used to assure that focus is kept on particular local conditions when local CTA schemes are designed. This can be done through a user oriented design course where potential users are involved in the planning of a scheme, and by continuously discussing the scheme's performance with the purpose of adjusting the scheme to meet the potential and present users' needs in relation to ordering, portion size, different options and so on.

## Introduction

Attention has been growing in recent decades with respect to the increasing prevalence of overweight and obesity in the world (WHO Regional Office for Europe 2007). Poor eating habits and lack of physical activity are considered to be the main causes for obesity in the Nordic countries, as well as in other regions (WHO Regional Office for Europe 2007, Nordic Council of Ministers 2006, Statens Institut for Folkesundhed 2006). With the growing attention to this public health problem, many different initiatives have been launched, all with the aim to target one or more of the identified causes of overweight and obesity (WHO Regional Office for Europe 2007).

Some studies show a link between obesity and social differences (WHO Regional Office for Europe 2007). In Denmark, it has been found that high education is associated with healthier eating habits, and that the prevalence of obesity is higher among people with low levels of education (Statens Institut for Folkesundhed 2006).

Poor eating habits are associated with obesity, and thus the field of nutrition has been an area of particular interest for many years. A major goal in the field of public health nutrition is to provide or increase access to healthy food in different settings in order to prevent obesity (Whitelaw et al. 2001). Since the notion of settings was used in the Ottawa charter, interventions have been developed for specific types of setting, such as schools or worksites.

In 2009, the recommendations from the Danish Prevention Commission were released (Forebyggelseskommissionen 2009). The commission's task was to analyze and develop suggestions for how to strengthen health promotion efforts on a national level. They concluded that the worksite is an important setting in the field of preventing unhealthy behavior in relation to eating, smoking, alcohol and physical inactivity (Forebyggelseskommissionen 2009: 292). This recommendation is based on the fact that the majority of all adults are in employment, and they spend a great amount of time at the workplace every day. Furthermore, the workplace can be a setting for targeting specific target groups that are not affected by more general campaigns targeted to the general population.

Another perspective related to poor eating habits is lack of time. This is perceived to be a barrier for healthy eating (Lappalainen et al. 1997). This finding corresponds well with the fact that in the period from 1987 to 2001, the average number of hours that Danes spend at work or transporting themselves to and from work has increased (Bonke 2002); they therefore have less time with family and also for household activities, including cooking. In a cross-sectional study of Danish meal habits and their development in the years from 1995 to 2008, it was found that there was a decrease in the group of people who never eat convenience foods (Groth et al. 2009). International studies have showed that time spent on food preparation has decreased from the beginning of the 1970s until the end of the 1990s (Warde et al. 2007), indicating an increase in the use of semi-processed foods or in meals prepared outside the home.

The increase in both prevalence of obesity and use of convenience products, combined with time as a perceived barrier for healthy eating, forms the basis for the idea of Canteen TakeAway (CTA). The underlying question behind the project is whether it would be possible to make worksite health promotion that can affect not only the employees but also their families. The idea of CTA was to encourage the worksite to provide healthy meals for their employees to take home after work.

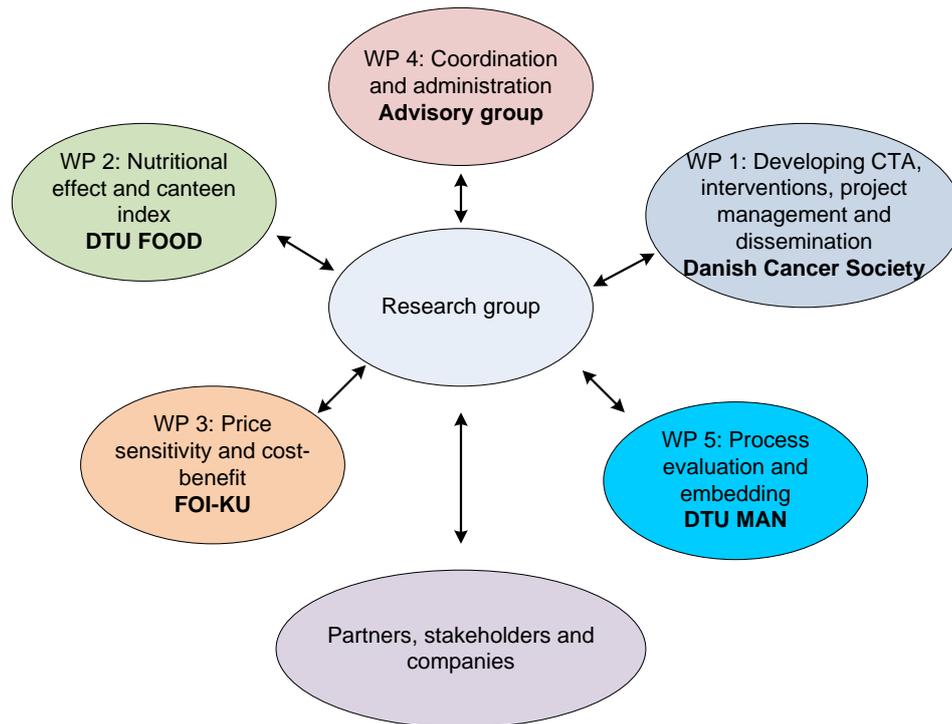
## About the CTA project

This Ph.D. project is a part of a bigger research and development project entitled “CANteen Take Away – Dissemination and Sustainability of Healthy Eating promoted by Workplaces”, which was initiated in 2007 and ended late 2010. It was funded by the Danish Council for Strategic Research, the program commission on food and health, and partners in the project. The Danish Cancer Society managed the project.

The overall aims of the project were to:

- Identify and communicate solutions to practical challenges connected with implementing CTA.
- Develop, validate and implement tools that would make it possible for the canteens to measure and improve the nutritional quality of the CTA meals, and measure the impact of CTA and the canteen meals on the employees’ diet.
- Investigate the financial incentives related to increasing the impact of CTA through investigating price sensitivity and making cost-benefit analyses.

The CTA project consisted of four work packages. With further funding from the Danish Agency for Science, Technology and Innovation and the Technical University of Denmark, a fifth work package was established. This Ph.D. project is work package five (WP 5). Figure 1 illustrates how the project was organized.



**Figure 1. The organization of the CTA research project**

The parties responsible for the work packages are the Danish Cancer Society, National Food Institute at DTU (DTU FOOD), Institute of Food and Resource Economics at Copenhagen University, and Department of Management Engineering at DTU (DTU MAN), and they constituted the research group. In order to coordinate activities and ensure progress, the research group met on a regular basis. Other parties in the project were Novozymes A/S, Horesta, Mandag Morgen, Danish Veterinary and Food Administration, 3F, Danish Diet and Nutrition Association, Fazer Amica, Oxford Health Alliance, Metropol, and Kantineledernes Landsklub (National Canteen Managers Association).

### **Objectives of the separate work packages**

The objective of WP 1 was to coordinate the overall research work and dissemination of the results to partners in the project. Furthermore, it was to establish contact with companies, conduct workshops for canteen managers, and develop different tools and materials for the companies interested in CTA.

The objectives of WP 2 were to develop and validate a tool that could be used by the canteen staff for self-evaluation of the canteen meals, and to develop a separate research tool to use in the scientific evaluation the nutritional effect of CTA.

The objective of WP 3 was to conduct cost-benefit analyses of CTA, from both a company and society perspective. Furthermore, the work package also conducted a web-based questionnaire among approximately 5000 respondents in 2008. The results of the questionnaire survey showed that highly educated and younger people had a significantly higher willingness to pay than older people and persons with a shorter education. It also

showed that people with a low level of physical activity and high BMI were interested in CTA.

The objective of WP 4 was to contribute with management of the project, including financial management and reporting to the Danish Council for Strategic Research.

WP 5 was the basis for this Ph.D. project. The objective and aim of this work package is described in the section named research focus and question.

Definition of CTA:

In the research project, CTA is defined as a concept that enables employees to buy food from the worksite's canteen, either to take home or to eat at the worksite e.g. when working evening shift. The concept does not include arrangements in which employees can occasionally buy leftovers from the lunch buffet to take home. It is a premise for the concept that CTA needs to be systematized. The scheme can be based on either the hot meal from the lunch menu or a separate CTA menu. Part of the scope for the CTA project was to promote healthy CTA meals, but it has not been a criterion in the choice of cases for this Ph.D. project.

## Research focus and question

The overall purpose of this Ph.D. project is to explore the CTA concept. The study also aims to develop an understanding of CTA by analyzing the concept based on a framework that combines social constitution of the worksite (Olsén & Clausen 1994) with STS-related perspectives such as script (Akrich 1992), and practice-oriented theories such as domestication (Pantzar 1997). The theories are combined in an analytical framework which is inspired by the work of Kamp and colleagues (2005), using the social shaping of political programs in organizations.

Despite the great attention to interventions at the worksite, only limited attention is given to organizational factors and how they shape schemes such as CTA (Thorsen 2010). The basis for this thesis is the findings of Thorsen (2010) combined with findings that show how local design of concepts such as CTA influences the shaping of the concept (Thorsen 2010, Jørgensen et al. 2009). The purpose of this Ph.D. thesis is to develop a deeper understanding of the concept of CTA, as formulated in the following research question:

**How are CTA schemes shaped and given meanings, both when developed and when in use?**

In order to answer the research question four case studies have been conducted. Three of the cases were followed as they were establishing a CTA scheme, whereas the fourth case already had an established CTA scheme.

The research design has been developed to answer the following questions:

1. How are CTA schemes integrated into the everyday life of the users?
2. How is the production of CTA included in the existing food production?
3. How is CTA shaped by different actors in the worksites?

The theories used in the thesis have been chosen with consideration to these questions. Overall the questions were developed to reflect the different perspectives of the overall research question.

## Outline

Four papers are included in the thesis. These papers contribute different perspectives, based on my research, and this thesis presents my findings and discusses methods and findings across the four papers, in order to answer my overall research question. Each of the four papers contributes important findings to the overall picture of CTA.

The thesis begins with an introduction to the background for thesis, the aim and objectives for the thesis, and the thesis' research question.

The thesis includes a 'state of the art' in the research area to which this thesis contributes and a theoretical framework, including the theory of script, the theory of domestication, and the theory of social constitution of the worksite. The theories are framed by using the theory of social shaping of political programs in organizations.

Hereafter follows a methodological section with considerations, including case study research and qualitative interviews.

The 5<sup>th</sup> chapter presents the papers and their findings:

### Paper 1:

L. Quintiliani, S. Poulsen & G. Sorensen: Healthy eating strategies in the workplace. Published in: International Journal of Workplace Health Management.

The paper is a review of the efficacy of dietary worksite health promotion.

### Paper 2:

S. Poulsen, I. Tetens, B. E. Mikkelsen & M. S. Jørgensen: Users' practices and perspectives on food from work: a case study on Canteen Take Away. Submitted to: Health Education Research.

The paper presents and analyzes findings from the Financial Company.

### Paper 3:

S. Poulsen & M. S. Jørgensen: Social shaping of food intervention initiatives at worksites: Canteen takeaway schemes at two Danish hospitals. Published in: Perspectives in Public Health.

The paper presents and analyzes findings from two hospital cases.

Paper 4:

S. Poulsen & M. S. Jørgensen: Canteen takeaway in a blue collar setting.

Draft, intended for submission to International Journal of Workplace Health Management

The paper presents and analyzes findings from the Medical Production case.

The chapter also contains findings from across the four cases. The findings presented have not been included in the papers.

The methods and the results are hereafter discussed. The results are discussed across cases. Finally, the conclusions and perspectives of the thesis are presented.

Appendix A contains a list of all the interviews.

## State of the art

This thesis explores CTA in a perspective that lies within the field of tension between intervention studies at worksites and everyday life.

### Healthy eating at worksites

The field of dietary health promotion at worksites has been investigated in several studies since the worksite was mentioned as an important setting in the Ottawa charter (WHO 1986). In general, the Ottawa charter defines health promotion as a process that enables people to increase control over, and thereby improve, their health.

An international review of studies aiming at increasing fruit and vegetable consumption through interventions at worksites (Sorensen, Linnan & Hunt 2004) finds that the success of the intervention seems to depend on the following factors: support from management, support consisting of education and information, supporting organizational structures, employee participation in planning and implementation, involvement of the employees' social context in the form of family and local community, and inclusion of various risk/success factors besides diet.

A systematic review of 110 health promotion programs at primarily North American worksites (Harden et al. 1999) finds that only 21 percent of the interventions is based on employees' needs and wishes, and furthermore that the majority of the interventions are targeted the individual level with limited organizational support. Based on these findings, Harden and colleagues (1999) point to the lack of accord between the practice of worksite health promotion organization and what the effectiveness literature suggests. Furthermore, the review finds that most interventions will only be evaluated on their short-term effects.

A recent systematic review of the effects of health promotion interventions on employees' diet at North American and European worksites (Ni Mhurchu, Aston & Jebb 2010) finds that worksite interventions generally have a positive, but small effect on dietary habits. They also find that programs targeting worksite environments in order to make healthy choices easier have failed to a great extent to include economic, political and socio-cultural aspects of the worksite in the intervention.

A survey of reported experiences with worksite health promotion in Denmark finds that the research in the field of influence of work and the work environment on dietary habits, including worksite eating, is limited (Jørgensen et al. 2009).

The National Board of Health has investigated the extent of worksite health promotion activities at Danish worksites in 1997, 2002, 2005 and in 2007. Health promotion activities related to diet are found at 60 percent of the companies participating in the survey, and the

amount has increased since 2005. The most common schemes related to diet are a food scheme such as a canteen (33%) and a fruit scheme (48%) (Sundhedsstyrelsen 2008). The target group in the survey is worksites with more than 10 employees. Public, private and semi-public companies participated. The survey also shows that there are differences related to geographic areas and industries. In the capital area, only 26 percent of the companies do not have any dietary health promotion activity, while for the other areas this number is between 40 and 53 percent. The differences between industries is illustrated by the fact that 58 percent of the worksites in the financial sector have a food supply scheme, while this is true for only 8 percent in the construction sector.

There has been a shift in dietary health promotion from considering food behavior as a private issue to investigating the potential of health promotion on a societal level (Lassen 2010).

## Food choice and everyday life

Based on data from the Danish statistic yearbook from 2011, the employment percentage can be characterized as high compared to the other countries in EU (Danmarks Statistik 2011). Approximately 75 percent of the Danish workforce is employed, distributed so that 78 percent of all men in the workforce have a job and 73 percent of all women. A comparison of Danes' time consuming activities in 1987 and in 2001 showed that time used for work and transportation had increased and time for primary needs, such as sleep and eating, had decreased (Bonke 2002). These data show that a great part of everyday life in Denmark concerns work.

Combining the national representative dietary surveys from 1995, 2000-02 and 2005-08 shows that there are few changes in the social perspectives of organizing meals. In the majority of the cases, it is women who are in charge of preparing dinner (Groth et al. 2009). A large number of the respondents say that they eat together with family at least five times a week.

In the national dietary surveys, an increase is found in respondents buying ready-made meals once in a while. The level of large-scale users of ready-made meals has not changed in the period from 1995 to 2008. Particularly young people between 19 and 24 years are frequent users of convenience meals. The surveys show an increase in awareness about healthy eating. At the same time, they also show that respondents misjudge how many vegetables they eat or are recommended to eat. Lack of time and old habits are considered to be barriers for healthy eating, particularly for those who intend to eat healthy but do not do so. Finally, the surveys show that only 20 percent of the respondents who have access to a worksite canteen actually use it every day. Between 50 and 62 percent of the respondents eat in the worksite canteen less than once a month.

In a quantitative telephone survey of eating habits in the Nordic countries, Denmark is found to be the most homogeneous country (Kjærnes et al. 2001). The study also finds that family and home tended to dominate the picture of Danish eating patterns, which is supported by the finding that Danish eating events are of a longer duration than in the other countries. Compared to the other Nordic countries, meat is more often on Danish plates; for 85 percent of proper meals in Denmark, meat is the central food. Finally, the study shows that cooking is still women's work; however, there are indications of a more equal sharing of the work among the youngest participants and those with middle and higher occupational status.

Several models of how food choice is affected by multiple aspects have been developed (Connors et al. 2001, Story et al. 2008). The models show that eating habits are affected by aspects on different levels. Food choice is a result of impacts on both a macro level (exemplified by legislation), on a structural level (e.g. closing hours in shops or kindergarten), on a social level (in the contact with other people), and on a personal level (where such factors as lifestyle and preferences influence eating habits). On the personal level, Connors and colleagues (2001) find that several values affect food choice and that these values can be conflicting. For example, convenience and price can be mentioned as two conflicting values.

## Work and food choice

The relationship between work and food choice has been investigated in several studies, which show that different job demands are associated with differences in food choices. Poor occupational conditions are associated with differences in food choice in a path analysis of the Health Survey for England (Sacker et al. 2001). Another aspect is high workloads (McCann, Warnick & Knopp 1990), while low status jobs are found to be related to less healthful diets compared to high status jobs in the Whitehall II study (Marmot et al. 1991). Furthermore, high work demands (Hellerstedt & Jeffery 1997) and low control at work (Wickrama, Conger & Lorenz 1995) are also related to less healthful diets compared to employees with low job demands (Devine et al. 2003). A Danish cohort study found a link between the psychological workload and weight gain among Danish nurses (Overgaard et al. 2006).

Furthermore, worker characteristics are also related to food choices. Age, level of income and education are linked to food choices (Morris et al. 1992). Blue-collar workers or unskilled workers are found to have greater benefits of worksite health promotion (Hope, Kelleher & O'Connor 1999).

In a Danish perspective, the national cross-sectional nutritional survey in 2003 finds a clear link between educational level and food choice (Groth, Fagt & Brondsted 2001). A high educational level is linked with a higher daily intake of fruit and vegetables compared to those with only a basic school level.

## Canteen TakeAway

In order to explore the novelty of the CTA concept, a literature search was made. I used Web of Science as the initial database, and extended the search to Google Scholar, as few results were found in the initial search. The search terms used were: Canteen Take Away, Worksite or Workplace, Take out, Take away, Meals from work and Food from work. To my knowledge, the literature on concepts such as CTA is very limited. In all, one book was found that mentions a concept comparable to CTA (Wanjek 2005), and two journal articles that suggest concepts like CTA (Devine et al. 2003, Heinen & Darling 2009). In the book *Food at Work*, the term 'take-home-meals' was mentioned as a concept targeting busy working parents in the more wealthy countries (Wanjek 2005). Wanjek (2005) describes how take-home-meals at Pfizer Canada were prepared after lunch and placed in a vending machine. He reported that there were no obvious disadvantages, since it was assumed that the meals were more nutritious than other meal options for workers, since they were prepared by professionals.

Heinen and Darling (2009) have described the role of employers in relation to addressing obesity. Besides mentioning different possibilities for the employees, they also emphasize the possibility of supporting employees' families in developing healthier eating habits. One of the possibilities mentioned was for the company to provide healthy 'dinners-to-go' (Heinen & Darling 2009).

A qualitative study aiming to develop a better understanding of how workers themselves experience and construct the relationship between their jobs and their food choices, suggested take-out family meals from the company cafeteria as an approach to balance the perceived conflict revealed by the study between work and dietary ideals (Devine et al. 2003).

Besides the three mentioned reports on concepts similar to CTA, no other reports have been found. While the concepts were mentioned, there were no further analyses of any aspects related to the concepts; for example, the nutritional aspects of the concepts, how such a concept was developed, and whether it was of interest to the employees.

These aspects of worksite health promotion, everyday life and the link between work and food choices indicate that the study of Canteen TakeAway covers themes from all three of these areas. A few studies mention CTA or similar concepts without investigating the concept in detail.

## Theoretical framework

The articles that form the basis for this thesis introduce different theoretical approaches to analyze the shaping of CTA schemes. In this chapter, the fundamentals are presented and combined in an analytical framework for the cross-case analysis.

### Inscription

The notion of *inscription* and *script* is developed by Akrich (1992). She was inspired by science and technology studies, and developed these notions to describe processes or conditions in the design of objects or systems. She describes how designers define expected users for their object or system. The expected user is ascribed certain values, which together with the designer's expectations regarding future developments in economy, science, technology, and morality form the point of departure for the design of artifacts. The predefined assumptions are *inscribed* in the object or system and the end product is termed *script* (Akrich 1992). The inscriptions can be made intentionally, but they can also be a result of unconscious premises (Ingram, Shove & Watson 2007). In the phase of use, the inscribed values can be challenged by other types of use. The notion *description* is used to describe the practice that differs from the intended use. There can also be a mismatch between the expected user and the actual user.

The notion of inscription is supported very well by the notion of configuring the user (Grint & Woolgar 1997), which means defining, enabling and constraining the users. This has relevance for the study of CTA in relation to understanding how some people become users of the scheme while others do not. Akrich uses the term *expected users* to describe those persons who the designers imagine will use the object being developed. In the terms of Grint and Woolgar, these persons are the *projected users*.

The similarities and differences between the script approach and configuring the users approach have been discussed by Oudshoorn and Pinch (2008). They find that the users become more active actors in the script approach, whereas it is primarily the designers who are active when configuring the users (Oudshoorn & Pinch 2008). The configuring term, as used by Grint and Woolgar, has been criticized for describing configuring as a one way process. This criticism is in line with the difference between the script approach and configuring the users approach.

In this context, configuring the users is only used to supplement the script approach. It is used to highlight how kitchen staff define, enable and constrain the users, while the script approach contributes to perspectives for both the users and the designers of the scheme.

Inscription and the terms derived hereof are used analytically together with configured users in Paper 2.

## Domestication

On the basis of the notion that consumer choices are influenced by the situation, routines and social norms, it is suggested by Pantzar that items are continuously being redefined (Pantzar 1997). The motive for buying or applying an artifact changes during use. It may start as an object of desire, develop into being justified as a functional or rational item, and then develop further into being taken for granted as a routine part of everyday life (Ingram, Shove & Watson 2007).

According to Pantzar (1997), a new product will either stabilize itself or disappear. He also claims that it can be difficult to determine how the specific product will develop. On an individual level, the product can influence the user to a new lifestyle, while on a higher level it can contribute to new communities.

The notion of domestication is used to analyze both users of CTA and the development of the CTA schemes. In relation to users, domestication can contribute to an understanding of users' choices. Furthermore, it can contribute to highlighting how CTA schemes are shaped.

Domestication is used analytically in Paper 2.

## Social Constitution of the worksite

Since a worksite embraces many political interests, it can be beneficial to have an understanding of the worksite's social constitution in order to understand how some change processes at the worksite develop. The notion of the social constitution of the worksite was developed by Hildebrandt and Seltz in 1989. With their contribution to political process theories, they make a dialectical connection between local worksite policy and structural power. The basic understanding is that the worksite is subject to capitalistic mechanisms that create an asymmetrical power structure among the actors at the worksite. Actors are linked in a macro-power structure due to their affiliation with specific social groups, based on their position at the worksite. Previous histories of conflict and consensus have shaped the social constitution of the worksite. The social constitution should not be considered as rules and norms but rather as social principles that shape the rules and norms at the worksite (Olsén & Clausen 1994). Several social constitutions can exist at the same worksite, for example within different departments. The social constitution functions as a filter that shapes the actors' perceptions of changes. Analytically, the notion of social constitution of the worksite is used to shed light on the political processes inside organizations.

Social constitution of the worksite is presented in Paper 1, and used analytically in Papers 3 and 4.

In addition to the theories mentioned here, other theoretical perspectives are included in some of the papers. These theories have been included to elaborate discussions of specific

findings related to one or more of the cases, but they have not laid the basis for the thesis as have the theories referred to above.

## Analytical framework

The overall analytical framework for the project and its case studies has been inspired by the work of Thorsen (2010). The framework is summarized in [Figure 2](#), which is Thorsen's model (2010) that has been further developed in order to be applicable for this project. The figure combines the social shaping perspective, the social constitution of the worksite perspective, and the everyday life perspective. It has furthermore been developed on the basis of the work of Kamp and colleagues (2005).

In organizational change management literature, a phase model is often applied to a planned change perspective, suggesting that change processes are static and that there is a logical order of the phases, where one phase is a prerequisite for the next. Phase models suggest that change processes are predictable, which they rarely are (Kamp et al. 2005). Organizations are dynamic and are affected by changes in the surrounding society. Individuals and groups inside the organization have different ideas and goals, which can result in conflicting views on changes in the organization.

Kamp and colleagues (2005) are inspired by Dawson and use their inspiration to suggest that there are three elements that influence the change process: the concept, the context, and the actors. The dynamics of change can be viewed as the interaction between concept, context, and actors. In this case of establishing a CTA scheme, CTA becomes the concept, the worksite and the surroundings is the context, and internal and external stakeholders are the actors.

The dynamics of change may be seen from three different perspectives: learning, political, and symbolic perspectives. Common for the three perspectives is the focus on the process, while they differ in their understanding of the roles the three elements may play. In the following, the political process perspective is elaborated, as this is the perspective that has influenced the theoretical framework in this thesis.

In the political perspective, the concept is part of a political agenda in which some problems are given greater priority than others, certain groups are considered to be central to the change process, and some methods in the process are considered to be better than others. This perspective investigates the agenda and the course of change, different actors' access to the change process, and the context of the change in the form of the power structures that have been challenged. With these aspects, the correspondence to the social constitution of the worksite is clear.

The model of the dynamics of change developed by Kamp and colleagues (2005) has its focus on management concepts, such as total quality management. The model is considered applicable in relation to other types of concepts that are introduced to a worksite setting, such as health promotion concepts.

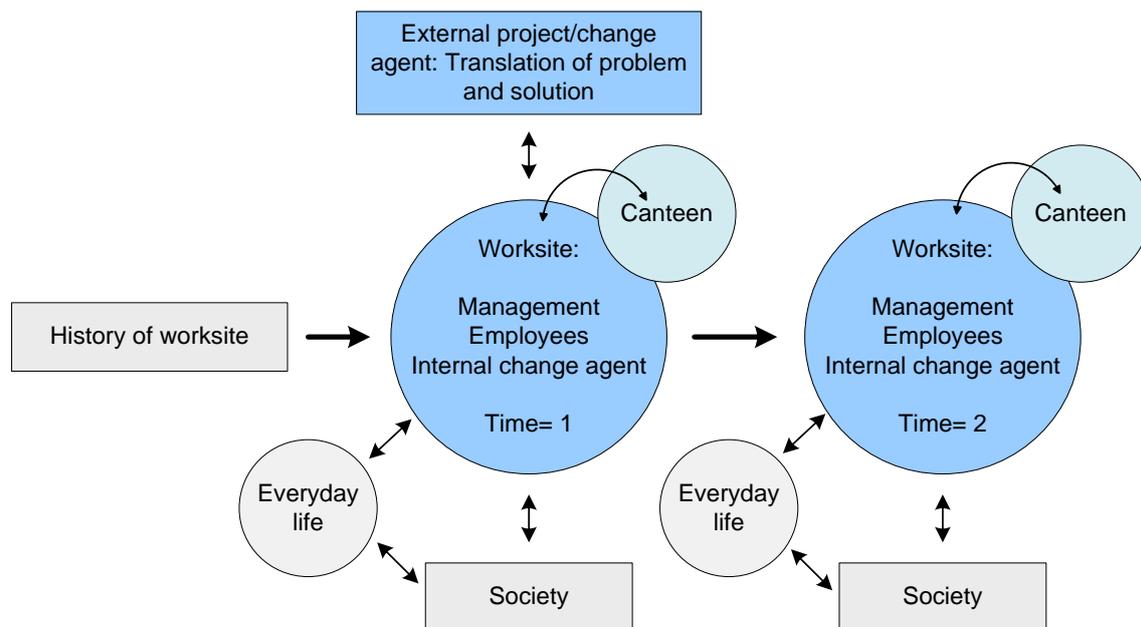
Based on these analytical perspectives, the shaping of CTA schemes at worksites involves the existing traditions at the worksite, pressure from stakeholders, use of the CTA scheme and societal decisions. The existing traditions at the workplace include routines and practices, while pressure from the stakeholders can be both in the form of internal actors (support from management) or external actors (CTA project manager). The analysis of the case studies focuses on the shaping of CTA schemes and the processes related to the shaping.

From a study of the sustainability of worksite interventions, a figure was developed to help understand the social shaping of interventions (Thorsen 2010). This figure was further developed for this thesis. It shows the combination of the social shaping perspective, the social constitution of the worksite, and the everyday life perspective in the planning of the CTA scheme (T=1) and at the time of the embedding of the CTA scheme (T=2). The figure also includes the interaction with society, which can affect both the worksite and everyday life of the employees.

It is important to note that the canteen is considered to be a part of the worksite, but at the same time an entity of its own.

The figure has been used to inspire the overall research design, and more specifically as inspiration when developing interview guides. The research design was inspired by the figure in that the intention was that all cases should be followed over a period of time in order to enhance the possibility of generating knowledge about the worksite and the CTA schemes at different times.

The figure's inspiration to the interview guides led to including questions about earlier events (relating to the history of the worksite).



**Figure 2. Analytical Framework.** The figure shows the combination of the social constitution of the worksite, everyday life and the social shaping perspective. Refined from Thorsen (2010).

The analysis is based on a multiple case study approach (Yin 2003). The analysis is concerned with how establishing a CTA scheme interacts with the social constitution of the workplace, and how different actors shape the scheme as well as whether the scheme shapes the worksite. Interesting themes are, for example, which meanings are ascribed to the scheme and why the users choose to use CTA.



## Methodology

The analysis of the development of CTA schemes was carried out as multiple case study research. With four different workplaces as cases, the study can be characterized as a cross-comparative case study (Maaløe 2002), where the contexts differed among the cases.

Case studies are suitable for explanatory research where the aim is to learn and to develop theory, rather than test theories. As stated by Flyvbjerg “Predictive theories and universals do not exist in the study of man and society. Specific contextual knowledge is therefore more valuable than the vain search for predictive theories and universals” (Flyvbjerg 1991).

When I write that case studies are suitable for developing theory, theory in this context is to be understood as explanations for the development of CTA schemes.

According to Yin (2003), case studies have advantages compared to other types of studies when the research concerns questions of how and why. Multiple case studies can clarify the influence of varying contexts and also produce information about causes and aspects that can explain patterns and changes within cases and differences and similarities across cases.

This Ph.D. project comprises four cases. These cases can be characterized as *maximum variation cases* (Flyvbjerg 1991), i.e. within the possibilities available. The project was initiated in the spring of 2008, when several companies considered starting a CTA scheme. With the financial crisis in the fall 2008, many companies lost interest, which narrowed the field of opportunities.

The selection of cases was based on criteria concerning type of workplace, geographical location, content of CTA scheme and type of food service operator. The criteria are elaborated in the following.

This study should investigate CTA in different workplaces based on considerations related to employee characteristics and studies that identified differences between health profiles at different types of workplaces. On this basis, a white collar worksite, a blue collar worksite, and two public worksites in the form of hospitals were chosen as cases.

Considerations regarding geographical location were based on the fact that health promotion initiatives at worksites are more common in the Copenhagen area than in other parts of the country (Sundhedsstyrelsen 2008); therefore, because I was interested in investigating whether CTA was only a phenomenon in the Copenhagen area or would also be saleable in other parts of the country, one worksite was located in Copenhagen, two worksites were in the greater Copenhagen area, and one in the eastern part of Jutland.

I was also interested in cases that had different approaches to the content of the CTA scheme (how many days, when to order, type of meals etc.) in order to see if the content was affecting the scheme. This was not my primary concern, since the workplaces were for the most part still considering the content when we established contact. I was aware, however, of their initial thoughts about the content of scheme already at the first contact. Finally, I considered the foodservice operator: one of the cases should have an external foodservice operator. This thesis investigates the organizational aspects as part of the shaping process, and it was considered that a case with an external foodservice operator

could provide valuable information. It took some time before I managed to find such a case, but eventually the blue collar worksite agreed to participate.

I also included a case that had some years experience with CTA, because I wanted to investigate how such a scheme had become embedded in the worksite.

Beside the four cases, I have had contact with a blue collar worksite on Funen. I talked with the kitchen manager, but the worksite was not interested in being case. I had also made an agreement with the kitchen manager at a big worksite in greater Copenhagen, but because the kitchen manager went on long-term sick leave, they withdrew their consent to be case.

Case study research is suitable for studying phenomena where the researcher has little control of events during the process (Yin 2003). In this case, it was agreed with the workplaces that, if they were interested, they could receive feedback on the basis of my observations and data from the interviews. Hospital B used some of the interviews in their evaluation of the scheme, and at the blue collar worksite, interviews I made before the scheme was developed informed the design of the scheme. Despite this involvement on my part, I had very little control of how the different processes developed.

## Interviews

In this Ph.D. study, I have used qualitative methods to gain information about CTA. The qualitative methods were chosen with consideration for my research question and the fact that I was interested in in-depth information about the CTA schemes. An alternative to the qualitative methods I have used could be questionnaires. An advantage of questionnaires is that they provide broad knowledge about a phenomenon, because it is possible to include many respondents in the study. As a consequence, questionnaires do not provide detailed information about the phenomenon. The two methods can be combined so that questionnaires supplement the qualitative methods, but combining the methods was beyond the scope of this thesis.

I have used both focus group interviews and semi-structured interviews. For the semi-structured interviews, interview guides were developed with key topics and some questions supporting these topics. One type of guide was developed for interviews with users, another type for interviews with kitchen managers and so forth. When I interviewed kitchen managers, I asked about the scheme and how it was developed. In the interviews with users, I asked about when they used the scheme and why they used it.

In order to gain information about how CTA was articulated, the first of my cases was the white collar worksite, which at that time had been offering CTA for four years. I used some of the vocabulary from this case to inform the future interview guides. As a result of this process, the interview guides at the white collar worksite were more open than the subsequent interview guides used for the other cases.

Besides the semi-structured interviews, I also made focus group interviews at Hospital B. The focus group interviews were used both for my empirical data and for feedback to the

hospital about the scheme. I made one focus group interview with six non-users of CTA, and one with eight CTA users. The structure of the interviews followed the recommendations by Halkier (2008) about beginning with an introduction that lays the basis for the interview, including one or more exercises, and ending with a debriefing (Halkier 2008). Some of the topics for the two interviews were the same. In both cases, I wanted to cover what the interviewees preferred to eat on a normal day, and which options they used if they needed a quick solution. Besides these themes concerning their everyday lives and food choices in relation hereto, they were also asked to discuss their perceptions of the CTA scheme.

I also have made observations at the worksites, particularly when participating in meetings but also before, during and after interviews. The observations were written down as soon as possible.

All interviews were recorded digitally and afterwards transcribed (see Appendix A for a list of interviews made). The focus group interviews were also video recorded to clarify which of the participants was talking, if doubt arose when transcribing. I made all the interview transcriptions verbatim. When the interviews were analyzed, I sometimes listened to the interviews again, if the interviews had been transcribed long before the analyses were made.

All data were analyzed and interpreted by me and discussed with my supervisors. I used the meaning condensation method after transcribing the interviews. Meaning condensation involves reducing large interview texts into shorter formulations (Kvale 1999). My supervisors had the role of being critical about my material and my interpretations in order to counteract biased interpretations and to ensure that the balance between proximity and distance was maintained.

## Cases

The cases and the interviewees are all kept anonymous, both in the papers and in the thesis. This has been part of the agreements between the worksites and me. The worksites are referred to as Financial Company, Medical Production, Hospital A and Hospital B. I briefly introduce the four cases here; more detailed presentations are to be found in the four papers. The characteristics of the four worksites are summarized in [Table 1](#).

### Financial Company

The Financial Company is located in Greater Copenhagen. It can be characterized as a white collar worksite, and the majority of the approximately 1000 employees has a long higher education. The company is a private company of which the canteen is a part. At the time of the interviews, the worksite had been offering CTA to their employees for four years. CTA is offered two times a week and cost 50 DKK. The ordering deadline for CTA is the previous day.

### Medical Production

Medical Production is part of a large biotechnology concern in Denmark, and the case worksite is located in Copenhagen. The worksite employs 250 employees and can be characterized as a blue collar worksite. It is a private company, and the canteen is outsourced to an external foodservice operator. The worksite was followed while planning the CTA scheme, which ended up offering CTA on all weekdays for the price of 30 DKK. The ordering deadline is 11:00 on the same day that the employees take the food home.

### Hospital A

Hospital A is located in the Greater Copenhagen Area and has 4000 employees. The hospital can be characterized as a public worksite, and the canteen is driven in-house. The hospital was followed while planning its CTA scheme, which ended up offering CTA on all weekdays for the price of 33 DKK. They also began selling family portions for a price of 88 DKK. After a period with decreasing demand, a special meal of the week was introduced at the price of 21 DKK. The ordering deadline is 9:00 on the same day that the employees take the food home.

### Hospital B

Hospital B is located in eastern Jutland and has 1600 employees. The hospital can be characterized as a public worksite, and the canteen is driven in-house. The hospital was followed while planning its CTA scheme, which ended up offering CTA on Tuesdays and Fridays for the price of 45 DKK. The ordering deadline is 8:00 on the same day that the employees take the food home.

Table 1. The characteristics of the four cases

	<b>Financial Company</b>	<b>Medical Production</b>	<b>Hospital A</b>	<b>Hospital B</b>
<b>Workplace type</b>	White collar	Blue collar	Service sector	Service sector
<b>Employees</b>	1000	250	4000	1600
<b>Location</b>	Greater Copenhagen Area	Copenhagen	Greater Copenhagen Area	Eastern Jutland
<b>Public/private</b>	Private	Private	Public	Public
<b>Canteen</b>	In-house	External foodservice operator	In-house	In-house
<b>CTA days</b>	Wednesday, Friday	Monday-Friday	Monday-Friday	Tuesday, Friday
<b>CTA price</b>	50 DKK	30 DKK	33 DKK (meal of the week: 21 DKK, family portions: 88 DKK)	45 DKK

## Main results

The results in this dissertation are presented in four articles, which are included in this section with a brief introduction to each article.

The first paper sets the stage for the scientific field of workplace health promotion. It establishes how nutritional interventions at the worksite can have positive effects. The second paper presents a study of a well-established CTA scheme and how it developed during its time of existence. It also examines user and non-user perspectives to CTA. The third paper compares the process of establishing CTA at two hospitals, with particular focus on the political processes related to the process of developing the schemes. The fourth paper presents experiences with establishing a CTA scheme in a blue collar setting. Finally, I include a few results that have not been presented in the papers. These results seem relevant, since they are found in more than one of the cases, but they have not been included in the papers.

### Article 1

Healthy eating strategies at the worksite

*(International Journal of Workplace Health Management, vol. 3 No. 3, 2010)*

The paper is a review that describes the field of worksite health promotion and shows how nutritional interventions at worksites can have positive effects. The effects depend on how the worksites handle the intervention. The article reviews the evidence for the effectiveness of efforts in workplace health promotion, focusing on dietary changes. Furthermore, it presents three models useful for either planning or evaluation of workplace health promotion initiatives. The social ecological model and the social contextual model propose two ways of planning interventions. The models are not used in the studies of CTA, since the worksites have had the leading role in planning and executing the CTA schemes. The political process approach is used in paper three and four as analytical framework. The paper also shows that studies investigating the long term effects of nutritional interventions at worksites are lacking. This is a field of research that has been neglected. The paper contributes to an understanding of the scientific field addressed in the subsequent papers. Furthermore it gives a short introduction to the research project on Canteen TakeAway.

## Healthy Eating Strategies in the Workplace

Lisa Quintiliani, Signe Poulsen & Glorian Sorensen

### Abstract

**Purpose** – There is a clear link between dietary behavior and a range of chronic diseases, and overweight and obesity constitute an indirect risk in relation to these diseases. The worksite is a central venue for influencing dietary behavior. The purpose of this paper is to provide an overview of workplace influences on worker dietary patterns.

**Design/methodology/approach** - The paper reviews the evidence of the effectiveness of dietary health promotion, and provides a brief overview of appropriate theoretical frameworks to guide intervention design and evaluation. The findings are illustrated through research examples.

**Findings** – Through case studies and published research, it is found that workplace dietary interventions are generally effective, especially fruit and vegetable interventions. There is less consistent evidence on the long term effectiveness of workplace weight management interventions, underscoring the need for further research in this area. This paper also reports evidence that changes in the work environment, including through health and safety programs, may contribute to enhancing the effectiveness of workplace health promotion, including dietary interventions. Organizational factors such as work schedule may also influence dietary patterns. The social ecological model, the social contextual model and political process approach are presented as exemplar conceptual models that may be useful when designing or assessing the effects of workplace health promotion.

**Originality/value** – Using the worksite as setting for influencing health by influencing dietary patterns holds considerable promise and may be instrumental in reducing workers' risk of chronic diseases.

### Key words

Workplace, nutrition, obesity, health promotion, occupational safety and health

### Paper classification

General review

## 1. Introduction

There is clear evidence that an unhealthy diet is related to increased risk for a range of chronic diseases, including heart disease, diabetes, and cancer (American Institute for Cancer Research, 2007). Diet plays a direct role in increasing risk of these chronic diseases, and additionally contributes to increased risk indirectly through overweight and obesity (American Institute for Cancer Research, 2007). Dietary recommendations to reduce chronic disease risk include lowering saturated fat, trans-fat, and red meat consumption, and increasing fruit and vegetable intake (American Institute for Cancer Research, 2007, National Institutes of Health, 2002).

Worksites represent an important venue for influencing dietary patterns. Given the considerable time workers spend on their jobs, worksites offer an important venue to reach large numbers of workers in order to provide on-going education as well as healthy food options. In addition, through worksites it may be possible to support behavior changes long-term through co-worker support, changes in the foods available at work, and consideration of other work-related factors associated with workers' dietary patterns (Sorensen et al., 2004b, Sparling, 2010, Story et al., 2008, Egerter et al., 2008). There is a growing body of evidence supporting the efficacy of these worksite approaches in promoting healthy diets (Glanz et al., 1996, Henrikus and Jeffery, 1996, Benedict and Arterburn, 2008, Matson-Koffman et al., 2005, Janer et al., 2002, Engbers et al., 2005, Pelletier, 2009).

The purpose of this paper is to provide an overview of workplace influences on worker dietary patterns. We review the evidence for the efficacy and effectiveness of workplace efforts to improve dietary behaviors, overweight/obesity, and the food environment. While some studies have focused on demonstrating *efficacy*, that is quantifying the magnitude of intervention effect under highly controlled study designs with homogenous populations that maximize internal validity, others have aimed to demonstrate *effectiveness*, that is study designs that seek to balance internal and external validity by implementing the intervention with more 'real world' settings and representative participants (Flay, 1986). We further examine other workplace influences on workers' dietary habits, including the efforts to prevent work-related illness and injury, reduce work-related stress, and expand work-related benefits and resources. In addition, recognizing the importance of the application of appropriate theoretical frameworks to guide intervention design and evaluation, we provide a brief overview of several models that may be applied to workplace efforts to promote a healthy diet. Although this manuscript is not meant to provide an exhaustive review of the literature, throughout these sections we provide research examples to exemplify the research findings for dietary behaviors.

## 2. Evidence for efficacy and effectiveness: Influencing dietary behaviors through the worksite

There is a growing body of literature on the effectiveness of workplace programs in improving workers' dietary habits. Workplace initiatives have targeted a number of dietary

behaviors, including fruits and vegetables, fat, red meat intake, and fiber. A review of nutrition and cholesterol worksite programs from 1980 to 1995 reported that approximately half of 26 reviewed studies demonstrated a significant effect on one or more dietary behaviors (Glanz et al., 1996). A more recent review of workplace efforts to improve fruit and vegetable intake identified factors employed by successful programs, including organizational support, targeting multiple levels of influence and participants' social context (see section 4.1 and 4.2), encouraging worker participation, and addressing multiple health behaviors (Sorensen et al., 2004b).

Much of the worksite research on dietary interventions has focused on fruit and vegetable intake. In the U.S., nine studies were conducted in the 1990s under the National Cancer Institute's '5-a-day for Better Health' program to increase fruit and vegetable intake; three were implemented in workplaces (Sorensen et al., 1999, Buller et al., 1999, Beresford et al., 2001). Each intervention focused on more than one level of influence including individual workers, their social networks, and changes in the food environment. These studies resulted in significant improvements in fruit and vegetable consumption, with an average effect size of 0.3-0.5 servings of fruits and vegetables per day. Subsequent analyses of the 5-a-day studies conducted among adults demonstrated that improvements in knowledge and self-efficacy were significant mediators of the observed increases in fruit and vegetable intake (Campbell et al., 2008). Similar research has also been conducted in Europe. For example, in Denmark, the '6-a-day' worksite study implemented changes over an 8 month period among canteen staff of five workplaces, focusing on improving the taste and preparation of fruit and vegetables (Lassen et al., 2004). One year post-baseline, this pre-test/post-test study resulted in an average increase of approximately 1 serving of fruits and vegetables per day per participant.

Several studies have focused on providing tailored interventions to promote dietary changes for individual workers. For example, in the U.S., the Tools for Health study was conducted among construction laborers, and included tailored and targeted print materials as well as motivational-interviewing based telephone calls. This intervention resulted in a significant 1.5 serving increase in the intervention group, compared to a slight decrease (-0.09) in the control group. (Sorensen et al., 2007a). As another example, the U.S.-based "Alive" [A Lifestyle Intervention Via Email] was an automated program that promoted changes in multiple dietary behaviors among non-medical employees of a large healthcare organization using a series of emails tailored to individual and family factors (*e.g.*, having children in the home) (Sternfeld et al., 2009). Over a 4-month follow-up, participants made several significant changes relative to the control group, including a 0.35 serving increase of fruits and vegetables, 0.75g decrease in saturated fat, and 0.29g decrease in trans-fat.

Other research has explored the role of worksite environmental changes to promote dietary changes by increasing access to healthy foods. While some studies have reported increased intake of fruit and vegetables, reduction in self-reported intake of fat and increased sales of healthy foods as a result of labeling or increased access to healthy foods, others have shown no dietary changes in relation to such environmental modifications (Matson-Koffman et al., 2005, Engbers et al., 2005). Reducing food prices may also contribute to dietary improvements. In two studies, French and colleagues found

that reducing prices on healthful snacks in vending machines can increase sales of these snacks (French et al., 2001). For example, in the latter of these two studies, the effect of lowering the price and increasing the availability of healthy foods was tested in vending machines used by workers at four bus garages in the U.S (French et al., 2010). Using input from the employee advisory group, more healthful beverages, snacks, and entrees were increased to reach a benchmark of 50% of offerings in the healthy category. These targeted foods were priced 10% lower than their normal price. Compared to the no-intervention control group, garages in the intervention group increased sales of healthy items including snacks.

A growing literature is also exploring the efficacy of workplace interventions to support weight management or weight reduction for overweight or obese workers (Henrikus and Jeffery, 1996); (Benedict and Arterburn, 2008). In a review of 11 randomized trials from 1995-2006, modest weight loss of -0.2 to -6.4kg was noted in intervention groups compared to control groups over a range of 2 – 18 month follow-up across studies ((Benedict and Arterburn, 2008). We briefly review three U.S. studies that have been conducted since this review. First, a study targeted to the physical and social environment of metropolitan transit workers, found a non-significant mean BMI change of -0.14, 18-months post baseline compared to workers in the garages in the control group (French et al., 2010). The authors concluded that worksite environmental interventions may be less effective when workers, such as bus drivers, mainly spend their workdays away from the worksite (French et al., 2010). Second, a pre-test/post-test trial with truck drivers included several components: team weight loss competitions, behavioral computer-based training, self-monitoring, and telephone coaching using motivational interviewing. The intervention resulted in a significant decrease in body weight of 7.8 lbs 6-months post baseline (Olson et al., 2009). Finally, an intervention for employees was conducted at six hospitals using strategies targeting the social and physical environment such as displaying print materials, working with the food service staff to increase offerings of healthful foods, and nutrition labeling at the cafeteria (Lemon et al., 2010). Results indicated no significant effects on BMI in intent-to-treat analyses, however, those who participated in more intervention events achieved a decrease in BMI (0.012 units) with each unit increase in participation (scale 0-100) after 2 years. Overall, these studies demonstrate the potential of worksite weight management interventions as well as the challenges, particularly in promoting a sufficient level of participation and exposure to intervention components. Clearly, further work is needed pertaining to long-term follow-up in randomized controlled trials (Benedict and Arterburn, 2008).

This diverse group of studies representing a range of workers and workplace settings point to several key intervention components, including providing ongoing maintenance and support for targeted changes, responding to workers' day-to-day work experiences, addressing the social and physical workplace environment, and tailoring to individual factors using principles of behavioral theory (*e.g.* stage of change) (Prochaska et al., 1997). These factors are explored further in section 4.

### **3. Healthy eating in the context of the work environment**

Workers' dietary patterns are also likely to be influenced by other factors in the work environment. As illustrated in Figure 1, other workplace initiatives contributing to worker health may also spill over to influence workers' dietary patterns. In addition to educational programming and policies to improve worker health behaviors such as diet, worksites may be engaged in efforts to prevent work-related illness and injury, reduce work-related stress, and expand work-related resources (Egerter et al., 2008).

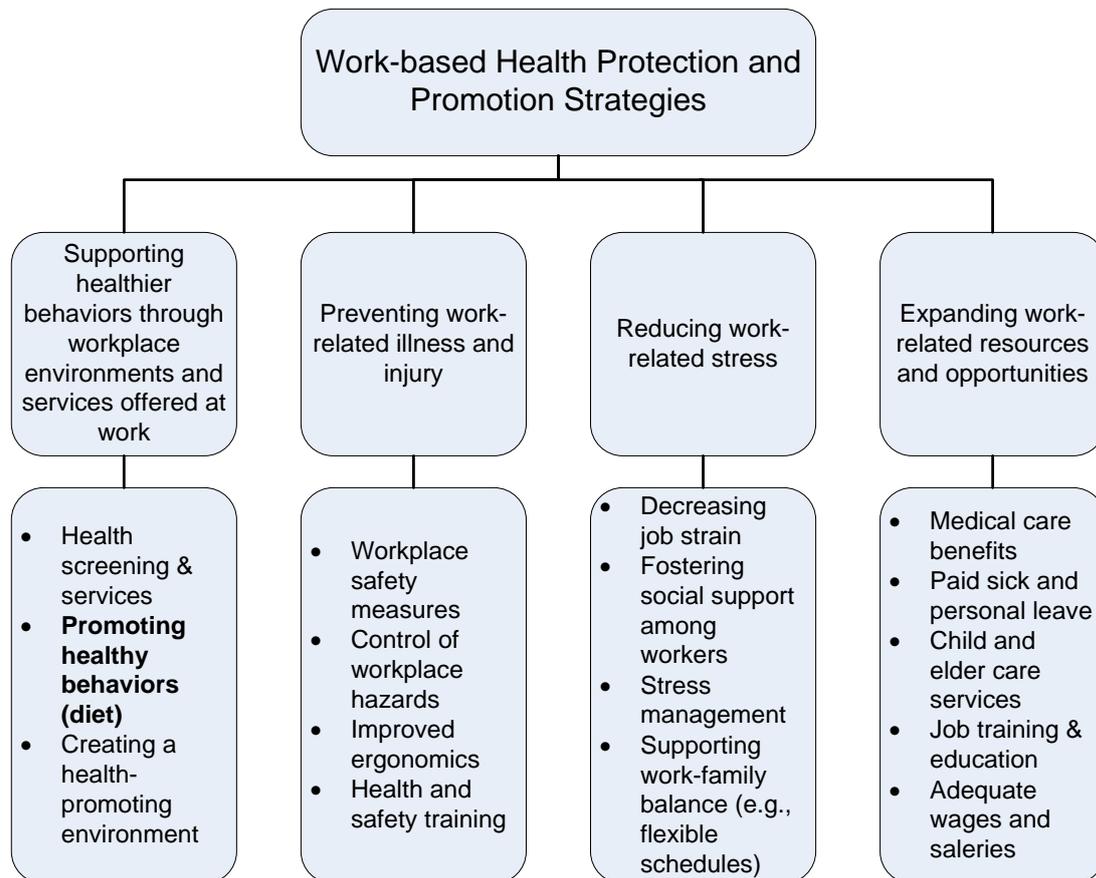


Figure 3: Framework of Strategies to Improve Healthy Eating through the Workplace. (Copyright 2008. Robert Wood Johnson Foundation Commission to Build a Healthier America. Used with permission from the Robert Wood Johnson Foundation)

### 3.1 Preventing work-related injuries and illness

Although they focus on different pathways to worker health, occupational health and safety and worksite health promotion share the common aim of promoting worker health, with complementary functions in protecting and enhancing the health of workers. There is growing evidence that an integrated or coordinated approach across these parallel paths may contribute to enhanced effectiveness in promoting health behaviors as well as influencing the work environment (Sorensen and Barbeau, 2004, Institute of Medicine et al., 2005, Sorensen et al., 2002). This principle of integrating worksite health promotion and occupational health and safety is the underpinning of the WorkLife Initiative of the US National Institute of Occupational Safety and Health [I], and was recently endorsed by the

US American Heart Association for cardiovascular health promotion (Carnethon et al., 2009).

The evidence for the effectiveness of this approach in improving diet and related outcomes is only beginning to emerge. One study testing an integrated approach to worker health within small manufacturing businesses found a significant effect on increasing fruit and vegetable consumption (Sorensen et al., 2005). In another study testing an integrated safety and health intervention for truck drivers, a reduction in body weight and significant improvements in safe driving were found (Olson et al., 2009). Two recent reviews have provided frameworks for this coordinating occupational safety and health interventions with those targeting obesity and nutrition behaviors. First, Schulte and colleagues provided a rationale for this focus in relation to obesity, concluding that there may be an association between obesity and workplace risks such as hazardous exposures on the job. For example, there is evidence to indicate that obesity may increase the risk of some occupational diseases, including musculoskeletal disorders, cardiovascular disease, and asthma. At the same time, these authors observed that workplace efforts to address both occupational hazards and obesity must take care that efforts do not result in blaming individual workers for their obesity (Schulte et al., 2007). Second, Reavley and colleagues described a systematic approach for bringing together key stakeholders (*e.g.*, health educators, representatives from government, occupational health and safety officers) to develop a detailed logic model for the Australian WorkHealth Program. The model integrates the promotion of health behaviors, including nutrition and obesity, with safe work environments and ongoing quality improvement for the prevention and management of osteoarthritis (Reavley et al., 2010).

### **3.2 Addressing work-related stress and other organizational factors**

Organizational factors in the work environment, such as work-related stress and work schedules, can also affect food choices and risk of obesity. In a large three-country analysis of the association between job strain and working overtime with food behaviors and obesity, although no significant relationships were found with the fully adjusted models for food behavior, working overtime was associated with obesity among women in London (Lallukka et al., 2008). Others have similarly reported the relationship of work schedule factors and psychosocial stressors to obesity, as well as other unhealthy behaviors such as heavy alcohol use and lack of exercise (Kivimaki et al., 2002, Siegrist and Rodel, 2006, Kouvonen et al., 2006). Work scheduling may influence dietary patterns through the pathway of sleep. For example, recent findings from a workplace study of mobile workers in the U.S. found that although low job strain, higher perceived job satisfaction and supervisor support were associated with more healthful sugary drink and/or snack intake, these effects were mediated by levels of adequate sleep, indicating the important role of sleep habits especially among workers with rotating schedules or shift work (Devine et al., 2003, Buxton et al., 2009). Additionally, qualitative evidence has underscored the relationship of work flexibility and the ability to manage work and family responsibilities to healthy eating strategies such as planning meals ahead of time and bringing fruit from home to work (Devine et al., 2003).

A strategy to address work conditions and limited time to prepare healthful meals is being evaluated in an ongoing Danish research project [II]. Canteen Takeaway is a program that assists worksites in establishing a service of making ready-to-heat meals available to employees for purchase at the worksite, for taking home as an evening meal. This study is investigating the potential impact of this program on the dietary patterns of employees and their families, as well as improvements in the healthiness of meals, the potential financial benefits for the employer, and the characteristics of workers who participate. For the worksite, this service may contribute to improving employees' work-life balance, because it might reduce time needed for shopping, preparing, and cooking the meal and cleaning afterwards. A small study at a white collar worksite compared dietary intake on days in which canteen takeaway was and was not offered using four, 24-hour dietary recalls (Hansen et al., 2009). Initial data showed that intake of fruits and vegetables was higher (up to 220g, approximately 1-2 servings) on days in which canteen takeaway was offered for both men and women, but was only statistically significant for women.

### **3.3 Expanding work-related resources and benefits**

In considering the impact of work on employee health and health behaviors, it is important to consider as well the role of the broad range of resources and benefits provided through employers. Workplace efforts to ensure adequate pay, provide training opportunities to increase opportunities for promotions, and expand job-related benefits, particularly for those from disadvantaged backgrounds, may bolster workplace health promotion efforts, including efforts to promote healthy eating. (Egarter et al., 2008). Efforts to reduce disparities in availability of the range of work-related resources may also include access to employee assistance programs (providing counseling referrals for substance abuse, financial, and legal difficulties) and workplace health promotion programs, which are lower among workers who are blue-collar, lower paid, and part-time (Stoltzfus, 2006).

A variety of resources are increasingly available to address these disparities and improve workers' access to these benefits. Examples of initiatives for increasing access to higher-ranking work can be drawn from federally-funded programs, such as the U.S. *Jobs Corp* [III] or non-profit organizations, such as the U.S. *Year Up* program [IV]. *Year Up* seeks to provide paid training opportunities with their corporate partners to young urban youth across 5 U.S. cities while also providing college credit. Finally, other organizations address issues related to work benefits and resources including improving workplace flexibility, helping family caregivers, and improving financial standing of workers. The non-profit research organization *Families and Work Institute* [V] is an example of a group that seeks to collect information about the interactions between work and family life and provide recommendations to act upon their findings.

## **4. Conceptual models to guide interventions and evaluations**

A conceptual model based on established social and behavioral theories can provide a useful structure to guide the design, delivery and evaluation of workplace health promotion programs. We provide three examples of conceptual frameworks that inform intervention design at multiple levels.

#### **4.1 Social Ecological Model**

Social ecological models have a long-standing background, drawing from both public health and psychology fields. Social ecological models serve as a comprehensive framework to guide health behavior interventions and describe how health behaviors may be influenced by multiple levels, usually including individual factors (*e.g.* demographics, behaviors, cognitions), social environment (*e.g.* family, co-workers, friends), physical and organizational environment settings (*e.g.* worksites), and macro-level environments (*e.g.* societal values, food marketing) (Story et al., 2008). One of the early models of the interaction of multiple levels of change and individual behavior was described by Bronfenbrenner in 1979, in which interactions between social groups (*e.g.* family), various settings (*e.g.* school, work), and larger social systems (*e.g.* cultural beliefs) were described (Bronfenbrenner, 1979); later versions of this model emphasize the influence of multiple levels over the lifecourse and in successive generations (Bronfenbrenner, 2000). As noted in section 2.3, changes to the work environment can have a beneficial impact on healthy eating behaviors, including through food availability on-site (cafeteria, vending machines), nutrition labeling of these offerings, and visibility of promotional material (Story et al., 2008). In addition to articulating the multiple levels of influence on health behaviors, social ecological models also rely on additional core principals, including the assumptions that there are interactions among these levels of influence, that interventions across multiple levels are likely to be more effective, and that interventions should focus on specific behaviors (Sallis et al., 2008).

The Treatwell 5-a-Day study provides one example of an intervention relying on a social ecological model (Sorensen et al., 1999). In this study, 22 worksites were randomly assigned to one of three conditions: a minimal intervention control group; a worksite intervention group, which included a worksite-based intervention that promoted increased fruit and vegetable consumption through worker engagement, educational programming, and increased access to fruits and vegetables in the work setting; and a worksite-plus-family intervention group, which included the worksite-based intervention plus outreach efforts to workers' families. This intervention illustrates the potential impact of multiple levels of influence, including educational efforts to build individual knowledge and attitudes, worksite environmental changes, and promotion of changes within the family. This study found significant between-group differences, with the worksite-plus-family intervention having the greatest impact on improvements in fruit and vegetable consumption corresponding to a 0.5 serving increase compared to the control group (Sorensen et al., 1999)

#### **4.2 Social Contextual Model**

The social contextual model was designed to guide intervention planning and evaluation by identifying social contextual factors that are amenable to change through interventions, and additional characteristics of the social context that may be important in informing intervention design. Specifically, the model delineates pathways through which population characteristics, such as income or occupation, influence health behaviors such as diet. By

illuminating these pathways that reflect the realities of people's day-to-day life experiences, the intention of the model is to improve the design of interventions by increasing their relevance to their intended audiences. This framework distinguishes between *modifying conditions*, that is, factors that independently impact on outcomes but which are not influenced by the intervention, and *mediating mechanisms*, which can be modified by the intervention. Social context, including life experiences, social relationships, organizational structures and societal influences, may function as either modifying conditions or mediating mechanisms, depending on their location within or outside the causal pathway between the intervention and the outcomes (Sorensen et al., 2003). Designing (Sorensen et al., 2004a, Stoddard et al., (in review), Sorensen et al., 2005) interventions that are responsive to both mediating and modifying conditions has been shown to promote beneficial changes in eating behaviors and to address disparities by race/ethnicity (Emmons et al., 2005) and occupation (Sorensen et al., 2005).

The Healthy Directions-Small Business study used the Social Contextual Model to design an intervention targeting dietary patterns and physical activity among low-income, multi-ethnic workers in 26 manufacturing industries (Sorensen et al., 2005). For example, recognizing that workers may live in a neighborhood with limited access to supermarkets selling affordable fruits and vegetables, intervention programming was responsive to this condition by working with management to establish policies for offering healthy food options at the workplace. Stratifying the analyses by occupational class, findings revealed a significant improvement in fruit and vegetable consumption among workers, although not among managers. Further analyses explored the role of the social context on changes in fruit and vegetable consumption, and found that key social contextual factors at the individual and interpersonal levels were significantly associated with increased fruit and vegetable intake, including being born outside the U.S., more social ties, and supportive social norms (Sorensen et al., 2007b).

#### **4.3 Political Process Approach**

The Political Process Approach, also integrates organizational context and has been applied to workplace health promotion, including efforts to increase the consumption of fruits and vegetables at worksites (Thorsen et al., 2005). According to this approach, worksite health promotion can also be seen as a worksite change process. Where the Social Contextual Model highlights social-contextual factors at the organizational level among other levels, the Political Process Approach emphasizes the political processes that occur in the workplace organization. When planning or assessing the effects of worksite health promotion, it is important to be aware of the political processes that shape worksite norms, values, and patterns of conflict and consensus. Existing social compromises may develop over time, resulting in social norms and values, also termed 'stiffened politics,' implying that these norms and values are no longer questioned in the daily practice of the worksite (Kamp, 2000). The underlying principles behind these norms and values are called the "social constitution" of the worksite (Hildebrandt and Selz, 1989). This term was developed by the German industrial sociologists Hildebrandt and Seltz, in 1989 to challenge the technical and economic models predominant at the time. Political processes occur when

the social constitution is put under pressure. For example, resistance to planned health promotion programs may occur when they are viewed as exerting control over what has been seen as private health behaviors such as weight, smoking habits, or freedom to choose unhealthy food in the canteen (Olsen, 1994). When planning such programs, it is important to be aware of these worksite-specific norms and values and related social practices, and recognize the need for addressing these norms and values as part of the planning, for example through involving employee representatives (Thorsen et al., 2005).

## **5. Discussion**

As this paper describes, the workplace offers considerable promise in playing a part in promoting worker health through improvements in dietary patterns and weight management. Worksite health promotion approaches have also been recommended internationally. For example, the World Health Organization 2004 report, "Global Strategy on Diet, Physical Activity and Health," endorsed workplaces as "important settings for health promotion and disease prevention. People need to be given the opportunity to make healthy choices in the workplace in order to reduce their exposure to risk...Workplaces should make possible healthy food choices..." (World Health Organization, 2004). The European Network for Workplace Health Promotion has issued a number of statements of common goals and recommendations for workplace health promotion, including the Luxemburg Declaration on Workplace Health Promotion in the European Union, the Lisbon Statement on Workplace Health in Small and Medium-Sized Enterprises, and the Barcelona Declaration on Developing Good Workplace Health Practice in Europe [VI].

### **5.1. Implications for best practice**

Sets of 'best practices' have been proposed by several organizations; assessing research studies according to a standard list of best practices for workplace health promotion provides a more complete understanding of different study components and offers a point of comparison between studies. For example, the U.S. National Institute of Occupational Safety and Health has established a set of essential elements to guide programs and policies for workplace health promotion [VII]. These essential elements are divided into four sections: 1) organizational culture and leadership, which includes linking program and business objectives and obtaining management support; 2) program design, which includes building integrated systems, using effective communication, promoting worker participatory strategies, tailoring to the needs of the specific workplace, using incentives/rewards, and planning for sustainability; 3) program resources, including implementing incremental start-up plans, providing adequate staffing, budget, and resources, and being accountable for program and outcomes; and 4) program evaluation, which includes checking for and carrying out corrective action using feedback loops. The conceptual models we reviewed in Section 4 also provide guidance for implementing programs across levels, including programs for individual workers (such as targeting across the stages of change, using goal setting, and building self-efficacy for change) and programs that seek to change or recognize the social environment, work conditions, and the physical environment. While the use of best practices such as these are available to guide

workplace health promotion efforts, further work is needed to identify barriers and facilitators to using best practices so that effective programs can be more broadly disseminated.

## **5.2 Implications for future research**

The research examples provided throughout this paper illustrate effective approaches that have been undertaken to address healthy eating in the workplace and establish evidence for intervention efficacy. Further research is needed to explore the linkages between health promotion efforts for individual workers and efforts to improve the organizational, physical and social environments at work. Strengthening these linkages could serve to maximize the impact of change within a multi-level program. Furthermore, in light of documented disparities in dietary patterns by socio-demographic characteristics such as racial/ethnic groups and occupational classes (U.S. Department of Health and Human Services, 2000, Thompson et al., 2009, Kant et al., 2007, Thane et al., 2007), continued research is needed to identify and understand relevant social contextual variables in order to improve strategies to encourage healthy eating behaviors in the workplace. In addition, research is needed to identify best processes for sustaining and disseminating effective programs, in order to assure the ongoing impact of these efforts.

[I] [www.cdc.gov/niosh/worklife](http://www.cdc.gov/niosh/worklife)

[II] [www.kantinetakeaway.dk](http://www.kantinetakeaway.dk)

[III] <http://www.jobcorps.gov/home.aspx>

[IV] <http://www.yearup.org/>

[V] <http://www.familiesandwork.org/>

[VI] <http://www.enwhp.org/publications.html>

[VII] <http://www.cdc.gov/niosh/worklife/essentials.html>

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## Article 2

Users' practices and perspectives on food from work: a case study on Canteen Take Away (Health Education Research, Submitted)

The concept of CTA is explored in this paper. The study presented was the first of the case studies, and it informed the interview guides used in the subsequent case studies. Based on the premise that I wished to explore the development of a CTA scheme, a workplace that had been offering CTA for four years was used as case. During the period I conducted my interviews, the nutritional potentials of CTA were investigated by Anne Lassen (WP 2, CTA project). Her investigation made it possible to investigate different types of users and their perceptions of CTA.

Theoretically, the paper draws on the notion of *script* (Akrich 1992) and *domestication* (Pantzar 1997). The theories are used to show how the CTA scheme was negotiated in the period it had existed, and how it transforms in meaning during the use phase.

The paper's contribution is that it provides knowledge about the different practices related to the CTA user. It also generates information about which issues the kitchen staff found to be important when developing a CTA scheme.

## Users' practices and perspectives on food from work: a case study on Canteen Take Away

Signe Poulsen, Inge Tetens, Bent Egberg Mikkelsen, Michael Søggaard Jørgensen

### Abstract

To explore a new initiative combining worksite health promotion with the challenges of time constraints in everyday life, a case study was conducted to investigate how a new concept 'Canteen Take-Away' is shaped in the processes of planning and use. A white collar worksite with a well established Canteen TakeAway scheme was used as case. Qualitative semi-structured interviews (n=31) with users and non-users of Canteen Take-Away, kitchen personnel and a representative from Human Resources were conducted to obtain a broad understanding of how the Canteen Take-Away scheme had developed. The kitchen personnel had developed a scheme with some limitations built into it. A general observation was that users were able to plan ahead, while non-users found it difficult to comply with the ordering deadline. Among all interviewees, considerable variations were found as to whether they found the Canteen Take-Away meals particularly healthy. The study indicated that the aspects that generated users of the Canteen Take-Away scheme also generated non-users. The process of continuously shaping the scheme should involve both kitchen personnel and users in order to refine the scheme to meet users' requirements. This study suggests that Canteen Take-Away may be a promising health promotion activity among white color workplaces.

Keywords: canteen take-away, worksite, time constraints, everyday life

## Introduction

Maintaining a healthy lifestyle including a balanced diet can be a challenge in a busy work life context and as a result the influence of time constraints on eating habits has gained increasing research attention during the last decade [1,2]. In a Danish study Groth et al., (2009) found that lack of time was perceived to be a significant barrier for eating healthy food [3]. Eating practices are adjusted as other aspects of everyday life, such as work or the family situation, change [4]. Time constraints are an important driver of the increased consumption of meals prepared outside the home that is seen in most Western countries. In these countries also a decrease in the time spent preparing food at home is reported [5]. Groth et al., (2009) found that the percentage of adults rejecting buying take-away and convenience foods had decreased considerably over the period from 1995 to 2008 [6].

Despite increased attention to the link between time constraints and eating habits, little has been done to develop solutions that meet food-based dietary guidelines [2]. This paper reports on a research project that has been developing a new take-away concept called Canteen Take-Away (CTA). The idea behind CTA is that worksites offer their employees the possibility of buying ready-to-heat meals to take home to their households. Literature searches show that family focused interventions have been developed before [7], but the CTA scheme is novel [8], and to our knowledge, there are no published studies to date that explore the concept of canteen take-away and its potential to meet users need for convenient meal solutions that may fit into a busy work life balance and at the same time meet nutritional needs [9].

This article aims to explore the complex process of shaping such a scheme and the interplay between actors involved in the planning and use of the concept. A further objective was to investigate how values and norms of the intended users were built into the scheme and how the users domesticated this new concept. In addition we wanted to identify patterns among both users and nonusers and study the role that time constraints and nutrition might play in these patterns.

## Theoretical background

The theoretical approaches used in this paper to highlight aspects of importance to our exploration of CTA include the notions of *script*, *inscription* and *de-script* [10] and the notion of *domestication* [11].

### Script, inscription and de-script

Inspired by science and technology studies, Akrich (1992) has developed the notion of *script* and *inscription*. When designing an object or a system, designers define an expected user and ascribe this user with some specific practice. With these predefined values and with an expectation of future economy, science, technology and morality to develop in a particular way, the artifacts are designed. The end product of the design work is termed *script* and the predefined assumptions are *inscribed* in the object [10]. It is important to note that inscriptions can be intentional, but this is not necessarily the case [12]; they can also be a result of unconscious premises. When the object is used, some of the inscribed values can be challenged by other ways of using the object. To describe the practice that differs from

the intended use, the notion *de-description* is used [10]. Even though the designers have defined the intended users of the artifact, this does not necessarily turn out to be the case.

#### Domestication

By combining studies of innovations with consumer behavior, Pantzar (1997) suggests that items are redefined all the way through their existence. They may start out as an object of desire, develop into being justified as a functional or rational item, and then develop further into being taken for granted as a routinized part of everyday life [12].

The particular theories are used because they contribute with perspectives in a broader scope, which can influence the implementation of worksite health promotion programs [13]. Script, inscription and de-description are introduced in order to show how predefined values are built into the scheme, while domestication relates to the practices of CTA users.

#### **Methods**

For this study a qualitative, semi-structured interviews [14] were conducted at a worksite in the greater Copenhagen area that had offered CTA for four years when the interviews were conducted was chosen as the case to study. The worksite is considered to be among the first worksites in Denmark to establish a CTA scheme, and the scheme has been developed further during the period it has existed. The scheme is used by around 20 % of the employees who use it on a weekly basis, which characterizes it as a well-established scheme. The worksite belonged to the financial business sector, and the employees can generally be described as white collar. There were approximately 1000 employees in all, and the majority of them bought their lunch meals in the canteen (Table 1).

Employees at the workplace could buy take-away meals twice a week. Internal newsletters were used to recruit participants for interviews. A nutritional part, which aimed at assessing the nutritional effects of the CTA scheme, was included in the study and has been reported in a separate paper [15]. A total of 28 employees were recruited. Participants received free CTA meals for themselves and their households, twice a week for three weeks. There were no constraints as to whether the participants had tried CTA before. Qualitative, semi-structured interviews were arranged with the kitchen manager, an employee in the kitchen, and one representative from HR which brought the total number of interviewees to 31.

Interviews lasted between half hour and one hour, and they all took place at the worksite. Two interview guides were developed, consisting of open-ended questions. The first interview guide was designed to generate information about users and non-users of CTA; it covered two main themes: (a) the interviewees' perceptions of 'the good meal' and how this related to CTA; and (b) their practices related to the use of CTA, including frequency of use, when it was used, why it was used, and how the food was re-heated. The second interview guide was designed to gain information about CTA from a kitchen perspective. The key themes were (a) how the CTA scheme was developed and shaped, and (b) how the scheme worked today.

Interviewees were informed that their names would be anonymized. In general, the interviews were framed by the informants' own words, as is often the case in qualitative research.

All interviews were digitally recorded and transcribed verbatim. Then, the transcriptions were carefully checked and coded manually. Codes were either thematic, referring to the interview guide (e.g. 'perception of healthiness of CTA'), or defined by themes not pre-defined in the interview guide but emerging from the transcriptions. The data were analyzed case-by-case and then across cases. Based on the analyses, several aspects related to the use of CTA were condensed.

## **Results**

The participants included present users of CTA, former users who had stopped using CTA for various reasons, and new users who had never tried CTA before. Twenty-eight employees participated in the interviews with a gender distribution among participants of 13 male and 15 female employees. Twenty-three interviewees had children living at home, while five had no children or no children living at home (Table 2). Twenty of the interviewees were married or living with a partner and had children living at home, while three were single and had children; three were married without children, and two were single and had no children. The interviewees were grouped in two groups: users and non-users. The group of non-users consisted of former users and new users. Consequently, the user group consisted of employees presently using CTA.

The CTA service is offered twice a week, and the deadline for orders is the day before the meals are offered (see Table 3 for further information about the service). In the following, the shaping of the scheme is presented.

**Table 2. Characterization of study participants in relation to use of Canteen TakeAway and to whether they have children. 'No children' covers users without children and users whose children are not living at home.**

	<b>Children</b>	<b>No children</b>
<b>Present user</b>	16	1
<b>New user</b>	6	1
<b>Former user</b>	1	3

**Table 3: Facts about the worksite and the service**

<p>Facts about the worksite:</p> <ul style="list-style-type: none"><li>• It is a white collar workplace</li><li>• Approximately 1000 employees</li></ul> <p>Facts about the CTA service:</p> <ul style="list-style-type: none"><li>• Offered twice a week (Wednesday and Friday).</li><li>• Deadline for ordering is the day before (Tuesday and Thursday).</li><li>• It is ordered through the worksite’s intranet.</li><li>• The meals vary; sometimes it is classic Danish meals other times more exotic.</li><li>• Once a week the meals contain some kind of fish.</li><li>• Every portion is packed separately in plastic trays.</li><li>• In average 300 portions are ordered every time.</li><li>• The price for one portion is 50 DKK.</li></ul>
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*User perspectives*

The interviewees varied with respect to whether they had tried CTA before, and they also varied in their perceptions of the scheme. In the following sections, we present the different aspects mentioned by the employees in the interviews. The overall themes are the meals, family and everyday life, preparation and ordering.

**Meals**

In the interviews, particularly two aspects were mentioned that had an impact on whether the users were positive or negative about the meals. These two aspects were healthiness and taste. A third aspect that was mentioned was that different ingredients were considered to be particularly important.

Although not asked directly about the healthiness of the meals, this subject was mentioned by most of the interviewees, and their perceptions of whether the meals were healthy proved to differ among the employees. Some found the meals to be quite healthy; this was stated by new users, former users, and present users. When talking about the healthiness of the meals, the employees used expressions as “many vegetables”, “gives inspiration” and “varied diet” as well as the terms healthy, health or healthful. On the other hand, some employees found that the meals did not contain “enough vegetables”, and they did not describe the meals as particularly healthy. Negative statements from a majority of women related to their wish for more vegetables in the meals. In general, the male respondents did not comment as much upon the healthiness of the meals as the female respondents.

Some interviewees said that they were absolutely sure that the meals were healthy from a nutritional perspective; they were however still skeptical about the meals. They said they did not find them “fairly interesting”. The negative comments about the

healthiness of the meals were primarily expressed as “too heavy” or “too fat”. It was mainly present users who mentioned that they thought the meals were too heavy or fat.

When some of the interviewees described the taste of the meals, they related taste to their perception of the healthiness of the meals – for instance, when they described the taste as too fat. Others described the taste of different meals as “too much of the same” and they said that the different tastes “blended together”. Some of the positive comments about the meals included statements about how “fantastic” or “delicious” the taste of the meals was, and how they became “inspired” by new spices or ways of preparing ingredients. There were also links between taste and healthiness amongst the positive comments:

*“It tastes good and it tastes healthy. You get a good feeling in your stomach from it.”  
(No. 2 – male, single, no children, new user)*

The positive statements about taste were not related to one particular meal, but to the meals in general.

The employees had expectations about the meals and the content of the meals. Several emphasized that the meals should differ from what they would prepare themselves, and that they should not be “too ordinary”:

*“In some way, you could say that it would be awesome if these meals somehow would represent the meals I wouldn’t make myself.”  
(No. 4 – female, single, no children, former user)*

When asked if they could exemplify how the meals differed from what they would serve themselves, they referred to two different meals – one with gravy containing grapes and another with fish, where the breadcrumb coating included chives. When referring to these meals, they compared them to how they would have prepared a similar dish; they would never have thought of adding such ingredients as grapes or chives to these dishes. The comments about inspiration from the meals were made by users and non-users.

When going into detail about the meals, one particular component was mentioned in the majority of the interviews – the meals containing fish. Several interviewees explained that they intended to eat fish, but they never actually got around to buying it; therefore, they found that CTA meals offered them the opportunity to actually serve meals with fish at home. They referred to the importance of eating fish once or twice a week; therefore, they chose to buy these meals because they would not otherwise live up to their own healthy eating standards. It was particularly the male respondents who were positive about fish meals. Some of the present users emphasized that the fish meals were one of the reasons they bought CTA. Other employees specifically chose not to buy meals with fish as one of the main components, either because they did not like fish themselves or because others in their household did not like fish. Another example was that often fish was not eaten several times a week, and if the CTA meal contained fish, it could affect the food choice for the following days:

*“I don’t have problems with fish, but I know that the children don’t want to eat fish two days in a row. So if we get fish from CTA, we skip the fish at home in the following days.”*

*(No. 7 – female, married, children, present user)*

Fish was the meal component most often mentioned, but some interviewees also mentioned lamb as a meal component they either found “fantastic” or would not select.

### **Family and everyday life**

The employees' everyday life was connected with various concerns that affected their perceptions of CTA. Among the respondents with children living at home, the children influenced their parents in their use of CTA.

Among employees with children at home, there were different views about what the children thought of the CTA meals. Some employees referred to how their children reacted to the meals, while others described their own perception of whether these meals were suitable for children.

Several regarded the meals as not very “child-friendly”:

*“The kids are tired of it. They will say: “Oh no, we don’t want that food”.”*

*(No. 1 – female, single, children living at home, present user)*

Some explained that the children ate less on the days they were served CTA meals than on days when their parents cooked for them. Some described their children as picky; they believed this was the reason for their children eating less. A female employee explained that she believed her children would rather eat a more simple home-cooked meal than the meal she brought home from the workplace. This was not the experience of every interviewee with small children (under the age of 8); some found, on the contrary, that their children were even more excited about what was to be served on the days they got CTA meals. Between these two views was an employee who argued that her children complained about the food regardless of whether it was home cooked or CTA meals.

In the cases where the children were not very fond of the CTA meals, some parents offered their children some extra food, such as bread or yogurt; one explained that they sometimes prepared a different meal for the children, if they would not eat the CTA meal. Others tried to make the meals resemble home-cooked meals. They did this by heating the meals in their own pots, pans and dishes. Some explained that they only ordered meals they knew the family would like, and one explained that if she was unsure whether her children would eat the meals, she asked them what they thought.

When the CTA service started, the kitchen personnel wanted to attract families with young children; therefore, they launched a special children's menu – for instance, a pasta dish. The meals for children were not the same as the CTA meal, but a special, more child-friendly menu. These children's menus also included a piece of candy, inspired by some fast food chains offering special children's menus. A majority of employees at the worksite, who had tried these special children's menus complained to the kitchen; they wanted their children to eat the same as they did. They argued that if they wanted to have separate children's menus, they knew where to get them. Based on this feedback, the kitchen decided to change the children's menus to be smaller portions of the CTA meals, but leaving out what the kitchen manager referred to as “provocative vegetables”, which he explained was vegetables such as leeks and onions.

The employees mentioned three different ways they chose to serve the meals, when they were brought to the home. A few ate the meals directly from the trays, while others served the meals in the trays and then moved the food onto a plate:

*“Typically, we would put three trays on the table, because the amounts are so big. And then you take from the three trays, and if it is necessary, then we take the fourth as well.(...) So, we haven’t done much about the esthetics and this might have contributed to our being a bit tired of those boxes [referring to the trays] by now.”*  
(No. 15 – female, married, children living at home, present user)

A second way of serving the food was to put it onto plates in the kitchen. The third was to put the meal's components in different pots and bowls and then serve them. Some of the interviewees who did this acknowledged that this created a situation that resembled the way they served the meals they cooked themselves. For some of the interviewees who heated the meals in pots and pans, this was related to their attempts to make the meals look more home cooked in order to motivate their children to eat the meals.

Some users explained that the CTA service gave them extra flexibility in their everyday life, because they could eat at different times if this was necessary due to different activities. Some also found that it made it easier to eat at a specific time compared to a homemade meal, where it is necessary to plan so that all the meal's components are ready at the same time. This was mentioned particularly by employees who had children living at home. Others found that there were some limitations built into the CTA system. In this connection, several other aspects were mentioned, besides family preferences, with regard to whether the employees chose to order and buy the CTA meals. These aspects included children and their after-school activities, their own work schedule and that of their partners, the menu, which days it was possible to buy CTA, and the everyday routines in the home. These different aspects all had an impact on whether the employees chose to buy CTA. Some of the interviewees found that CTA was less flexible than other kinds of take-away; it was necessary to plan when they would buy CTA, whereas it was more ‘spontaneous’ to go to a pizzeria and order food.

### **Planning**

The employees could find the menu and order on the workplace's intranet. They had to order the meal the day before – for example, to take food home on Wednesday, the ordering deadline was noon on Tuesday. This meant that using CTA called for some planning. Price was also mentioned as an important consideration in deciding whether to order CTA.

Some of the employees had made it a habit to look at the menu Monday morning, and while checking their calendar to see if they would be able to use the service during this week. This applied particularly to the current users with children. Others explained that they found it a bit difficult to plan so far ahead, and that the deadline was an obstacle for them ordering CTA. This was for instance the case for a single male employee and for a married female employee without children. They both argued that they lived their lives more impulsively and therefore found it difficult to use CTA. A few of the employees with children felt the same way. Some argued that situations in which they would like to

use this option were characterized by sudden changes in plans, and it was difficult to plan for such situations in advance:

*"You know, sometimes when you finish work later than expected or something unexpected occurs, then you need an easy solution. You cannot always plan for it."*

*(No. 28 – female, married, children living at home, present user)*

The employees found that the greatest benefit from buying the meals was that it released time from grocery shopping, preparing dinner and washing up, time that they mostly used to be with their children. Several interviewees argued that time was the major reason for them ordering CTA. Particularly employees with children living at home made this priority. When asked about what they would have eaten instead of CTA, most replied that they would have made something themselves, and several emphasized that the meal probably would be simpler than the CTA meal. Particularly simple sandwiches were mentioned as an alternative, particularly if it had been a hectic day. Spaghetti bolognese was considered to be a simple and easy meal and was often mentioned as an option, together with other pasta dishes. A few would have chosen to buy some other kind of take-away food, including fast food.

The employees were split more or less in two groups with regard to their perceptions of price. Some found the price to be fair compared to the price to other take-away options where they did not have to cook themselves. In relation to this, some also found that CTA was the healthiest take-away option they could find in that price range. The other group compared the price to what they could buy in the supermarket for the same amount of money. Some also linked the price with the family's preferences, explaining that if the children would not eat CTA food, then a lot of money was wasted buying it. Some families chose not to order a portion for every family member, because they found the portion sizes very large; they argued that this was also a way of lowering their expenses on CTA. In general, it was the families with young children who found the price "too high".

#### Corporate perspectives

The kitchen manager explained that they had about 300 users. Most often the users ordered more than one portion, but since all users did not order for the same day, an average of 300 portions were ordered every time. According to the kitchen manager, it was primarily couples without children who used CTA regularly.

#### **The meals**

When the kitchen launched the service, the primary idea was to deliver proper home-cooked meals. At that point, they did not have many concerns about the amount of fat in the meals, but this has changed during CTA's lifetime. The kitchen personnel began to receive more wishes that the food should contain less fat. This was based on the employees' perception of fat content, since the meals were not labeled.

The general view of the kitchen manager and the employees in the kitchen was that the meals they made were healthy and had a very high quality:

*"In my opinion, it is just as good as what is served in the good restaurants."*

*(Kitchen staff member)*

It was emphasized that it was very important for them to be able to maintain the high standards, which was one reason why they only had this service twice a week. When they began to offer CTA it was only once a week, and after a while the service was expanded to two days a week.

When the kitchen staff examined the amount of orders, it became clear that some dishes were more popular than others. If the kitchen was busy with other tasks, the staff sometimes chose to place a less popular dish on the menu in order to regulate indirectly the amount of orders that day. The kitchen personnel did not explain what these less popular dishes were, but the users made it clear that meals they regarded as too simple, e.g. pork chops or minced meat patties, were not as popular as other dishes.

### **Discussion**

The present study explored a CTA scheme at a worksite in Denmark. The design of the study helped highlight how such a scheme develops over time, since the worksite had four years experience with CTA. Overall, we found that aspects that are important to users of CTA also actively generate non-users. Furthermore, we identified negotiations of the CTA scheme several times during the time it existed. The results of the qualitative analyses show that use and non-use develop through a number of mechanisms and these mechanisms confirm that a script configures both users and non-users. We can also see that use is not only a matter of passively commissioning a script; it can for example involve feedback from users about their wishes for changes. Another example of how a script is accepted is the special emphasis that users put on aspects that were relevant for their practices in the household. Non-users, who rejected the script, also emphasized aspects related to their household practices as reasons for rejecting it. We have identified the following aspects that seem to influence users' and non-users' perceptions of CTA, and also how their practices are shaped in relation to CTA:

- Users' assessment of meals' healthiness: vegetable content
- Users' assessment of meals' culinary aspects: taste; likes or dislikes (e.g. fish)
- Interaction with the everyday time schedule: pre-ordering; time saving

### **Users' assessment of meals' healthiness**

We have identified several types of mechanisms related to the notion of scripts [10]. In the planning of the scheme, we have identified how designers are making configurations of users. The term configure is defined by Grint and Woolgar (1997) as: to define, enable and constrain the users; thus, this underpins the notion of script. An example of configuring is when the kitchen staff prepares special meals for children, due to kitchen staff's view of the scheme as an alternative to fast-food meals. Making special children's meals shows that the kitchen's *projected users* [16] have the same expectations for CTA as they do for fast food, which turned out not to be the expectations of the *real users*. The real users wanted a nutritional option that suited their busy schedule. The adoption of CTA as an eating routine can be described as a "best-fit" solution [4], implying that eating routines are being negotiated and stabilized over a period of time. Other studies have found that a healthy option that complies with a busy schedule is hard to find, because most convenience

products do not meet the nutritional guidelines [2] or are not perceived as healthy [17]. In general, we have found that there are considerable variations in which aspects are given meaning, and also that the meaning ascribed to the aspects varies. The same meals are considered by some to be very healthy, while others think they are less healthy. This shows that existing practices of potential users – in this case, how healthy their diet is habitually – influences to what extent an initiative is accepted.

### **Users' assessment of meals' culinary aspects**

CTA users have made their own individual adjustments to the overall CTA script; this is most evident in relation to their concern about ordering CTA meals that contain fish. Fish as a meal component became a main reason for the CTA meal to be ordered or not, because some people like fish and others dislike it. According to their food choice model, Connors and colleagues argue that in every case, different values affect the final food choice [18]. In relation to fish, taste is the decisive value.

The content of fat in the meals has been decreased since the scheme was established. In the beginning, the kitchen's *projected users'* expectations with regard to fat content and the *real users'* wishes were very similar. After a while, the real users' expectations changed and via negotiations with the kitchen manager the fat content of the meals was reduced.

The users generally had very high expectations for the meals, which should be better than ordinary. A study shows that people have higher expectations for convenience meals than for the meals they prepare themselves [19]. The kitchen was aware of this and built it into the scheme; their *projected users* were only interested in buying CTA if the meals were special or had a special twist – for example when the kitchen put chives in the breadcrumb coating or served venison meatballs.

### **Interaction with the everyday time schedule**

In some households, it becomes part of the everyday routines to order CTA, and the deadline fits with these household's routines, which are characterized by a certain degree of planning. It has been found that planning becomes a strategy among working mothers for managing a hectic working day with obligations to the family [20]. These mothers plan ahead, and their plans encompass all the family's activities during the day. In other households, the deadline hinders using CTA, because the same type of planning is not part of their everyday routines. The issue of planning has been found to influence the healthiness of women's eating habits [21].

Price and ordering deadline are often mentioned as reasons for rejecting the script. Studies have found that price can be a barrier for meals such as CTA and other types of convenience food [17]. In relation to both price and ordering deadline, the kitchen personnel seem to have configured users who are willing to pay a certain price for CTA and who plan far enough ahead that they can comply with the deadline. Since the non-users have not been able to influence the design of the script, they reject it. For some of the non-users, CTA represents a new logistic problem that they cannot solve. It corresponds well

with findings by Warde (1999), who have investigated what he calls time-shifting devices that just causes more problems of coordination, contrary to the intent of the device [22].

We have identified how users gradually made the script fit into their everyday lives, because they found the extra time won from buying CTA to be valuable. Some started by being skeptical users, concerned that the script would not fit into their way of life, but then they accepted the script because it released time from food preparation. CTA became domesticated by redefinition. From being an exciting new concept at the workplace, it became part of a routine that created free time. Time constraints due to inflexible or unpredictable or long working hours, and obligations to children have been recognized as a barrier to healthy eating [23]. Through redefinition, CTA became part of a routine that worked around the barrier posed by time constraints.

In addition to the limitations of single-case studies with regard to representativeness, the participants in this study, who all volunteered, may have been too similar. All the participants were given free CTA meals as part of the study, which may have caused some employees who were against CTA not to participate. Thus, the group of participants may be unrepresentative with regard to their perceptions of CTA.

The study was carried out in a white collar setting in a private company, and the CTA initiative received financial support from management. The premises for the CTA scheme could be very different at other types of workplaces, so that different results would occur in relation to CTA. Further research is needed to investigate CTA in other organizations in order to learn whether other types of worksite characteristics influence the CTA scheme.

We do not know how often the different users eat CTA meals and therefore cannot determine the overall impact on time schedule and nutrition of CTA in different households. Further research is needed to investigate this more thoroughly.

### **Conclusion**

We have explored how a CTA scheme is shaped and how users have been a part of this shaping process. We have also found that some of the same aspects generate users as well as non-users. Some become users of CTA because they can manage to plan ahead, and CTA then becomes a solution that releases time; others are non-users because their need for a convenient food solution in their everyday life is much more spontaneous and cannot be planned a day in advance. The nutritional aspects are important, but very different perceptions of the healthiness of CTA meals were identified. Based on our findings, we suggest that workplaces that intend to establish a CTA scheme, involve users both in the planning phase and when the scheme is in use, in order to continuously keep track of user preferences. Further, we conclude that Canteen Take-Away may be a promising health promotion activity. Finally, we find that the theoretical approach is applicable in relation to studies of worksite health promotion.

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### Article 3

Social shaping of food intervention initiatives at worksites - Canteen takeaway schemes at two Danish hospitals

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The paper analyzes the underlying political processes related to the development of two CTA schemes at two hospitals. The paper's point of departure is in how the object in health promotion (e.g. CTA) is considered to be non-negotiable and that studies of health promotion black box negotiations of the object by neglecting to report how the studied objects are shaped by discussions between different stakeholders. It also includes a discussion of how problems and solutions shape each other.

The two cases show how two comparable worksites end up with very different CTA schemes, due to different processes.

The paper contributes to new perspectives for worksite health promotion by applying political process theory as an evaluation tool to studies of health promotion at worksites. The last interviews at Hospital A were made so late in the Ph.D. project that it was not possible to follow up on the new information about how they were changing their concept. Therefore, I do not have any information about whether they succeeded in making their CTA service more flexible for the users, and whether it generated more users.

***Social shaping of food intervention initiatives at worksites***  
**- *Canteen take-away schemes at two Danish hospitals***

Signe Poulsen & Michael Søggaard Jørgensen

Abstract

**Aims:** The aim of this article is to analyse the social shaping of worksite food interventions at two Danish worksites. The overall aims are to contribute first, to the theoretical frameworks for the planning and analysis of food and health interventions at worksites and second, to a foodscape approach to worksite food interventions.

**Methods:** The article is based on a case study of the design of a canteen takeaway (CTA) scheme for employees at two Danish hospitals. This was carried out as part of a project to investigate the shaping and impact of schemes that offer employees meals to buy, to take home or to eat at the worksite during irregular working hours. Data collection was carried out through semi-structured interviews with stakeholders within the two change processes. Two focus group interviews were also carried out at one hospital and results from a user survey carried out by other researchers at the other hospital were included. Theoretically, the study was based on the social constitution approach to change processes at worksites and a co-evolution approach to problem–solution complexes as part of change processes.

**Results:** Both interventions were initiated because of the need to improve the food supply for the evening shift and the work–life balance. The shaping of the schemes at the two hospitals became rather different change processes due to the local organizational processes shaped by previously developed norms and values. At one hospital the change process challenged norms and values about food culture and challenged ideas in the canteen kitchen about working hours. At the other hospital, the change was more of a learning process that aimed at finding the best way to offer a CTA scheme.

**Conclusion:** Worksite health promotion practitioners should be aware that the intervention itself is an object of negotiation between different stakeholders at a worksite based on existing norms and values. The social contextual model and the setting approach to worksite health interventions lack reflections about how such norms and values might influence the shaping of the intervention. It is recommended that future planning and analyses of worksite health promotion interventions apply a combination of the social constitution approach to worksites and an integrated food supply and demand perspective based on analyses of the co-evolution of problem–solution complexes.

Keywords: Hospital, food service, canteen take-away, social constitution of worksite, worksite health promotion

## **1. Introduction**

This article analyses the shaping of a worksite health promotion initiative, a so-called canteen takeaway (CTA) scheme, at two Danish hospitals in order to contribute to the development of theoretical frameworks for the planning and analysis of food and health interventions at worksites. The article also contributes to the development of a foodscape approach to food and health interventions at worksites by integrating a food production and a food consumption perspective and by including the organizational processes, which shape the intervention. The analytical focus is on the local processes that influence health promotion interventions at worksites based on their previously developed norms and values. This implies that the same type of initiative might end up being shaped rather differently, even at two worksites within the same sector.

This article is based on theories concerning political processes at worksites and theories concerning the co-evolution of problem–solution complexes during the design of socio-technical systems. Empirically, the article is based on a qualitative case study organized by Poulsen about the shaping of CTA projects at two Danish hospitals where employees were offered the opportunity to buy meals to eat during evening shifts or to take home in order to reduce their workload outside the worksite, in terms of planning, shopping for and cooking meals at home. This case study was carried out as part of a research and innovation project about the shaping and impact of canteen takeaway systems at different types of worksites.

In 2008 the first hospitals in Denmark began offering their employees the opportunity to buy meals to take home for dinner, so-called CTA schemes. At the time, this was a very new idea, not only for public worksites but for worksites in general in Denmark. The first hospitals to offer this project wanted to be recognized by potential staff as attractive worksites; they wanted to attract new staff and to retain their existing staff. Through the case study, the two hospitals were followed during the planning and implementation of a CTA scheme. Hospital A is located in the Copenhagen area and employs about 4,500 staff, which makes it one of the biggest hospitals in Denmark. The other, Hospital B, is located in the eastern part of Jutland and has about 1,600 employees. The two hospitals began their considerations about CTA in the spring of 2008, inspired by a Danish research and development project on CTA schemes, coordinated by the Danish Cancer Society ([www.kantinetakeaway.dk](http://www.kantinetakeaway.dk)). In November 2008, Hospital A sold their first meal, while Hospital B was ready with their system in the spring of 2009.

### **1.1 The worksite as setting for food and health interventions**

The importance of the worksite as setting for health promotion is supported by the World Health Organisation (1), the European Commission (2) and The Nordic Council of Ministers (3). Several studies on the effects of food and health interventions at worksites (4) have been published. The majority of these studies discuss whether a specific intervention had an effect on beforehand determined parameters. Review articles show several positive effects of interventions at worksites (5, 6). Besides investigating effects of interventions, the reviews also focus on aspects that seem to influence the success of the interventions.

Employee participation in the process can be beneficial because it can increase employee awareness of the intervention (5, 7, 8). Another aspect is organisational support, which is stated to be important for the success of especially comprehensive interventions (5). Also the organisational structure may influence workplace health promotion (9). These aspects are all seen as internal aspects at the worksite, but the social context, which can be both internal (i.e. the cultural norms at the worksite) and external (i.e. influence from family conditions), is found also to affect the staff and thereby the intervention (5).

Despite the importance of these aspects a deeper theoretical understanding of the processes at worksites, which influence the design and impacts of such initiatives, seems to be missing (9). Several models have been developed with the purpose of planning and/or evaluating; for example the social contextual model (10). The model focuses on how different parameters influence people's health. However, despite its complex understanding of the shaping of people's health the model blackboxes the shaping or the design of the intervention itself since the model does not focus on how the intervention itself can be an object of negotiation during the process of planning and implementation. Based on organisational theory Dooris, 2009 has suggested that settings can be viewed as complex, dynamic systems (11). Within this approach a worksite setting is seen as a system with inputs, throughputs and outputs. However, the work of Dooris is also lacking a theoretical base for the analysis of how the complex social system of a worksite shapes changes. Our study investigates the shaping of CTA schemes at two hospitals based on a theoretical approach to the worksite as a political system where interventions are negotiated based on previous conflict and consensus processes among the different stakeholder groups at the worksite as explained in the next section.

## **1.2 Theoretical approach**

The analyses were inspired by the approach of the worksite's social constitution and by a co-evolution approach to problem-solution complexes in design processes, including organisational design.

The concept of social constitution is based on a dialectical relation between local worksite policy and structural power and was developed by Hildebrandt and Seltz (1989) (12, 13). The basis is an understanding of a worksite as subject to the capitalistic mechanisms and thereby an asymmetrical balance of power between the different actor groups at the worksite. Actors are structured in social groups through their position at the worksite (e.g. top management, project management, supervisor groups, support staff, employees, etc.) and are thereby also linked in a macro-power structure. The social constitution is shaped by the conflict and consensus history of the worksite. The concept is linking structure and actor because the worksite actors' interpretation of external and internal conditions is shaped by the social constitution, which acts as a joint framework or filter through which the worksite actors understand and shape changes. Several social constitutions may exist at a worksite, for example within different departments.

Another analytical inspiration in the article is an understanding of change processes as the co-evolution of problem-solution complexes (14, 15). This perspective draws on knowledge from creative design and the focus on two design spaces, problem space and design space.

The approach highlights the importance of focusing on the social consequences of a problem-solution complex since new problems may be created because of the way the solution have been shaped. Applying this approach together with the social constitution approach implies that both the proposed solutions and the underlying understanding of the problem are seen as shaped by the social constitution. The focus on the details of the shaping of problem-solution complexes helps the researcher understand aspects of the social constitution of the worksite.

## **2. Methods**

Qualitative methods were used to retrieve data in the case studies. At hospital A semi structured interviews were conducted with relevant informants, based on a snowball sampling. Furthermore observations were made at meetings where the canteen manager presented results from the CTA process. At Hospital B semi structured interviews with key informants were also conducted and furthermore focus group interviews were made with users and non-users of the scheme. The participants for the focus group interviews were found with help from the manager of the kitchen and a human resource professional from the hospital with the purpose of getting voices from different divisions and in different types of jobs at the hospital.

For the focus group interviews an interview guide was developed. Based on recommendations from Halkier (2008) the interviews started with a general question and afterwards the questions became more specific (16). The focus interviews were recorded on video and on voice recorder. A resume was made and transcribed verbatim. For the face-to-face interviews semi structured interview guides were developed (17), shaped in accordance with the interviewee's role in the change process. The interviews were all recorded and transcribed. Observations made were written down during or after the interview.

## **3. Results**

The main events in the shaping of the two CTA schemes are presented in [Table 4](#) and [Table 5](#).

Table 4. Main events at Hospital A

Time	Event / activity. <i>In italic the type of food</i>
Beginning 2008	Canteen wants to do something for the staff working irregular hours
February – March 2008	Trial evening opening in personal canteen. Canteen staff does not like irregular hours themselves. <i>Lunch dish for staff</i>
June 2008	Proposal for selling <i>external suppliers ready-to-eat meals</i> . Management want the internal possibilities analysed
August 2008	Proposal for CTA from patients' kitchen approved. <i>Patient food with a lower fat content</i>
September 2008	Webshop developed. Pick up hours 14.00-16.00 => problems for the target group
November 2008	Trying leased vending machine. Problems handling the 'trays'. Given up
November 2008	CTA starts with pick up hours 14.00-16.00. 100 meals => 10 meals
November 2010	Visitors' cafeteria cooks and sells <i>today's menu for CTA</i> . Not possible to order in advance => 20 meals

Table 5. Main events at Hospital B

Time	Event / activity. <i>In italic the type of food</i>
2007	Hospital organizes workshop for nurses about Job satisfaction. Proposal for take-away from hospital
2007	Welfare strategy is developed based on workshop ideas
Spring 2008	HR department and kitchen consider a concept (number of days, ordering deadline and <i>if they should make a separate CTA dish</i> )
Fall 2008	Questionnaire to staff based on CTA project proposal (interest to CTA, how often staff would use it and what they would pay for it)
January 2009	<i>Special CTA dishes</i> were developed through free staff trials in return for feedback.
March 2009	CTA scheme starts. CTA can be bought 2 times a week and needs to be ordered a day in advance. Starts out with around 50 meals Around 65 meals in average for 2009.
2010	CTA continues. Around 70 meals in average

### 3.1 Hospital A

Since the staff canteen manager started working at Hospital A he had always wanted to do something to improve the food supply for staff working irregular hours (e.g. the shift from late afternoon to late evening), because the staff canteen closed at 13:30, leaving them with few options to buy food during working hours. In the beginning of 2008, he opened the staff canteen in the evening for a two-month period. The canteen offered the same dishes that were served for lunch which could be re-heated in accordance with the evening shift's working schedule. The canteen manager handled this extra task himself because the canteen staff did not want to work in the evening. Due to this reluctance to work irregular hours, the canteen committee, with representatives of management and employees at the hospital, discussed if they could find another solution for the evening shift. They came up with the idea of CTA, and through the CTA project they found an external supplier of ready-to-eat meals. The canteen manager was keen on this external supplier because he found the quality of the meals very high and it would barely require resources from the canteen. The management of the hospital was presented with this idea, but decided that they wanted a proposal from the manager of the patients' kitchen. The manager of the patients' kitchen developed a proposal where the meals would be low-fat versions of those made for the patients and would be offered every day from Monday to Friday. This proposal kept the production expenses low. In August 2008, the management approved the proposal from the patients' kitchen because it would 'keep the money in house'. The canteen manager, however, found the food from the patients' kitchen tasteless and boring. Despite this, he continued to develop the scheme. Together with the patients' kitchen, he found out that the food would be ready for pick up between 14:00 and 16:00, but this meant that the evening shift staff could not use CTA as their shift started at 16:00. The chairman of the canteen board offered to develop a web shop where the staff could look at the menu and order meals. The staff needed to order before 9 a.m. on the days that they wanted CTA. As a way of making CTA an option for the staff working irregular hours, the canteen manager rented a vending machine. However, the trays got stuck in the machine and it was returned to the supplier after a few days. In the beginning there was great interest in the takeaway service with 100 meals sold each day, but after a while interest dwindled and after some months only 10 meals were sold each day. The canteen manager believed the staff found the meals boring. A user survey taken after one month did not confirm this assumption, but the reduction in the demand soon after could indicate that the users became tired of the adjusted patient food.

In the beginning of 2009, as part of a restructuring process, a new food service organization was formed. The new service covered food for the patients, the staff and the visitors, with the patients' kitchen manager as its manager. After one year, the takeaway scheme was extended with an 'offer of the week' which offered certain meals at a lower price. However, this did not increase interest among the staff. In October 2010, a newly appointed customer and quality manager proposed that the visitors' cafeteria should sell their 'dish of the day', prepared by trained chefs, as the staff CTA menu. The customer and quality manager believed that the poor culinary quality of the CTA meals had caused the lack of interest among the staff. The cafeteria chefs decided to develop the scheme so

that it was no longer required, nor possible, to order in advance. With these changes, the web shop was no longer seen by the canteen committee to be of any use to the scheme and so was given up. However, this could mean that staff cannot be sure of obtaining a takeaway meal from the visitors' cafeteria to either take home or to eat during an evening shift. This new scheme did not offer the night shift new possibilities for buying food during working hours.

### **3.2 Hospital B**

In 2007, the human resource (HR) department at Hospital B organized a workshop for nurses about job satisfaction because the hospital manager wanted to find out how to retain staff. At the workshop some nurses proposed the idea of takeaway food sold by the hospital. Several other ideas emerged at the workshop and they provided the foundation for the development of a welfare strategy for the hospital later that year. HR were given the task of investigating the proposals further and in 2008 they began looking into CTA. Together with the kitchen manager, they investigated different options, such as what type of meal to offer and when it should be ordered. Based on their initial ideas, they developed a short questionnaire for all employees asking about ordering deadlines, type of meals and price. Based on the answers, the HR department and the kitchen manager decided to change the order deadline from two days before to one day before the meal was sold, in order to make it possible for employees to use the CTA scheme with less planning.

In January 2009, the kitchen began developing CTA meals and organized a trial period where some employees could try the meals for free on the condition that they give feedback to the kitchen. The kitchen wanted to ensure that the meals tasted as intended when they were re-heated and that the size of the portions were acceptable; they had to incorporate this extra task in the kitchen workflow. Based on the feedback, the scheme began in March 2009. The HR department and the kitchen manager decided that CTA should be sold twice a week, which was the frequency that the kitchen found to be realistic. At the beginning, 50 meals were ordered every time the takeaway was offered; this later increased to 70 meals, twice a week.

## **4. Discussion**

The aim of the article is to investigate the shaping of CTA schemes at two hospitals in Denmark and show how earlier and present interactions among actor groups shape the schemes and the problems which are in focus and the solutions which are offered.

### **4.1 An integrated perspective on food supply and demand**

What might look like two similar design processes, turned out to be rather different change processes due to the local organizational processes. The two cases show how the problem-solution complexes, which are part of the design of worksite food interventions, need to combine a production and a consumption perspective while considering whether proposed solutions seem to solve the original problem in focus. Some of the considered solutions at Hospital A during the shaping of the CTA scheme did not solve the original problem. The solution space seemed for a time more focused on finding out what problems a CTA

scheme could solve and not whether the original problem of the food supply during the evening shift could be solved. One of the proposed designs of the CTA scheme was organized so that the staff on the evening shift could not collect meals to eat during their working hours, since the CTA was only sold between 14:00 and 16:00. This implied that this solution generated a new (derived) problem seen from a food demand perspective. The solution to this became a vending machine, but since the trays got stuck, this failed to solve the problem from a demand perspective and for a period the CTA food was not available to the original target group: the employees on evening shifts.

The importance of an integrated food production and consumption focus to worksite eating – it could also be called an integrated food supply and demand focus - is confirmed by Faugier et al (18, 19). They show that the combination of poor availability of food (as an aspect of food supply) together with poor possibilities to have regular breaks (as an aspect of the staff's actual food demand) is found to prevent healthy during working hours for hospital staff.

#### **4.2 The roles of worksite social constitution**

The two cases also show the role of previous organizational processes at a worksite and their shaping of present norms and values, which act as a framework for new change processes. New political issues might be developed or existing norms and values might be challenged and put under pressure by a change process. As we will see, both types of political processes are seen in one or both cases.

The focus in both cases is problems, which through the change processes become recognized as problems of the worksite. At Hospital A, the poor availability of meal options for staff working irregular hours became the focus and was proposed by the canteen manager as a problem he wanted to address. At Hospital B, the work–life balance was recognized as a problem because the nurses requested support for everyday activities outside working hours. The CTA scheme was a way of reducing their load from shopping and cooking at the end of the working day. This request was accepted by the management to make the hospital a more attractive workplace at a time when there was a lack of available staff in the labour market.

The two change processes conflicted with existing norms and values to a different degree. While the shaping process at Hospital A challenged some existing norms and values at the worksite, the process at Hospital B was more consensus based, aimed at finding the best way of solving a problem, which was agreed upon from the beginning of the shaping process (the possibility of reducing the workload of employees outside working hours).

As stated in the theory about social constitution, conflict and consensus processes, which took place before the intervention process in focus, have developed the norms and values of the worksite. These norms and values might become part of active political processes at the worksite if an intervention changes the norms and values or challenges the balance between different norms and values. At Hospital A, food culture differences between a nutrition perspective in the patients' kitchen and a culinary perspective in the staff canteen and visitors' cafeteria created tensions between different

parts of the food service system when the hospital management was considering outsourcing the staff canteen to an external entrepreneur, thereby effectively creating two food system organizations. This tension between the two food cultures implies that the decision to ask the hospital kitchen to produce the CTA food for staff and then adapting it for patients' food created a political conflict, with different stakeholders defending and attacking the decision. The decision implied that an economic perspective (create as much activity internally at the hospital as possible) was given higher priority than the culinary perspective (buy culinary-interesting food from an external supplier). When the restructuring of the food service organization, (initiated without reference to the CTA scheme), merged the three parts of the food service organization into one and when one of the managers left the organization, it became possible to cooperate between the food supply units for the three different target groups (staff, patients and visitors). The visitors' cafeteria, which was open part of the evening, was also able to sell its daily dish as CTA food for staff to take home or eat in.

The resistance at Hospital A towards opening the canteen in the evening illustrates an element of the local social constitution within the canteen kitchen at this hospital: the manager and the employees co-determine the working hours and normally the kitchen staff do not work in the evenings (while this is common practice among the health personnel (nurses, doctors, etc.)). This explains why other solutions to the improvement of the food supply to the evening shift have to be considered. The final design of the CTA scheme builds upon the existing evening opening hours in the visitors' cafeteria, where it is an accepted element of the local social constitution.

At Hospital B, the design of the food supply did not create conflicts with existing norms and values at the hospital or within the food service organization. However, it is important to be aware that a lack of expressed conflicts does not imply that there are no conflicts with existing norms and values. Conflicts may be suppressed due to very asymmetrical relationships between management, employees and support functions at the hospital and may not even be expressed directly through interviews. The interviews did not show directly expressed conflicts, nor did they show information that could indicate suppressed conflicts.

## **5. Conclusion**

This case study proposes that worksite health promotion practitioners, whether internal or external in relation to a worksite, should be aware that the intervention itself is an object of negotiation between different stakeholders at the worksite. The social contextual model<sup>10</sup> includes considerations about how worksite structures can influence health and inform the intervention, but it lacks reflections about how the norms and values of the worksite might influence the shaping of the intervention itself during the intervention process. It is recommended to apply a combination of the social constitution approach to worksites (12, 13) and an integrated food supply and demand perspective based on analyses of the co-evolution of problem–solution complexes (14, 15). It is especially important to be aware about how an understanding of a problem and the proposed solution is co-shaped within the framework of the social constitution and its norms and values. Furthermore, it is

important to concentrate on to what extent proposed solutions seem to solve the problem in focus and whether derived problems develop, for example with respect to food availability for certain social groups within the worksite, such as groups working irregular hours.

The two cases here show that the level of conflicts can differ substantially from one worksite to another depending on to what extent a change process opens new political issues at the worksite or whether it challenges the balance between existing norms and values. Conflicts should not be seen as negative but rather as necessary in relation to the development of a 'good' food intervention at a specific worksite. A lack of conflict could indicate a change process that is in accordance with existing norms and values, but it could also indicate that the relations between management, employees and different support functions are so asymmetrical that disagreement is not expressed.

From the systemic approach to workplace settings (11, 20) it has been suggested that the throughputs, as part of the worksite as a system or setting, are unpredictable. Based on the two case studies, we also argue that the inputs (the existing norms and values of the worksite) and outputs (the developed problem–solution complexes) are unpredictable and need to be considered carefully and perhaps addressed directly during the design of a worksite food intervention. The case studies and the proposed theoretical perspective contribute to the foodscape perspective on worksites with an integrated food supply and demand perspective. Furthermore, the article contributes with a political process perspective to worksites and change processes at worksites. Finally, it proposes methods for collecting and analysing data within the political process perspective when analysing the social shaping of food interventions at worksites.

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## Article 4

Canteen takeaway in a blue collar setting

*(International Journal of Workplace Health Management, draft)*

The empirical data for the final paper is from a case study at a blue collar worksite. This worksite represents another type of worksite than presented in the other papers. Furthermore, the canteen and food supply are organized differently, since the worksite has an external food service operator.

The paper contributes to new perspectives for worksite health promotion by applying political process theory as an evaluation tool to studies of health promotion at worksites. It also contributes with new understandings of how the blue collar setting can affect a health promoting initiative such as CTA.

# Canteen take-away in a blue collar worksite - Social shaping of food intervention initiatives at worksites

Signe Poulsen & Michael Sjøgaard Jørgensen

## Abstract

### **Purpose:**

The worksite has been found to be an important setting for health promotion. Studies of health promoting initiatives in blue collar settings seem to be lacking. This study aimed at investigating how the concept of Canteen TakeAway was shaped as it was introduced at a Danish blue collar worksite.

### **Design/methodology/approach:**

The study was based on a case study approach. Qualitative interviews were made with key stakeholders. Theoretically the study combines a political process perspective with theory about the shaping of concepts in change processes.

### **Findings:**

The study show how the concept of CTA is being interpreted by the different actors involved in the process. Further, it shows the challenges related to establishing a healthy scheme in a blue collar context.

### **Research limitations/implications:**

A study of the long-term sustainability of the CTA scheme is suggested as subject for further studies.

### **Originality/value:**

The paper contributes with an understanding of the challenged related to establishing a CTA scheme in a blue collar context. Further, it provides new insights by applying political process perspectives to the field of worksite health promotion.

### Keywords:

Canteen TakeAway, Blue Collar worksite, Worksite health promotion, Political process perspective

## **1. Introduction**

A Canteen Take-Away (CTA) scheme at a workplace is a recently developed concept in Denmark which seeks to combine concerns for work-life balance and dietary health at workplace as part of workplace health promotion. In a CTA scheme a workplace offers the employees the opportunity to buy ready-to-heat meals to take home or to eat at the worksite if they work on evening and night shift and thereby often outside the opening hours of the worksite canteen (Kantine-Take-Away, 3F 2010).

During the last decades the worksite has been acknowledged as an important setting for dietary health promoting initiatives such as dietary interventions (Sorensen, Linnan & Hunt 2004, Quintiliani, Poulsen & Sorensen 2010). Most employees spend a large amount of their time at the workplace and eat one or more meals at the workplace every day. Thus health promotion at the worksite potentially can reach a large number of people including some, that can be difficult to target through other types of health promotion (Glasgow, McCaul & Fisher 1993). Worksite characteristics can influence the outcome of health promotion at worksites. Weight status and gain have been associated with socio-economic factors such as level of education and occupational status (Groth et al. 2009). These aspects should be taken into consideration when planning and developing health promoting initiatives (WHO Regional Office for Europe 2007). White collar worksites have a higher response rate and more participants in their health promotion programmes and thereby distinguish themselves from blue collar worksites (Glasgow, McCaul & Fisher 1993). Health promotion at blue collar worksites is challenged because shift work and work obligations conflict with participation in health promotion (Sorensen, Linnan & Hunt 2004). From a worksite perspective dietary health promotion can be beneficial due to reduction in absenteeism (Jensen 2011). Despite the great potential of worksite health promotion there has not been many studies of dietary health promotion at blue collar worksites.

The attention to work-life balance has been increasing in the last decade, and worksites have tried to develop programmes that could improve their employees' work-life balance. One of the areas in focus is stress and one of the causes gaining attention at the workplaces is the balance between work and everyday life (Csonka 2006). One area related to work-life balance is the logistics of everyday life, where aspects such as grocery shopping and cooking are included.

The idea of CTA has been promoted and analysed in a Danish research project Kantine Take Away with the aim of increasing knowledge about the shaping and impact of CTA schemes and helping workplaces start their own CTA scheme. The companies were offered support to consider the shaping of a local CTA scheme and could develop the scheme as they wanted with regards to how many days they wish to offer CTA, which types of meals, how to order the meals etc. Some of the worksites are not offering CTA because of the health potential in the meals, but because they want to contribute to a better work-life balance (Poulsen et al., submitted). Others offer CTA as an opportunity for the evening and night shift to eat while at work, and also to the day shift to take home to their families (Poulsen, Jørgensen 2011). Both white collar and blue collar workplaces participated in the project. The shaping of CTA schemes at white collar workplaces have been analysed in

(Poulsen, Jørgensen 2011) and (Poulsen et al., submitted). This article aims at developing knowledge about how a CTA scheme is shaped in a blue collar worksite in interaction between the CTA concept promoted by the Kantine Take Away project and the local context and its previously developed norms and values.

## **Theoretical approach**

### Social constitution of the worksite

The concept of social constitution was developed by Hildebrandt and Seltz in 1989 (Hildebrandt, Seltz 1989, Olsén, Clausen 1994). It is based on an understanding that there is an asymmetrical balance of power between different actor groups at the worksite due to the worksite being a subject to the capitalistic mechanisms. Based on their position at the worksite the different actors (top management, support staff, employees etc.) are structured in social groups that constitute a macro-power structure. The social constitution is shaped by the conflict and consensus history of the worksite and is thereby a result of former political processes. The social constitution works as a filter for the actors' way of understanding internal and external initiatives and thereby how the interactions among the actors shape changes. Several social constitutions may exist at a worksite, for example within different departments.

### The shaping of concepts in organizations

The CTA intervention is analyzed by a worksite policy process approach to the local shaping of new concepts at worksites, where the concept of the CTA intervention is viewed like a policy program, which means the concept is non-neutral and has a preferable way of viewing the organization's future (Kamp et al. 2005), here consumption of 'healthy canteen take away food' (see for example (Kantine-Take-Away, 3F 2010)). The analytical model is inspired by the work of Dawson and it suggests that a change process based on the introduction of a concept into an organization is influenced by a) the concept (and its measures and tools), b) the context (the worksite and its surroundings and how they operate) and c) the involved internal and external stakeholders (management, external consultants, project leaders, employees, change agent etc.).. The model aims to capture some of the social dynamics which is part of a change process. This means that the concept is not neutral; it is giving meanings by the involved actors. Furthermore, the actors and the context are mutually influencing each other. The work of Kamp and colleagues (2005) suggest three different perspectives on organizational change, learning processes, symbolic processes and political processes. We have chosen only to include the political perspective as expressed in the social constitution approach above. The political perspective puts emphasis on the agenda of the change, the change process and the actors that have had access to impact it, and the power structures that have been challenged by this change.

## **Methods**

In this study, we wanted to explore the shaping of a CTA scheme in a blue collar arena. In order to do so we have used a qualitative case study approach and the results are retrieved by using semi-structured interviews. The results presented in this paper are parts of a PhD project based on four case studies. One of these cases is used as empirical basis for this paper. Case studies can contribute to in depth understandings of phenomena (Flyvbjerg 2011) and is suitable for exploring new concepts (Yin 2003) in order to gain knowledge about the development of such concepts.

Based on the agreement with the worksite it was agreed upon that the first author could be a part of the process, but that they also wanted to receive feedback from her during the process. Therefore the research became dialogue based. As part of doing a dialogue based research study one of the aims of the first interviews was to gain information for the development of the scheme. The first interviews were made while the scheme was still being developed. The participants for these interviews were employees at the worksite, working in different divisions. Three interviews were made before the scheme started. The results from these interviews were presented to the CTA development group. The CTA development group consisted of the project manager for the CTA research project, the kitchen manager, the health and nutrition manager in the external food service company, and the vice manager. The information from the interviews was used to clarify the employees' expectations to the CTA scheme.

Besides interviews observations were made at meetings, when the design of the scheme was discussed. The observations showed who the key persons were and gave ideas for whom to interview when the scheme was established. Half a year after the scheme had been started interviews were made with employees, the manager of the kitchen and a vice manager who also was member of the canteen committee. In total six interviews were made and they all took place at the worksite. The interviews lasted between 0.5-1 hour and all interviewees were informed that the interview would be recorded before initiating the interview.

For the interviews semi structured interview guides were developed (Kvale 1999), and shaped in accordance with the interviewee's role in the change process. Interviewees were informed that their names would be anonymized. In general, the interviews were framed by the informants' own words, as is often the case in qualitative research.

All interviews were digitally recorded and transcribed verbatim. Then, the transcriptions were carefully checked and coded manually. Codes were either thematic, referring to the interview guide or defined by themes not pre-defined in the interview guide but emerging from the transcriptions. The data were analyzed case-by-case and then across cases. Based on the analyses, several aspects related to the use of CTA were condensed. Observations made were written down either during or after the interview or meeting.

## **Results**

The worksite is located in the Copenhagen Area and is part of a bigger company. The worksite began considering developing a CTA scheme due to external pressure from the

CTA research project manager. The company had agreed to be part of a research project investigating and developing the potential of CTA. Furthermore the worksite had an external food service operator and the external operator company had also agreed to participate in the research project. Since the project wanted to investigate the possibilities of CTA in a blue collar setting this particular worksite was suggested as an option. As described by Mikkelsen (2004) there are typically two ways of providing foodservice at worksites in Denmark; either an internally driven canteen or an external operator using the foodservice facilities owned by the worksite (Mikkelsen 2004).

The worksite is a blue collar worksite producing biotechnical products. 80 % of the employees are working in the production, while the last 20 % are secretaries or have other types of office work. The blue collar workers have shift work with three shifts working round the clock. The evening shift had food delivered from a local fast food shop, which supplied meals with high content of meat and high energy content. In the following the shaping of the scheme is presented and in the presentation these involved actors are included; the CTA project manager, the vice manager (member of the canteen board), the first kitchen manager, the second kitchen manager, employees at the worksite and the main author.

The initial idea with CTA was that it could provide the employees working daytime with a meal they could bring home. When the project manager for the CTA research project was aware that the evening shift had food delivered from a fast food supplier, she suggested that when they had established CTA they could expand the scheme to also provide the evening shift with food. She argued that the CTA meals would be healthier than the meals provided by the local fast food deliverer. The first kitchen manager thought CTA was a great idea, but he only wanted to sell CTA once a week. The vice manager, who participated in the planning group because he was a member of the canteen board, did not think it would be sufficient to only sell CTA once a week. The interviews with employees before the scheme was developed showed that they also wanted an option more than once a week. The vice manager also made it clear that the meals should have a high level of meat otherwise it would just confirm the employees' prejudices about the scheme:

*"I heard in the factory that they were prejudiced. They were saying that it would probably be some salad crap and so on. And I had heard that and reported it back saying be careful about the meat... They are meat lovers many of them"* (Vice manager)

Just as the overall lines for the design of the scheme was clear the first kitchen manager resigned. A new manager was quickly found, and he had experience with CTA from his former worksite. He presented the idea that CTA should be sold every week day, and furthermore he showed interest in becoming the new supplier for the evening shift instead of the local fast food shop, as suggested by the CTA project manager. He believed that CTA could be an option for both the day shift to take home and for the evening shift to eat during their break. He was also aware that the scheme should be as flexible as possible with respect to when to order and buy the food in order for most employees to use it. In order to offer CTA all week days the meals became the same as the hot meal served for lunch, with this solution it also became easier to make the CTA scheme flexible. The ordering

deadline for CTA was decided to be at 11 AM same day as they could take the meals home. During the first couple of months the scheme became even more flexible as the ordering deadline was changed to 1 PM if ordered directly in the canteen. The ordering deadline was still 11 AM if ordered via the intranet. There were made two options for picking up the meals. The first option was that the employees could pick up the meals from a refrigerator placed on the staircase into the canteen. The other option was to pick up the meals from a refrigerator at a break room over the production area. There were two options because it was too much of a detour for the production crew to go to the canteen to pick up the food, and the same was applicable for the office personnel, if they had to go to the break room to pick up the food. In both cases the meals could be picked up from 2 PM.

When the service was introduced the price was 30 DKK pr. meal (approximately \$5,5), after two months the price was raised to 40 DKK (approximately \$7). The second kitchen manager had originally suggested that the price should be 40 DKK, but the CTA project manager wanted to make a price experiment and offered the kitchen manager compensation for the difference between 30 and 40 DKK. She argued that the low price would attract employees to try it and they would continue to use it although the price was raised. It turned out that the raised price made some of the users stop ordering CTA and after half a year the price was lowered again. The kitchen manager chooses to lower the price on CTA because the CTA scheme is a business to him. Since the kitchen is a company in the company and there is made a contract between them, there is no financial support to CTA from the worksite. Due to the lack of financial support the CTA scheme needs to break even in order for the kitchen manager to maintain a healthy business.

During the first half year of the CTA scheme's existence the second kitchen manager several times showed interest in selling CTA for the evening shift. This had already been suggested by the CTA project manager at an earlier time. To begin with the member of the canteen board was very reluctant to this idea. It turned out that the fast food solution was a benefit they had on this one site, and it had never been approved by top management of the company, which has several worksites. The vice manager was afraid if they changed from the fast food deliverer to CTA the word would spread to other sites with the consequence that it would be disapproved. As he was considering how to handle it he noticed that the fast food option was not used as much as it had been earlier and that it would be a cheaper arrangement for the site if they changed to CTA. Furthermore the canteen board was of the opinion that the fast food solution was unhealthy, but they had not been able to find an alternative that could meet the requirement of delivering almost every day of the year. After the first half year CTA became the meal option that the worksite provided for their evening shift.

## **Discussion**

The aim of the article is to investigate the shaping of CTA scheme at a blue collar worksite in Denmark and show how the concept interact with earlier and present interactions among actor groups at the workplace and thereby shape the local CTA scheme. It also

investigates how a concept that is introduced into an organization is given different meanings and which mechanisms that is related to the change process.

In this case study we have identified three issues, which have affected the shaping of the CTA scheme:

- Considerations about CTA meal price
- Considerations about equality among the employees at different work shifts
- Considerations about what good food is

### **Considerations about CTA meal price**

The case study shows price is an important part of the overall CTA concept, and that the price is determined by negotiations between the different actors in the change process. The external CTA project manager used an argument about attracting users to the scheme to persuade the other actors to follow her arguments about a low introductory price. After an introduction period the price was raised. The increased price had a negative effect on the number of users, and the price was lowered with the aim of increasing the employee interest again. The users of the scheme tried to influence the pricing by choosing not to buy CTA. Studies have found that price can have an effect on sale of take-out meals. In a Dutch study price has been found to influence the use of take-out meals. High price was found to be an obstacle for frequent use of take-out meals (Costa et al. 2007). In studies of CTA at a white collar worksite and at two hospitals the users also expressed that there is a limit in relation to the CTA meal price and some non-users found the meals too expensive (Poulsen, Jørgensen 2011) (Poulsen et al, submitted).

### **Considerations about equality among the employees at different work shifts**

The findings show how negotiations about equality in the food supply opportunities among the employees at the different work shifts were part of the shaping of the local CTA scheme. This negotiation was seen in the considerations about whether the CTA meals, besides being offered to the day shift, also should be offered to the evening shift as an opportunity for buying meals for consumption at the workplace.

Despite willingness from the kitchen manager the canteen board was reluctant to follow the suggestion from the external CTA project manager. The canteen board was concerned that the hidden financial contribution to the external supply of fast food to the evening shift would become visible and known at other worksites and by the top management if they changed to CTA. This could put this worksite's existing practice under pressure because the company did not have clear norms (Hildebrandt, Seltz 1989) for financial support for evening and night shifts. The considerations implied that financial perspectives (concerns about financial contribution to food to the evening and night shifts) were given higher priority than the culinary and nutritious perspectives (the possibility of changing from fast food meals with high fat content to more varied and healthier meals). That the canteen board decided to give economic support to the CTA food for the evening shift shows how an external actor can play a key role in a change process. The CTA project manager, provides new angles to the discussion by arguing that the financial support given to the evening shift is not different from the support given for the day shift's lunch buffet.

Thereby she succeeds in establishing consensus about the financial support for the scheme. The findings show that the CTA concept is interpreted differently by the involved actors.

### **Considerations about what good food is**

We identified a conflict between local values of the worksite on the one hand and meanings from the CTA project manager on the other hand with respect to the content of the meals. The case study shows consensus at the worksite about 'good food' as big portions of food with a big meat content. This consensus is challenged by the CTA project manager when she assesses the CTA meals as having a bad nutritious quality. When it is suggested that the CTA meals should be modified the social constitution of the workplace works as a filter towards this idea. This conflict shows how the external CTA project manager interprets CTA schemes as health promotion with dietary aims, while the local vice manager articulate CTA as a service contributing to work-life balance issues and without dietary aims. He is afraid that a change towards smaller portions of food and with less meat would challenge the employees' use of the CTA scheme. When the vice manager chooses to defend the food quality values of the employees they gain influence on the shaping of the CTA scheme.

The employees were concerned that the CTA meals would have too big a proportion of salad or vegetables in the meals and that the meals would not be of a sufficient quantity. It has been found that meat is a marker for masculinity in various national cultures (O'Doherty Jensen, Holm 1999) and that meat dishes is preferred by blue collar workers who also express a need for meals to be filling (Roos, Prättälä & Koski 2001). The expectations to the size of the portions are confirmed by studies of other convenience meals. In a focus group interview study it was found that the volume of "ready meals" was not expected to be filling enough for males (Prim, Gustafsson & Hall 2007).

Kamp and colleagues (2005) argue that conflicts can be beneficial in a change process as it can help generate compromises between actors as it can break existing interests and new interests can develop. In relation to the healthiness of the meals the conflict implied an increased attention to the employees' expectations as users of the scheme while the conflict did not change the local values of 'good food' towards more healthy food.

We see the increased attention to the employees' expectations to the CTA scheme as a dilemma between developing the scheme in a user oriented direction on the one hand and in a more nutritious direction on the other hand. In this case it was not possible to unite these two aspects, but other studies have found that it is possible to develop healthier meal schemes at blue collar worksites (Lassen et al. 2007). The study of Lassen and colleagues (2007) emphasizes the importance of employee participation and positive communication about healthier meals with focus on pleasure from eating and for example not focus on weight loss in order for the employees to support health promoting activities. In the CTA project the communication about the CTA scheme becomes a matter of not giving the scheme a negative reputation among the employees and positive communication was maybe not emphasized enough. Employee participation was part of the CTA project through the employee members of the canteen board.

The study did not include a study of the long-term embedding of the scheme, even though we recognize the importance of such studies.

## **Conclusion**

We have explored how the CTA concept is shaped into a local CTA scheme at a blue collar workplace during the planning of the scheme. The study shows how the concept mostly was shaped by the local workplace context and not by the healthy eating aspect of the concept which the external project manager promoted. Specifically the study has found that price is an object of negotiation between the involved actors. Furthermore considerations about equality among the different work shifts of employees contributed to the shaping. Finally, the study also showed that the local support for the CTA scheme was challenged when the external project manager tried to push the local CTA scheme in a dietary healthier direction. This shows a potential conflict between improving nutritional aspects and employee participation in the shaping of dietary health promotion at blue collar workplaces. However other experiences from dietary health promotion at blue collar workplaces show that it is possible to develop support for healthier meals.

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## Results across the case studies

In addition to the results presented in the articles, some results have been found across the different studies.

### Development

From the perspective of the kitchen, the kitchen managers emphasized that with CTA there is only one chance. They were very much aware that they had to do it right the first time, because they believed that the same attention could not be generated a second time. Not only kitchen managers were aware of this perspective; also other key stakeholders were conscious of only having one chance:

*“For me, it is important that things succeed the first time... Some are quick to judge... and if something doesn't succeed, they point their fingers immediately and then such a scheme is actually half-dead, and that would be a shame.”*

(Vice manager, Medical Production)

At Hospital A, it was also stated at an early stage that you only get one chance. Later, they changed the CTA concept radically in order to revive CTA at the worksite. It has not been possible to follow whether or not the changes have made a difference.

Based on the considerations about only getting one chance, several of the kitchen managers also emphasize the importance of having sufficient resources to develop a new service. They argue that establishing a CTA scheme should not be at the expense of the other services they provide.

*“I think that the most important thing... what is crucial to me, is that you need to have the resources... Well, if it is hack work then the level of success is already given and it will be zero.”*

(Kitchen manager, Financial Company)

### Packaging

Some users have commented on the packaging of CTA. These comments are primarily related to the fact that for some people the packaging resembles the food service for senior citizens. In every case, a few users have commented on problems connected with transporting the meals home, if they bike to work. It is particularly a problem that the trays are packed in paper bags, which become useless in the rain. A user at Hospital B finds that the packaging must have been designed for users with cars. At Medical Production, another user finds it a matter of how many meals that can be transported on a bike – two portions are manageable, but more than that is a problem.

As part of the concept change at Hospital A, it was planned to use biodegradable plastic bags, since they were aware that many of their employees bike to work and plastic bags are therefore more practical.

### Everyday life activities

A few male users across the cases expressed that CTA makes it possible for them to contribute to family life.

*“At home we joke about it: now Dad has cooked again.”*

(User, Medical Production)

It is men under the age of 50 who say that CTA makes them feel that they contribute to solving one of the everyday household activities. Older male users describe how they primarily use CTA because it solves practical issues:

*“I need to use it on Thursdays [...]. My wife has yoga lesson that day [...]. It fits very well that I can bring food home on Thursdays, because I never cook at home.”*

(User, Medical Production)

In the focus group interview with non-users, the male participants expressed that CTA was not an actual option for them, because their wives normally cooked dinner for them. Among the female interviewees, there have been no expressions of CTA helping them contribute to everyday household activities.

### Administration issues

From a planning perspective, the cases had different experiences with regard to the regulations of the food and veterinary administration. This was particularly the case at the white collar worksite, because when they planned their CTA scheme it was very new, and the Danish Food and Veterinary Administration had difficulties assessing which rules the worksite had to follow. When the CTA research project began, the rules were still not completely clear, which the canteen manager at the white collar worksite discovered after talking to a superintendent from another region who said that he would not have approved the scheme at the white collar worksite. Another superintendent had approved the scheme before this. It was particularly in the two cases with kitchen managers who were trained chefs that emphasis was placed on these rules and that they were a barrier in the process. The problem relates to whether CTA should be considered “sale from counter”, like food sold in the supermarket, or “sale over counter”, like take away meals sold from restaurants. Different rules apply, and one significant difference is whether the meals need to be labeled with a list of ingredients or not.

At the two hospitals, the kitchen managers are trained as kitchen managers (before the scheme was changed at Hospital A). They are used to preparing food based on recipes, which makes it easy for them to prepare labels if required. Since the chefs do not follow

recipes, they are more interested in having their concept considered as “sale over counter”, because it would be difficult for them to make a list of ingredients.

## Discussion

This section presents two main discussions. The methodological considerations are elaborated and discussed first, and thereafter the results are discussed across the papers in order to emphasize similarities and differences between the four cases.

### Methodological reflections

The qualitative methods were chosen because they were found to be the best methods when investigating social and human experiences. There has not been symmetry between how the different methods have been used in the different case studies. At Financial Company, Hospital A, and Medical Production, I interviewed the different stakeholders. At Hospital B, I interviewed some of the stakeholders and conducted focus group interviews with other stakeholders. At Medical Production, I participated in the meetings held in the planning phase; therefore, I had the opportunity to observe the process closely.

The choice of making focus group interviews was based on a request from Hospital B. They wanted an evaluation of their CTA scheme and asked if I could do that as part of generating my data. The hospital was not interested in a quantitative evaluation, e.g. a questionnaire; they were interested in the underlying causes. Based on their considerations and considerations from my part regarding what I wanted to gain from the evaluation, we decided to conduct focus group interviews.

The difference in methods was based on which possibilities were given to me. Participating in meetings in the planning process at Medical Production contributed with much background information about the workplace and its history. In the analysis of the case, the information gained from participating in the meetings contributed with an increased understanding of the social constitution of the worksite.

The difference in symmetry in methods across cases affected the comparative analysis slightly, since the data material was generated via slightly different methods. Particularly the focus group material may have generated stronger points of views, because the participants influenced each other. On the other hand, it seems that the different methods generated information that is comparable. Furthermore, using exactly the same methods should not be considered to be a guarantee for generating exactly the same information in each case.

In the interview situation, the interviewer plays an important role, because she is obtaining knowledge while at the same time being engaged in the social interactions between herself and the interviewee (Kvale 1999). The interviewer has to be aware of and avoid systematic bias, and also assure the research process' validity. It is important to be aware of the roles of the different actors in the process, and also of how the social interaction with the interviewer can have influenced the interviewees. When analyzing the shaping of a concept, such as CTA, it is important to have an understanding of the different actors' roles.

The interviews were all conducted at the different worksites. They were all conducted in a good atmosphere. I had prepared interview guides that outlined relevant topics. The guides were not followed strictly, but were used to guide the interviews. I tried to cover all the relevant topics while also following the flow of the conversation and encouraging the interviewees to elaborate on their thoughts and feelings. At the beginning of each interview, I introduced its purpose and context. The interviews ended with a debriefing about how the data would be handled prospectively, and I thanked the interviewee for the time spent on the interview. Then, I asked finally whether the interviewee had anything more to add.

At one of the first interviews with kitchen personnel, I learned that when interviewing them it was important to ask questions of a very practical nature and to ask them for many examples. In advance, some of the kitchen personnel were a bit reluctant about participating; they did not think they could contribute anything. During the interviews, as they began to give examples, they elaborated on some of their answers on a broader level.

The two focus group interviews were divided into an interview with some non-users and an interview with some users. In the group of non-users were employees representing the technical support department and nurses from different wards. Two of the participants were men, while the other four were women. Two participants did not show up for the interview.

At the user focus group interview, nurses from different wards participated and all eight participants were women.

Participants for both focus group interviews were recruited by the HR representative and the kitchen manager. They had split the task; the kitchen manager found participants among the non-users, while the HR representative found user participants.

The two interviews were held on two consecutive days, with the non-user focus group first. The first focus group interview did not last as long as the second, and the participants in the first did not talk as much as those in the second group. One of the premises for focus group interviews is that the participants should discuss subjects among themselves (Halkier 2008). This only happened to some extent in the non-user focus group interview, whereas there was much more discussion among the participants in the user focus group. The difference in the two interviews may have been caused by me as interviewer, the participants, the context or a combination of these. The two interviews were not conducted in the same room; the first room was smaller than the room used the next day. The small room made it difficult to place the tables as I would have liked; I ended up sitting at the end of the table with the participants sitting on each side. This affected the interview, because it separated me from the group of participants and made me too much of a leader of the interview (Halkier 2008).

As part of my preparation for the focus group interviews, I had made a guide with different topics and prepared an exercise. In the exercise, each of the participants should prioritize five different types of take away meals. The exercise was very successful in both focus group interviews, making conversation among the participants easier.

The combination of different methods is far from new, and it has been stated that combining focus group interviews with other methods can be very beneficial (Halkier 2008). I had made individual interviews with the HR representative and the kitchen manager before I made the focus group interview, and I had also gained information about CTA from interviews at the Financial Company and at Hospital A. I thereby had information regarding the specific scheme as well as how other users and non-users had talked about CTA. Interviewing both users and non users about CTA fulfils the principle of symmetry (Law & Bijker 1992, Bloor 1976).

When doing dialogue research with both interviews and the possibility of follow-up meetings with the participants, it can be challenging to find a balance between proximity and distance. The advantage of proximity is the insights it allows, while the drawback is that the researcher can influence or be influenced by the interviewees (Maaløe 2002). The interviewees also have an expectation about the role of the interviewer. As researcher, it is important to find a balance between proximity and distance – you need to be near in order to motivate the interviewees to share their opinions, and at the same time keep a distance (Maaløe 2002, Bengtson 1981).

Proximity and distance are also important in relation to the analysis of empirical data. The balance between proximity and distance from the interview situation can be changed when interpreting your data. Use of theory is a way of obtaining further distance, because the theory can lead to interpretations outside of the interviewees' self-understanding (Hviid Jacobsen, Kristiansen & Prieur 2002).

As interviewer, it is important to be aware of your pre-understanding when preparing and executing the interviews. I tried to do this by keeping an open mind and developing interview guides with open-ended questions. I was also aware that the interview situation should not be regarded as a data recovery method, but rather as a scene for social interaction (Alvesson 2003), keeping in mind that the situation can be affected by norms and expectations about what the interviewer wants to hear.

In the methodology section, I present arguments for the choice of the specific cases. In addition to the methodological considerations, the choice of cases was also based on a more pragmatic approach, since three of the four worksites were required to be engaged in the process of considering establishment of a CTA scheme. Due to the financial crisis, many companies withdrew their initial interest in CTA. As stated by Flyvbjerg (1991), it is possible to generalize the findings in single case studies; he even argues that formal generalization is overrated and the "force of example" is underestimated. He also argues that concrete context-dependent knowledge is more valuable than the search for predictive theories and universals. The cases in this study have different contexts, and this was taken into consideration when the research design was considered. I wanted to investigate CTA in different worksite contexts in order to gain information about whether the differences had

an influence on shaping the CTA. The differences contributed to developing understandings of how different types of worksites shape their CTA concept.

The quality of the research design was ensured by continuously discussing the research design with my supervisors as well as at Ph.D. courses. Another aspect was to be aware of the criticism of case studies and qualitative methods, and if possible try to incorporate this criticism in the research design.

## Reflections on the findings

The findings have been discussed separately in the four papers, in the following the findings are juxtaposed in order to find similarities and differences between the cases.

The discussion combines an exploratory approach and an explanatory approach to case studies (Yin 2003:5-6). An exploratory approach contributes with an understanding of the different cases and helps describe the field of Canteen TakeAway, whereas an explanatory approach helps understanding the context and the shaping of the Canteen TakeAway cases and helps understand the similarities and differences among the cases. By combining the two approaches, the analyses should help develop an understanding of **what** CTA is and **why and how** it is developed.

Theoretically, the discussion is based on the theoretical framework for the thesis, which has been applied in the different articles. I include perspectives from the theory about social shaping of technological systems, especially the concept of script and inscription, both when discussing the design of the schemes and when discussing the different user and non-user practices. Related to the user practices are also the perspectives from the domestication theory, which focuses on use as a process of appropriation into a person's everyday life. Finally, I include the social constitution of the worksite in order to highlight political aspects involved at the worksite in connection with developing CTA schemes.

### **What problems are CTA schemes designed to solve?**

On the basis of findings from the four cases, I identify two overall problems that CTA schemes have been designed to solve:

- Meals to take home in order to contribute to a better work-life balance for employees
- Meals to eat at the worksite for employees who work outside the worksite canteen's opening hours

In all four cases, CTA is linked to discussions about how the worksites can contribute to a better work-life balance for their employees by offering the possibility to buy the evening meal at the worksite and take it home. As mentioned, the design of a CTA scheme in two of the cases was also linked to problems of supplying meals to employees who work on evening and night shifts. When working irregular hours, it can be difficult to get food, since the worksite canteens are normally closed.

The case studies show that the percentage of employees who use a CTA scheme is influenced by the extent to which employees experience work-life balance (some non-users indicate that there is someone at home to cook for them) or work irregular hours, but also by whether or not the local CTA scheme offers a solution to the problem. The detailed discussions later in this chapter show that the question about whether and when the CTA meals have to be ordered in advance may hinder some from using the CTA scheme. The case studies show that the percentage of employees using the CTA scheme at the different worksites differs. In the Financial Company, about 30 percent of the employees use CTA on a regular basis, while in Medical Production, 10-15 percent of the employees are combined users who either take meals home or eat meals at the worksite during the evening shift. The two hospitals have lower percentages of users. At Hospital A, the number of users before the most recent change of concept was as low as 20-30 employees out of a total of 4000, which is less than one percent of the employees using CTA; and at Hospital B, approximately six percent of the employees use the scheme. These numbers show that the Financial Company and Medical Production worksites have been able to create a solution that solves a problem for a reasonable number of employees, while others have been less successful.

In the following, I discuss the main issues that have been identified that are related to the shaping of CTA schemes. The issues included are not based on a quantitative evaluation of how many times they have been mentioned during the interviews with users and non-users of a CTA scheme at one of the four worksites. This is because the methodological approach recognizes all the problems mentioned as issues relevant to the discussion of the design and use of CTA schemes. Each section in this chapter includes an analysis and comparison of the meanings that are ascribed to the different CTA schemes, and a discussion of whether and how the CTA schemes have become a solution to an articulated problem at the different worksites. Together, these issues also indicate issues that need to be in focus in future designs and analyses of CTA schemes. The following issues have been identified and are discussed in the following sections:

- Integration of CTA into employees' daily life
- Healthiness of the CTA meals
- Culinary aspects of the CTA meals
- Integration of CTA food production into present food production
- The process of designing the CTA schemes

#### **Integration of CTA into employees' daily life**

The interviews within the four case studies show that for the CTA users, CTA becomes a coping strategy in relation to the scarcity of time in their daily lives. Some users relate time scarcity to the management of their private after-work activities in a hectic everyday life, which allows limited time for cooking at home; others relate problems with time scarcity to the work-life balance, because they might suddenly be required to work extra hours and thus worsen the possibility for shopping and cooking at home. Some of the users of CTA become users from other reasons than time scarcity, but as they began using CTA on a

regular basis, they came to realize that CTA became a solution that released time for activities that had not been part of their daily lives. Originally, they had not ascribed this meaning to the CTA scheme; rather it emerged as a result of using CTA regularly. This is an example of how meaning can shift during domestication of a product, as proposed by Pantzar (1997).

The case studies show that choices made in the process of designing a CTA scheme influence whether or not the employees choose to use CTA. Some choices in the design process affect whether the employees can integrate the CTA scheme into their everyday routines, and thus whether CTA becomes a coping strategy to solve the problem of time scarcity. Especially two issues have been mentioned as affecting potential users: whether and when the meals need to be ordered in advance; and the price of the meals. In the following, I discuss how both issues are shaped and negotiated between the worksite and the employees.

In the four cases, the worksites developed a CTA scheme based on a script that inscribed an expectation that the users could accept the necessity to order the meals in advance. The script also reflects the fact that the worksite kitchens produce the meals during a short period of time during the day, whereas fast food shops like pizzerias make food to order. Pizzerias are considered by users and non-users, as well as kitchen staff, to be an alternative to CTA. The difference between them is that fast food shops have no ordering deadline, apart from their closing time usually late in the evening.

The case studies show that the need for CTA schemes to have an ordering deadline is co-shaped by the worksite's need to plan CTA food production ahead and the need some employees have for flexibility in planning daily cooking at home and thus the need for the latest possible ordering deadline. One aspect shaping employees' need for the latest possible ordering deadline has to do with the possibility for planning the workday. This is especially the case when employees know that they might have to work overtime the same day in order to finish certain tasks. The need for flexibility is also shaped by households' different approaches to planning cooking at home. The interviews show differences between a long-term planning approach, where meals are for example planned one week ahead. In such cases, the menu plan of the CTA scheme can be used in the planning, since it is possible to order CTA meals for specific days on-line from home. Other households have a more day-to-day or maybe last-minute planning approach to cooking at home the same day. Some interviews at Hospital A show that employees who either have to plan, or are used to planning, the cooking the same day need the latest possible ordering deadline, because during a busy working day it might be difficult even to find time to order the CTA meals.

The cases show how ordering deadlines become an object of negotiation at the worksites. At Medical Production, there is direct negotiation between the vice manager and the kitchen manager, whereas negotiation at the two hospitals is via the user surveys. The

ordering deadline is being changed in three of the four cases. At Medical Production and Hospital B, the deadlines were also changed to the same day as the meal is delivered, while Hospital A finally skipped the deadline when it was decided that the CTA meal should be sold through the visitors' cafeteria and be the same meal that was on the daily menu there. An interview at Hospital A indicated that no ordering deadline could imply that employees who are able to plan ahead and order in advance might not be certain of being able to buy CTA meals. In all the cases where the deadline was changed, the kitchen staffs accepted the change, because they had gained experience with production of CTA meals and learned how much time is required for them to produce them.

Jabs and colleagues (Jabs et al. 2007) discuss three different strategies for constructing time for food provisioning in households: planning, coordination and prioritization. The planning strategy is related to planning meals for the following week in order to fit this into the activities for each day. The coordination strategy involves coordinating different activities and responsibilities; an example could be sorting the laundry while cooking dinner. Finally, the prioritization strategy relates to making priorities in everyday life; an example is to prepare home-cooked meals when there is time to do so, and on the other days to buy some kind of take out meal. The case studies show that the use of CTA can be characterized as either a planning strategy or a prioritization strategy. The planning strategy relates to the ordering deadline of CTA. As already stated, the ordering deadline might exclude employees who do not plan ahead or do not have the possibility to plan ahead. In accordance with the findings of the case studies, Jabs and colleagues (2007) argue that many things can interfere with the planning strategy, like urgent tasks at work. Planning is also mentioned by Devine and colleagues as a food choice strategy for employed parents (Devine et al. 2009), together with other strategies, such as feeding the children first and speeding up the cooking by serving meals that are quick to prepare. The use of quick-to-prepare meals is also mentioned by CTA users as an alternative strategy to using CTA.

For some employees, using CTA as coping strategy requires prioritization, both of activities and economy. Some choose to buy CTA because it makes it possible for them to engage in other activities instead of cooking. The price of CTA meals is a matter of prioritization for some potential users who find the price to be too high and choose other options. The case studies show different mechanisms for determining price. At Financial Company, the price is based on the price of a pizza, because the kitchen staff considers pizza to be a competitor to CTA. At Hospital B, the price is based on careful calculations to indicate when the scheme would break even. At both Medical Production and Hospital A, the price is based on demand for CTA. At Medical Production, the price was increased after an introduction period, but since the higher price caused a decrease in CTA orders, the price was lowered again. At Hospital A, the price was lowered as a consequence of the continuously falling number of orders.

For employees working irregular hours, it is necessary for them to be able to integrate CTA into their daily lives. It is not only the ordering deadline that becomes an obstacle for them,

but just as much the pickup time. At Medical Production, meals are delivered to a refrigerator where employees can pick them up when they want to. At Hospital A, the pickup time does not correspond well with the evening shift's working hours. Initially, CTA was proposed as a solution for the staff working irregular hours, but the scheme did not seem to solve the original problem, because the staff could not pick up the meals during the pickup period. The subsequent change of the entire scheme has made it possible for the evening staff to make use of CTA.

### **Healthiness**

One aspect of the design of the CTA schemes relates to the content of the meals. Especially the healthiness of the meals is negotiated by the kitchen staff, users and management representatives. The kitchen staff makes a proposal regarding this aspect, which may have the ambition to develop a healthy scheme; however, the cases show that healthiness is in some cases continuously negotiated during the existence of CTA at the worksite. The overall issue when negotiating the healthiness of CTA meals is how healthy the meals should be. Related to this are considerations about the size of the portions and different opinions/practices about healthiness. The discussion includes perspectives related to both CTA meals to take home and for staff working irregular hours.

In three of the four cases, users do not decide to become users due to health concerns, but health does become an issue after they have made this decision. At Medical Production, some employees state that the level of healthiness will affect whether or not they will use the scheme. In the other cases, they do not take the health aspects of CTA into consideration when making their decision to become users. This can be a reflection of a change in the meanings ascribed to CTA, as part of the domestication process. The interest in healthiness of the CTA meals occurs after the users have started using CTA; this could be a reflection of the fact that CTA use gradually becomes routine, whereas originally it was an object of sensation. The users describe how in the beginning they were just happy to have the possibility to buy CTA, but as they became used to it, they began to focus on the content of the meals. Meanings about and expectations for routine objects are different from those for objects of sensation. The cases show that healthiness becomes an issue as CTA becomes domesticated in the users' lives. However, in one case – the CTA scheme at Medical Production – too healthy meals became an issue that influenced whether employees would subscribe to the scheme to a substantial degree.

The type of workplace influences the level of healthiness of the meals, whether the meals are articulated as healthy, and how they should be articulated. At one end of the continuum is the Medical Production worksite, where the shop floor employees articulated clearly that they are not interested in too healthy meals; their priority is big portions with lots of meat. Medical Production is a male-dominated worksite, which can have an impact on the employees' wishes regarding the level of healthiness of the CTA meals (Groth et al. 2009). The kitchen manager becomes aware of the employees' wishes and chooses to develop the scheme to fit employees' expectations. National dietary surveys in Denmark have found that a significant number of men never strive to eat healthy on a daily basis

(Groth et al. 2009). Furthermore, the latest national dietary survey also shows that more than half of the men participating in the survey eat more meat than is recommended in the dietary guidelines (Pedersen et al. 2010). The employees at Medical Production seem to fit these findings, since they are not interested in the CTA meals being “too healthy” and want large portions of meat. At the other end of the continuum is Financial Company, where the meals have become healthier over the years as a consequence of wishes from the employees. The employees at Financial Company represent another type in comparison with Medical Production, because they are primarily white collar workers with medium to long higher education. The national dietary surveys find that men with long higher education eat more in accordance with the dietary recommendations than those with only basic schooling (Groth, Fagt & Brondsted 2001). Also women with medium or long higher education were found to have the healthiest dietary habits. Financial Company’s employees’ wish for healthier CTA meals is a reflection of their general dietary habits, which based on the findings from the dietary surveys seem to be healthier than average. The interviews show clearly how users’ assessment of the healthiness of CTA meals is associated with their everyday life practices. Users who perceive many vegetables as important in order to eat healthily shape their opinion about CTA on this perception, while users with other perceptions likewise shape their opinions about the healthiness of the CTA meals on their daily norms. This is clear from the interviews at Financial Company, which show how differently the different users’ describe the healthiness of the same meals.

### **Culinary aspects**

Both during the development of the scheme and when the scheme is in use, culinary aspects contribute to shaping the scheme. Particularly in the development phase, the scheme is shaped by the kitchen managers’ ambitions for the meals’ culinary level. In addition, considerations about economy and the users’ expectations about the culinary level influence the shaping of the scheme.

The culinary level is affected by considerations about economy. The price of the meals and the financial support from the worksite set a limit to the culinary level. Only one of the four cases receives direct financial support for CTA from the worksite; the other cases have had to integrate the production of CTA into the present food production without an increase in resources. This means that the same staff had to integrate an extra task into the kitchen’s daily tasks of. At Financial Company, where the company has supported the scheme financially, they have very clear ambitions about the culinary level of the meals. The financial support was related to the number of staff in the kitchen, the number of tasks, and the kitchen modifications required. Kitchen staff made it clear that they could not continue to carry out all their tasks if they were to establish a CTA scheme. The management acknowledged this and supported the kitchen staff’s dispositions.

Development of a CTA scheme would require modifications of the kitchen, which the company also supported financially. There seems to be a link between the culinary level of the CTA meals and whether the schemes receive financial support. This is reflected by the fact that only the kitchen staff at Financial Company claims that their meals are equal to what is served at restaurants.

The users express expectations about the culinary level of the meals. Their expectations are based on their previous experiences with CTA at the worksite and what they could prepare themselves. The perceived lower limit for the culinary level of the meals differs among the cases, and a clear link exists between the culinary expectations and the price of the meals. The meals that are most expensive are also expected to have a high culinary level, whereas the users of the less expensive meals at Hospital A have lower expectations to the culinary level. In general across the cases, users expect the culinary level to be higher than that offered by convenience solutions to be bought at the supermarket. A study of convenience consumers' needs and demands for readymade meals found that users expected readymade meals to taste out of the ordinary (Prim, Gustafsson & Hall 2007), which supports the findings from Financial Company, Medical Production and Hospital B, whereas some users at Hospital A state that the low price influences their level of expectation. Beside the general expectations to the culinary level, there are particular ingredients that seem to be controversial for some users. Primarily fish is mentioned as an ingredient that divides the users. The possibility of buying meals with fish is positive for some users, while other users consistently choose not to buy the meals with fish. In all of the four cases, some users expressed a personal wish for the kitchen to offer a second meal on days where the CTA meals contained fish. The choice of buying or not buying CTA when the meals contain fish is another example of the users' individual adjustments to the script. The majority have accepted that the meals sometimes contain ingredients they do not like and have made their own de-scriptions accordingly.

The culinary aspects of the meals have not been the subject of explicit negotiation. In one case, users tried to shape the culinary aspects of the scheme that was related to their children. At the Financial Company, the CTA scheme was renegotiated after complaints about the special children menu. The users wanted their children to eat the same meals as the parents. The kitchen manager accepted their complaints and changed the scheme. At Hospital B, some non-users were convinced that the CTA meals were not suitable for children. This opinion was based only on the menu presented to them; they had not tried the meals.

### **Integration into present food production**

The cases show that it is not only the users who need to integrate CTA into their everyday lives; the kitchens in the four cases also needed to consider how to integrate the production of CTA meals into the existing food production. The decision of how to integrate production of CTA into the kitchen's food production is based both on considerations about capacity and economy. Capacity and economy are not two isolated subjects; they are to some extent related. Furthermore, organizational structures can complicate this decision-making process.

In general, conditions such as storage and cooling facilities, space, and number of employees influence how production of CTA can be integrated into the daily routines in the kitchen. The shaping of the scheme is also affected by economic considerations about the possibility to include another service, such as CTA, in the existing services provided by the kitchen.

The strategies for including an extra service have varied among the cases. In order to keep the production costs low, Medical Production decided that the CTA meal should be the same as the hot meal served for lunch. A similar strategy was used at Hospital A, where the CTA meals became a modified version of the meals served for the patients. Hospital B used another strategy; they decided to offer CTA meals twice a week, because this made it possible for them to integrate the production of a completely separate meal into the present food production. Only one of the cases cut down on some of their other services in order to be able to integrate CTA production into the present production. The kitchen manager at Financial Company was very clear in his opinion about capacity and economy; he could not include another service in addition to the existing number of services without changing or cutting down on some of the other services. He therefore cut down on the service of providing coffee by buying a hot drink dispenser so that employees could help themselves. None of the other kitchen managers have had the same considerations; they have integrated CTA into their present food production without reducing the other services they provide.

The kitchens that prepare CTA meals from scratch developed their schemes to be flexible in relation to other tasks in the kitchen. An example of this is found at Financial Company, where the kitchen places less popular meals on the menu in order to adjust the number of orders, if they know they have many other tasks on the same day. At Hospital A and Medical Production, the scripts are shaped in such a way that they can continue with their other tasks in the kitchen.

As discussed earlier, the kitchens establish schemes with ordering deadlines in order for them to be able to plan ahead. The ordering deadline is set on the basis of considerations about how they have designed the rest of the scheme. This means that if they have decided to make separate meals, they need to plan for delivery of special ingredients and the fact that it is more time consuming to prepare a separate meal than more portions of the meals already in production. The kitchens all try to set the deadline to be as flexible as possible for the users.

### **The design process**

The cases show how the four CTA schemes develop in different directions. From the results, it is clear that the design process of each CTA scheme is unique and that internal organizational aspects, as well as external aspects, influence the design process. Three of the four cases have had some kind of contact with the CTA research project that has influenced the schemes to varying degrees. The cases show that it can be difficult to create a scheme that solves an identified problem. It is also clear that the idea of CTA emerges from different places in the four organizations, and that the conflicts that arise are part of the shaping processes.

As discussed previously, the number of actual users of CTA is rather limited compared to the potential users, and in only one of the four cases did the idea of CTA emerge from among the employees. Based on these facts, it is interesting to investigate what were the explicit reasons for developing the CTA schemes in the four cases and relate this to the problem-solution discussion.

Three of the cases have been influenced to varying degrees by the CTA research project. These are Medical Production, Hospital A and Hospital B. At Hospital B, they wanted to improve the employees' work-life balance and also attract new employees to the worksite. They used the CTA research project as inspiration for developing their scheme at the beginning of their design process. At Medical Production, the CTA research project was more directly involved in the process, because the CTA research project manager introduced the concept to management with the aim of developing a CTA scheme at a blue collar worksite. At Hospital A, the CTA research project indirectly influenced the co-shaping of problems and solutions. The initial problem identified at Hospital A was that it is not possible for the employees working irregular hours to buy food, because the canteen is closed. At some point when the problem was discussed by the canteen board, CTA was suggested as a possible solution to this problem. During the process, the solution seems to have been shaped in a way that did not solve the original problem. When the solution was redefined, it seems to have generated a mismatch between the *expected users* of CTA and the *actual users*, which can explain the limited number of users at Hospital A. Finally, when analyzing the process at Hospital A, it seems that the developed solution may be a result of the garbage can decision model (Hatch 2006: 278), since links between the identified problem and the final solution seem to be a consequence of the fact that one person, who happened to have been present in the canteen board at the time the problem was discussed, had heard of the CTA research project.

The idea of CTA emerged from different places in the four organizations, which shows that the process of gaining support for an idea can be initiated at many different organizational levels. At Hospital B and Financial Company, the idea emerged outside the kitchen, and one of the first steps was therefore to convince the kitchen managers that CTA was a great idea. At Hospital A, the kitchen staff participated in developing the idea, and here it was a matter of convincing management of the idea's potential. In the case of Medical Production, the idea emerged outside the worksite, and the CTA project manager had to convince the kitchen manager, the kitchen manager's boss and the worksite management of the idea's potential.

The processes developed quite differently among the four cases. In one case, the process can be characterized as rather conflict-ridden, whereas the other processes were based more on consensus. The process with many conflicts took place at Hospital A, where a difference in the level of conflicts during the process of developing and embedding the schemes was found in comparison to Hospital B. The difference in the two processes can be a result of already existing conflicts at Hospital A, between the canteen manager and the patients' kitchen manager. The conflicts at Hospital A originate partly in differences in professions, and traditions within these professions. Since Hospital B has a unified organizational system, the same conflicts do not exist. The conflict between the canteen manager and the patients' kitchen manager had developed over a long time, and the process of developing the CTA scheme increased their conflict.

In another case, Medical Production, two conflicts influenced the shaping of the CTA scheme. One conflict related to a difference of opinion about what is meant by 'good food'.

The employees had one opinion about it and the kitchen staff another. Another conflict involved the existing arrangement with the local fast food supplier, which was put under pressure by the CTA scheme. Particularly the CTA research project manager was very interested in developing the CTA scheme in such a way that the contract with the fast food supplier could be cancelled.

The two different cases show how the results of conflicts can in some cases be beneficial for the process and in other cases become an obstacle to developing a solution. At Medical Production, the conflict about how healthy the CTA meals should be resulted in a solution that seemed to fit the expectations of many of the employees at the worksite. On the other hand, at Hospital A, the conflict resulted in a solution that did not meet the expectations of the employees. Both the conflicts at Medical Production were linked to the development of the CTA scheme, which may be part of the reason why the result of these two conflicts ended being beneficial to the shaping of the scheme. The conflict at Hospital A has its background in events that had happened years before CTA was in the pipeline. These conflicts were part of the worksite's social constitution, and as the CTA scheme was being shaped, the norms and values of the worksite were put under pressure. In a study of a change process at a factory worksite, Kamp and colleagues (2005) found that conflicts can be constructive for the change process, as they can make room for "the working compromises" (Kamp et al. 2005: 110). Their findings suggest that conflicts do not necessarily shape the change process in a negative manner but can contribute to shaping the process so that it results in better supporting work at the worksite. The conflict at Hospital A seems to have influenced the shaping of the CTA scheme in a direction where a sequence of co-shaping of problem-solutions occurred. Despite the fact that the problem initially identified was related to developing a solution for the employees working irregular hours, the shaping process was related to finding a problem that CTA could solve, and the originally identified problem was forgotten in the process. When the scheme was changed so that the cafeteria provided the meals and the ordering deadline was cancelled, it was not specifically presented as a solution to the problem of irregular working hours, but could rather be viewed as a consequence of the culinary ambitions of the new staff in the patients' kitchen.

The cases show that there is no single best recipe for an intervention, but local needs and expectations should be included in the shaping process. This finding is supported by Thorsen (2010), who found that interventions are shaped by the local context and should be developed to suit the local needs, which depend on the social constitution of the worksite.

It becomes clear that CTA has been established as a solution for small groups of people at the four worksites. The culinary aspects of the meals only seem to be the decisive argument for few users. CTA is attractive for the employees that are able to plan ahead and thereby integrate CTA in their everyday life.

In my introduction, I present CTA as a health-promoting initiative. The four cases consider CTA to be worksite health promotion, since they describe it as an employee benefit and an initiative that can have a positive effect on work-life balance.

Searches in the literature for concepts comparable to CTA showed that very few mention CTA or similar concepts. No analysis was found of the development of CTA concepts, or results from investigations of the possible benefits from CTA. A possible explanation for this might be that CTA is a fairly new phenomenon, or that the problems that CTA tries to solve are not present in other countries. Another explanation might be that in other countries there are no traditions of involving worksites in solving the problem in such a way as it has been done in relation to CTA.

Worksite health promotion has been criticized by Kamp and Nielsen (2008) for being primarily based on the *medical paradigm* and therefore essentially focusing on health promotion as an effort that should improve the population's lifestyle (Kamp & Nielsen 2008). Furthermore, it is criticized for focusing on the individual as opposed to the collective in organizations. Kamp and Nielsen argue that worksite health promotion can be linked to occupational health and safety work, as both work environment and lifestyle affect health. Linking these two efforts is not necessarily without problems, however, because the scope of occupational health and safety is only internal at the worksite, whereas health promotion also affects people's personal lives. They also find that health promotion strategies are basically found in two different versions; health promotion as fringe benefit and health promotion as a strategic element. The two strategies are a result of the increasing incorporation of occupational health and safety issues in the human relations (HR) field.

It could be interesting to investigate some of Kamp and Nielsen's reflections on health promotion with regard to CTA. In two of the cases (Hospital B and Financial Company), the health-promoting initiatives have clearly been part of the HR field in the organizations, and it could be interesting to investigate at several worksites whether CTA and other health-promoting initiatives are linked to HR, and if so, how this has influenced them.

It seems that CTA has primarily been linked to the medical paradigm in the CTA research project. In the four cases, this link is not quite as explicit. In relation to being part of a health-promoting initiative, CTA is viewed as a solution to a stressful life situation in which it can be difficult to manage all household obligations. In the articulation of CTA as a solution, the problem it is supposed to solve is understood to be stressful everyday life. Applying the humanistic paradigm would mean that the worksite should consider if and how work was perceived as stressful and, based on these findings, develop strategies or methods for dealing with a stressful everyday life. This would be a very comprehensive approach, and politically, it could also be a difficult subject to discuss at the worksite.

## Conclusion and new perspectives

In this thesis, I have investigated the concept of Canteen TakeAway at four different worksites. The main aim has been to investigate the shaping of these schemes and the processes related to the shaping. In order to do this, I have used qualitative methods, because they were considered to be best suited for this kind of study. The overall research question in this thesis was stated as: How are CTA schemes shaped and given meanings, both when being developed and when in use? The answer to this question is that CTA schemes are shaped by the local context of the organization in an ongoing process, where different actors try to influence the script. In three of the four cases, the worksites had some degree of contact with the CTA research project, and these cases show that there is a co-shaping of problems and solutions. In one case, Medical Production, the CTA research project manager played an active role in co-shaping the problems and solutions, as she identified a problem (fast food meals for the evening staff) and tried to develop CTA into becoming a solution to this problem.

Overall, the cases show that the number of users of CTA is limited, which seems to be linked to a mismatch between the problem CTA is supposed to solve and the actual solution provided by the CTA schemes I have analyzed.

The scripts influence how the users integrate CTA into their daily life. Particularly the ordering deadline and pick-up time of the CTA meal have been identified as being decisive for whether or not users can integrate CTA into their everyday life. The users have described that CTA is not necessarily a solution for them in the situations they feel they need a solution, because the need for CTA can occur during the workday after the ordering deadline is past. Aspects related to the content of the meals, such as healthiness and culinary aspects, are not decisive factors, but are taken into consideration when the employees have decided to become users. As the use of CTA becomes routine, the users becomes dependent on the time released for other activities. The ordering deadline, pick-up time, healthiness and culinary aspects are all shaped by the kitchen staff in interaction with the users and the management at the worksites. The shaping is done via user surveys or face-to-face discussions about the scripts.

The kitchen use different strategies to integrate CTA into their production. In three of the four cases, the schemes have been shaped based on the condition that the kitchen could integrate the production of CTA into the present food production within the already existing scope of the kitchen. In only one of the cases, the kitchen was given extra resources while also reducing the number of tasks in order to release time. The design of the schemes is shaped by the local context, since already existing conflicts or newly established conflicts contribute to the shaping of the schemes. The overall concept of the scheme at Hospital A was shaped by the existing conflict between the staff canteen and the patients' kitchen, and the aspects of healthiness of the CTA meals at Medical Production were also negotiated between the kitchen manager and the employees.

Overall, the findings contribute to an understanding of the ways in which CTA schemes are developed by a co-shaping of problems and solutions. The co-shaping is affected by the local context. In two cases, part of the identified problem was lacking possibilities for the staff working irregular hours to access healthy meals while at work. In all four cases, the schemes were developed on the basis of considerations about how the worksite could contribute to its employees work-life balance.

## Perspectives and further studies

It is generally the case with research projects that there are limits to how much it is possible to investigate; this also applies to my project. More work could be done in relation to research in CTA. Three areas have my interest. The first area is based on surveys from the Danish National Board of Health and relates to imbalances regarding which companies have some sort of health promotion. The second area relates to the field of tension between worksite and private life that CTA is a part of, and finally, there are some perspectives on sustainability of interventions in relation to CTA.

The Danish National Board of Health has found in their analyses of worksite health promotion that there is geographic imbalance in relation to the location of companies that provide some sort of health promotion (Sundhedsstyrelsen 2008). They found an overweight of companies offering health promotion in the capital area. Furthermore, they found an overweight of financial companies and public administration worksites offering some sort of nutritional health promotion. These results are from 2007, and at that time, the concept of CTA was not introduced at many worksites. It could therefore be interesting to examine whether there is correspondence with the findings from the National Board of Health with regard to CTA. Such a study would have a broader scope and could thus supplement the findings from this project.

The concept of CTA lies in a field of tension between worksite health promotion and family and everyday life. To a very high degree, CTA is health promotion that also affects personal life. In a study of the attitudes and values towards health and health prevention among Danes, it was found that to a very high degree Danes think that each individual is responsible for his or her own health and at the same time is positive towards health-promoting initiatives at the worksite (Mandag Morgen & TrygFonden 2008). Another survey showed that the Danes are positive towards the worksite discussing weight issues with overweight employees (Birkedal Christensen 2009). These two surveys show that health is no longer just a personal issue, and that the borderline between worksite and private life has changed. These new perspectives on health promotion raise the question of how the worksites handle this new development, where to some extent it is expected of them to interfere in their employees' health. It could be interesting to examine this in a future study.

In relation to this, I find a need to investigate how users' dietary habits are affected, together with their everyday lives. I have some information from the study at Financial Company indicating that some users find that CTA has generated more time, and also information from the 24h recall that suggests that users eat more healthily when they eat CTA compared to not eating CTA. It would be interesting to investigate this further at other workplaces, and also make a qualitative investigation about whether users experience that they are eating more healthily when they eat CTA meals.

One of the four cases had their scheme for a longer period of time when I made my interviews; the three other cases were in the developmental phase when I had my first visits to the worksites. Several studies have pointed to the fact that very little is known about how health-promotion schemes are sustained and embedded in a long-term perspective (Thorsen 2010, Sorensen, Linnan & Hunt 2004, Dooris 2006). Due to the fact that the concept of CTA was very new when this study was initiated, long-term sustainability has only been included in relation to the Financial Company. A study of the long-term sustainability of a fruit and vegetable intervention showed that an intervention's sustainability depends on being robust in relation to changes at the worksites (Thorsen 2010). Such changes could be from re-organization, cutbacks, outsourcing, and loss of engaged staff members. A similar follow-up study of the four worksites followed in this project could make an interesting subject for further studies of CTA schemes.

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## Appendices

### Appendix A: List of interviews

Financial Company: September – October 2008:	Interviews with 28 employees. Some interviews were made by two master students, who investigated the nutritional benefits of CTA as part of their data collection. They did not use the qualitative data. Interview with a HR representative. Interviews with kitchen manager and employee in the kitchen. Interviews in total: 31
Medical Production: February – May 2009:	Observations during meetings (4 meetings). Interviews with 3 employees.
December 2009 – January 2010:	Interviews with 5 employees Interview with kitchen manager Interview with vice manager Interviews in total: 10
Hospital A: November – December 2008:	Interviews with staff canteen manager (2) Interview with patients' kitchen deputy manager  Interview with developer of web shop (member of canteen board)
March 2009:	Observed focus group interview with non-users of the canteen (including non-users of CTA). Focus group interview was carried out by two students.
October 2010:	Interview with the manager of quality and customer in the patients' kitchen. Interview with chef in the cafeteria. 5 interviews with users of CTA. 1 interview with non-user. Interviews in total: 12

Hospital B:

May 2008:  
coordinator.

Observations from meeting with CTA project

March 2009:

Interview with HR representative  
Interview with kitchen manager  
Interview with kitchen trainee

September 2009:

Interview with HR representative  
Focus group interview with 6 non-users  
Focus group interview with 8 users

Fall 2010:

Follow-up: e-mail correspondence with HR  
representative.  
In total: 4 interviews and 2 focus group  
interviews