Making it work

Trial Work between Scientific Elegance and Everyday Life Workability

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and Everyday Life Workability

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PhD Dissertation July 2017

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Acknowledgements

Introduction

Mary has just completed her three-month tests in the laboratory when we meet to talk about her participation in a health intervention project on the health effect of physical exercise in everyday life. She recounts she had seen an ad for the project one day at work and that it had made her think about the weight she had gained since giving birth to her third child. As Mary explains, taking part in the project is a "pretty good package deal" because she can "get back on track", "find the exercise routines", receive a "health check", and support health research. However, Mary struggles following the exercise protocol she has received. With three small kids and a new career as self-employed with shifting work hours, burning 320 calories five times a week by cycling to and from work is a "project". Making it all "hang together" is hard, as she needs to plan each cycle ride in advance, coordinate everything with her husband, and make special arrangements to deliver the kids at the day care centre in the morning to be able to follow the protocol and cycle to work. Because of this extra work, she seriously considers opting out of the project, even though she feels guilty. "But, I just can't see how I'm going to make it work".

After some time, I interview 'MB', one of the biomedical researchers in the project. Although he uses the trial to collect data for his PhD, MB describes that he is more an "everyday life coach" than a researcher at the moment. In his daily work in the project, as he recounts, he spends much of his time writing emails or talking to the participants to help them follow the exercise protocol. "All participants need help", MB states and goes on to explain how he tries to "tinker with the mechanisms in their everyday lives" to "fit in" the protocol, which is crucial for his PhD. If the participants do not follow the standards of the protocol to the letter through the six-month intervention, then the project will not be considered "elegant", just as he will not be able to complete his PhD. During our talk, I mention Mary, who has just left the project, to which MB replies, "No matter how much we talked about things, we just couldn't make it work".

Health Intervention Research and its Problems with Everyday Life

In the above description, we met a research participant named Mary and a biomedical researcher named MB[1], both of whom were involved in the health intervention trial project, which is the focus of this dissertation. The description provides a glimpse into some of the everyday processes and problems of implementing a biomedical exercise trial in everyday life. More specifically, the description highlights the work involved in implementing an exercise protocol, in which both Mary and the biomedical researcher have certain stakes, tasks, and problems.

For Mary, following the protocol is a way to change her lifestyle; for MB, the protocol is a way to produce data. While these two projects relate to each other, both struggle with making them work together. For Mary, coordinating her daily activities, while following the protocol to get data, is a challenge. Comparatively, for MB, changing Mary's everyday life to make her follow the protocol is a challenge. Although Mary and MB do different things in the projects, their work relates to each other through complex patterns of feelings of guilt, lifestyle change ambitions, altruism, everyday life hassles, technologies, academic ambitions, and scientific ideals.

While it simply provides a brief glimpse, the description broaches questions regarding the everyday life of a health research project and the work and social processes involved in making a health research intervention workable, beyond the laboratory, in people's everyday lives. For instance, what makes such a project a "pretty good package deal"? How can a health research project be a way to get "back on track" and "find the exercise routines"? What kind of everyday life does Mary have to plan? Why does she feel guilty about thinking of dropping out when trying to follow the protocol makes little sense for her? Why did she ultimately drop out? Then there is MB, the biomedical researcher; what does he mean by he is an "everyday life coach"? What kind of everyday life is he coaching the participants to live? Why does he have to help the participants? What does he mean when he says that he must "tinker with the mechanisms in their everyday lives" to "fit in" the protocol?

These questions stem from my engagement as an ethnologist in the project and fieldwork among the researchers and the participants, during which I observed and took part in the joint work that goes into making biomedical requirements, standards, and ideals workable in people's ongoing everyday lives. During fieldwork, I was fascinated by the researchers' engaged work of reconciling ambitions to meet rigorous methodological research criteria with care for participants and their lifestyle change projects, as well as the participants' dedicated work of following rigid exercise protocols to the letter five days a week for six months. Overall, I have been struck by the work and

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[1] Throughout the dissertation, I use pseudonyms for participants in the project and acronyms for the researchers in charge of the day-to-day management of the intervention project (MRL, JSQ, MB and ASG). The intention of doing so is to aid distinguishing between researchers and participants.

social interactions that comprised the everyday life of the health intervention project, and how researchers and participants together tried to make a research protocol work as both a means to pursue scientific ideals of control, standardisation, and quantification, and ideals of meaningful and workable lifestyle change. On a general level, this dissertation thus explores how people and their everyday lives and biomedical research practices come together and are reciprocally transformed in the process of producing evidence about healthy living. Two questions mobilised this exploration:

Which kinds of work were involved in the realisation of the trial protocol?

How did ideals of methodological rigour and everyday life workability align in practice?

Drawing on fieldwork among researchers and participants in the project, I explore these questions by working from a performative understanding of science (Law, 2002; Mol, 2002). I thus take as my starting point that understanding how a health intervention project works requires that one explore the practices that its implied actors do on a day-to-day basis. Instead of approaching knowledge production on lifestyle change research and lifestyle change as separate activities, I look into their co-production and entanglement in the effort involved in making them work together. Based on this core strategy, I explore the social and material relations, situations, practices, and subjectivities needed for the trial to work as a research project and a lifestyle change project. The dissertation focuses on how implementing the protocol relied on establishing a trial-specific everyday life through trial work, which included creating suitable trial subjects, achieving high compliance, constructing measurable and workable routines, and arranging meaningful self-realisation.

These are the work processes I try to capture in the title of the dissertation, *Making It Work*, which refers to a kind of work ethos that circulated around the actors in the project. Both participants and researchers talked about "getting it to work", "doing what it takes", "making it function", "finding a way", "figuring out solutions", "fitting things together", "making ends meet" and about somehow "making it work". All of these different expressions point to work and to an everyday life that rarely gets its due in the final reports, which travel from health intervention research projects into policies and health care. The dissertation thus illuminates the joint effort underlying knowledge production for contemporary public health.

In what follows, I provide a brief description of the organisational backdrop of the dissertation before reviewing recent discussions related to health intervention research.

Governing Obesity

The work presented in this dissertation stems from my engagement as an ethnologist in an interdisciplinary health intervention research project by the name of GO-ACTIWE, which is the acronym for Governing Obesity-Active Commuting To Improve health and Wellbeing in Everyday life. This project formed part of a research initiative called Governing Obesity (GO) at the University of Copenhagen (UCPH) in Denmark.[2] As its title indicates, the GO initiative focused on obesity, which is widely considered one of the greatest public health challenges worldwide. The initiative was set in motion against a background of statistics, which show that the prevalence of obese people worldwide has doubled since 1980 and that 50% of men and women in Europe are obese (WHO, 2016a), which creates an economic burden that costs the EU member states about €59 billion each year (EU-Observer, 2006). Moreover, statistics show that if this trend continues, around half of the world's adult population will be overweight or obese in 2030 (Dobbs et al. 2014)). Such statistics have spurred concerns among politicians and health experts (Butland et al. 2007; Kelly et al., 2008) and have given rise to various health research projects, including the GO initiative, that aim to produce knowledge about how to tackle the problem.
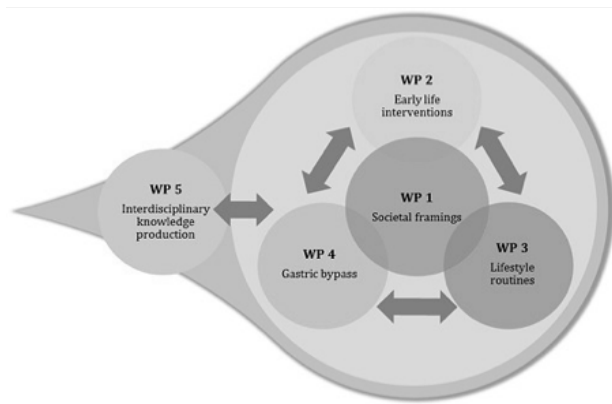
Figure 1: The organisational chart of the GO initiative showing the five work packages (Governing Obesity).

The GO initiative's overarching ambition was to produce knowledge to understand and handle the obesity problem through interdisciplinary research. To this end, junior and senior researchers from different faculties and disciplines were grouped together in five 'work packages' (WPs), which worked with various aspects and dimensions of obesity in interdisciplinary research constellations.

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[2] The GO initiative was one of 18 research initiatives that UCPH funded in 2013 as a part of the so-called 'UCPH Excellence Program for Interdisciplinary Research'. The initiative was granted a total of 31.7 million DKK (approximately 4.2 million Euro) involving five faculties and 12 research departments (UCPH, n.d.).

WP1, 'Societal Framings', combined ethics, philosophy, law, history, policy analysis and epidemiology to address questions of responsibility and ethics in relation to governing obesity from the political to the individual level. WP2, 'Early life interventions', combined biomedical, genetic, historical, sociological, and epidemiological approaches to study the associations between early nutrition and physical activity with risk of later obesity. WP3, 'Lifestyle routines', or the GO-ACTIWE project,[3] within which this PhD project is situated, involved scholars from biomedical disciplines, public health and ethnology. It addressed the health effects of physical activity in overweight adults and the potentials and barriers towards physical activity becoming a daily routine. WP4, 'Gastric bypass', comprised researchers from psychology, anthropology and nutritional science who studied weight loss variation after gastric bypass surgery. WP5, 'Interdisciplinary knowledge production', featured an anthropologist and an ethnologist who explored the interdisciplinary knowledge production across all work packages.

The interdisciplinary organisation of the research and the work packages' overall thematic span reflect an ambition to address the complexity of the obesity problem and to produce knowledge that can be transferred into effective treatment and prevention interventions at the societal level. As the website phrased it, the overarching ambition was to "provide novel means for governing obesity and its consequences via effective interventions at the societal and individual level, from an early stage towards the morbidly obese individuals, while avoiding unintended and negative effects" (Governing Obesity).

'Active Commuting To Improve health and Wellbeing in Everyday Life'

In the GO-ACTIWE project, the ambition to produce societally relevant knowledge for governing obesity was concretised in a randomised controlled trial (RCT), the GO-ACTIWE trial. As suggested, the trial engaged issues of physical inactivity and exercise as a particular problem field in governing obesity, thereby coupling to an established public health agenda of promoting health and preventing illness at the individual level (Thing, 2009). The launch of the trial was motivated by widespread public health concerns about physical inactivity and obesity, as well as epidemiological reports that show that 47% of Denmark's adult population are now overweight (BMI ≥ 25), that 13 % are obese (BMI ≥ 30) (National Health Profile, 2010), and that physical inactivity constitutes a significant risk factor regarding cardiovascular disease (CVD), associated with 5.3 million global deaths per year (Lee et al., 2012).

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[3] From now on, I use the notion of the 'GO-ACTIWE project' as a broad term for this work package, and the 'GO-ACTIWE trial' or simply 'the trial' as a term for the practices associated with the completion of the trial protocol.

To inform future recommendations and interventions regarding physical activity, the project was structured around a randomised controlled trial designed to evaluate the health effects of three workable and time-reasonable ways of complying with the current recommendations, which encourage adults to be physically active for 30 minutes per day (Pedersen & Andersen, 2011). To this end, the trial involved a target group of healthy, physically inactive, and overweight men and women between 20 and 45 years, who were randomised into: 1. a control group, 2. high-intensity leisure time exercise, 3. moderate-intensity leisure time exercise, and 4. active commuting to and from work by cycle. Each exercise intervention lasted for six months, involved exercise supervision and consisted of five exercise sessions per week that the participants had to perform in their everyday life settings. During the intervention period, the participants underwent intensive biomedical testing on various health parameters before the randomisation, after three months and after six months. Eighteen months after the intervention, the participants were invited to partake in a follow-up study, which comprised an additional component to the intervention phase of the trial.[4] On a general level, the trial was designed to evaluate the health effects of exercise regimens followed in everyday life and thus built on the basic premise that it could serve both scientifically valid lifestyle research aims and support a meaningful lifestyle change process.

The trial constituted the centrepiece of an interdisciplinary research project, which involved biomedical, ethnological, and technical researchers whose various research projects all connected to the trial. This dissertation forms part of the ethnological engagement in the project, which also involved an associate professor of ethnology who took part in the design and overall management of the research in the project. Our joint engagement concerned the integration into the trial of ethnological perspectives on social and cultural dimensions of health interventions. This includes systematic qualitative data collection on exercise motivation, experience and routinisation, interdisciplinary research organisation, and ethnographic fieldwork on trial implementation. As the result of the latter, this dissertation builds on fieldwork among the participants and the four researchers responsible for the day-to-day management of the trial. During fieldwork, I conducted interviews with participants and researchers, and participant observations during laboratory procedures and exercise sessions throughout the intervention phase of the trial, with the aim of exploring the day-to-day-practices involved in completing the protocol of the trial and what this dissertation proposed to consider as the co-production of biomedical health research and practical lifestyle change.

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[4] The ethics committee of the Capital Region of Denmark (H-4-2013-108) approved the project with adherence to the Helsinki Declaration. The project was registered at http://clinical-trials.org.

In the remainder of this introduction, I situate the project in relation to recent literature on health intervention research within public health, critical public health on contemporary health promotion and ethnographic work on the RCT, after which I sketch out the main theoretical orientations that have informed the present work.

Trialling to Improve Health

The notion of a health intervention covers a wide range of activities, whose 'purpose is to assess, improve, maintain, promote or modify health, functioning or health conditions' (WHO, 2016b). Health interventions include, for instance, individual lifestyle interventions, local area interventions, community interventions, and market and policy interventions that aim to improve health and health equity. In this connection, public health practice and research concerns health-related activities that involve understanding and promoting public health and preventing disease. Public health endeavours include a wide range of activities and actors, including epidemiology, social and cultural research, health policy work, health education, and various forms of experimental intervention research (Krejsler, 2009, p. 129). In relation to health promotion and illness prevention, the latter plays a crucial role by providing evidence on which interventions work to improve health and should, therefore, receive political support. More specifically, health intervention research rigorously tests and evaluates health interventions for their efficacy before any attempts to scale and reproduce the interventions beyond the realms of the research settings are made.[5]

In that connection, the RCT is routinely described as the best experimental method available—the gold standard—for producing evidence about the effects of particular interventions to improve health. While the RCT denotes a line of complex procedures and principles, one can describe it as an experimental and comparative scientific method that produces statistical and empirical evidence on the causal relationship between an intervention and an effect by conducting a trial, in which a group of people is subjected to one or more interventions. The results of the interventions are then compared to a control intervention on a set of preselected parameters. To eliminate variables and conditions irrelevant to the causal relation in question, trial researchers try to control their trials through various procedures. These include conducting trials in isolated environments, using control groups that are not exposed to the intervention as the basis for comparison, and randomising participants to different interventions to ensure the groups are similar except for the interventions

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[5] In public health, the practice of intervention research closely links to the tradition of experimental medicine, whose emergence can be traced back to French physiologist Claude Bernard, whose thoughts on experiments on living beings in the 1860s paved the way for systematic experimentation with interventions into the human body to prevent diseases and derive general laws on the causal relations between intervention, disease and health (Hawe & Potvin, 2009, p. 8).

in question and to eliminate selection bias. Enrolling people who represent the relevant population is a way to ensure the general application of the results (Juul, 2012; Meinert, 2012).

Although predominantly used to test new medical products and treatments, the RCT has become a standard in research domains outside clinical medicine, most notably in fields such as education, social work and public health research at large (Bell, 2016; Christensen & Krejsler, 2015; Krejsler, 2009). The consolidation of the RCT as the privileged method in public health research, practice and policy has been linked to the emergence and spread of evidence-based medicine (EBM) (Bell, 2016). While EBM started as a project to make doctors challenge the assumptions and routines underlying their treatment of patients by reviewing and working on the basis of the best scientific evidence available, since the 1990s it has become integral to public health research, practice, and policy (Timmermans & Berg, 2003; Will & Moreira, 2010). Given its reliance and support on empirical data and quantitative methods, EBM has been characterised as a 'positivistic regime of truth' (Krejsler, 2009, pp. 119–120) comprising a set of rigorous procedures on how to produce, review, and disseminate evidence about the effects of health interventions to inform decisions on the treatment of individuals and populations (Bell, 2016). Within the logic of EBM, strict methodological criteria of quantification, standardisation, objectification, and statistical operation hierarchise what count as valid and reliable evidence. In the so-called 'evidence hierarchy', which reflects the methodological strength and validity of particular research methods, the RCT ranks at the top together with meta-analysis and systematic reviews, followed by observational methods such as epidemiological studies (Pors & Johannsen, 2013).

Given the rise of EBM and the widespread support of quantitative forms of evidence, the RCT today constitutes the privileged scientific procedure through which agendas of promoting health in everyday life are concretised and configured. In particular, the development of health promotion guidelines, recommendations, and campaigns has become a significant meeting point for public health policy and RCT-based intervention research. This means that both national and international health campaigns, as well as prevention and health promotion interventions at the individual, municipal, and societal levels, often build on trial evidence. In Denmark, for example, the official recommendation regarding physical activity partly builds on evidence from trials (Pedersen & Andersen, 2011). Similarly, the Danish Health Authorities attempt to encourage, through guides and reports, the Danish municipalities to base their prevention efforts on different forms of evidence: epidemiological evidence about prevalence and risk, evidence of cause and effect, and evidence about implementation (Skovgaard et al., 2007). On a general level, the RCT can be said to constitute one of the key technologies through which public health concerns are made into objects of intervention and inspection.

Yet, although public health research, policy, and practice have embraced the RCT as the gold standard, public health researchers continuously debate the appropriateness of conducting RCTs in matters of public health, health promotion and illness prevention (Hawe et al., 2004; Victoria et al., 2004). While many of these discussions primarily regard community-based health interventions, and implementation and evaluation of complex health interventions[6] in the 'real world', they reflect a more general methodological reflexivity about the strengths and limitations of the RCT within the field of public health intervention research (Moreira, 2013, p. 92; Wahlberg & McGoey, 2007, p. 2). For example, public health researchers Rosen et al. (2006) have reviewed, discussed, and rebutted eight common criticisms of the RCT from within and beyond the field of intervention research in connection with health promotion and lifestyle intervention research designed to change people's behaviour. A brief outline of these criticism serves to show how the RCT, while a privileged method, is under trenchant scrutiny and, in particular, how its relation to the 'real world' is continuously problematised.

In their article, Rosen et al. listed the following eight criticisms. First, RCTs are fraught with ethical problems pertaining to the randomisation of participants to treatment and no treatment. Second, RCTs cannot evaluate multifaceted health interventions in complex societal contexts because they are designed to test and evaluate only single outcomes. Third, they cannot test long-term effects of treatment and thereby cannot produce evidence on key health parameters, such as mortality and morbidity. Fourth, RCTs are not geared to consider or answer questions relevant to current health problems, such as interventions that seek to change legislation, organisational practice or public policy. Fifth, they require highly selected groups of people and controlled and artificial laboratory conditions and therefore are not generalisable beyond the research site. Sixth, RCTs focus on individuals, rather than communities or complex social systems. Seventh, they are built on rigid methodological requirements that cannot be adapted to local conditions. Finally, RCTs are costly to perform. On a general level, these criticisms points to serious tensions between methodological requirements and the social world, in which they are implemented (Rosen et al., 2006).

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[6] Various definitions of complex interventions exist within the public health community. According to the definition proposed by British Medical Research Council (MRC), who has issued an influential guide to RCT-based health research, the notion of complex interventions refers to non-pharmacological (behavioural) interventions that involve and target several interacting components, behaviours, actors and organisational levels. Interventions that target particular communities or organisations are usually referred to as complex interventions (Craig et al., 2008). In light of this definition, the GO-ACTIWE trial would probably not be interpreted as a complex intervention, although it can be analysed and theorised as such. While the researchers responsible for the trial did not approach it as a complex intervention, this dissertation attempts to articulate aspects of its social complexity.

As part of the ongoing discussions about the appropriateness of RCTs in matters of public health, public health researchers have recently devoted increased attention to the development and testing of interventions in everyday life or "real world" contexts. In particular, efforts have been made to develop more adaptive and pragmatic trial designs and more complexity sensitive forms of evaluation, which take into account the role of particular settings and the significance of the variety of actors involved in a particular health intervention projects (Campbell et al., 2000; Craig et al., 2008; Wells et al., 2012).

Some of these discussions concern the specification, identification and delineation of intervention 'wholes' and smaller 'parts' (Clark, 2013) or 'active ingredients' (Craig et al., 2008; Dombrowski, 2012) in order to assess their effects and how these components interact with the intervention context. Other discussions concern how to ensure intervention fidelity and plan intervention adaption to local circumstances (Borrelli et al., 2011; Gearing et al., 2011; Masterson-Algar et al., 2014), strategies for intervention implementation and normalisation (Murray et al., 2010) and theories about how to evaluate intervention trials (Bonell et al., 2012; Marchal, 2013). The development of practical guidelines for the evaluation and reporting of trials to improve generalisability and reproducibility to improve translations from research to practice also has become a key subject matter (Boutron et al., 2008; Michie et al., 2011).

The overarching ambition of these discussions is to improve the production of evidence that can contribute to the development of a more informed and societally effective evidence base for policy priorities in matters of public health. More generally, the methodological challenge facing many trial researchers today relates to the question of how to balance requirements of scientific rigour and demands for social relevance (Rushforth, 2015; Will, 2007; Will & Moreira, 2010).[7]

Going Beyond the Logics of EBM

While widely debated within public health circles, discussions about context, complexity, and health behaviour often take as a starting point the EBM paradigm's own logics of quantification, isolation, and causality (Bell, 2016, p. 124). This means that even though interventions trials can be extremely elaborate and in refined ways take into account possible confounders and biases, the primary objective is still to isolate an intervention from its context and measure its effects and make causal conclusions about what works in improving delineated health parameters. As social science scholars Cohn et al. (2013) have argued, the commitment to the RCT with in public health research and practice and the associated occupation with isolation and quantification cannot but lead to

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[7] In Chapter 1, I return to these discussions through an analysis of how everyday life was problematised in the concept, drafting and implementation of the trial protocol.

'mechanical' understandings of the complexities of changing people's health behaviours and practices. The commitment to isolate interventions into measurable parts, they have argued, comes with "the sacrifice of any genuine commitment to complexity" (Cohn et al., 2013, p. 42). Although these social science researchers have intervened in current discussions of the RCT within public health research, their contribution like many discussions on the issue of intervention complexity (both within public health research and beyond) is abstract and theoretical in nature. More generally, discussions of the complexity of health intervention lack empirical detail and insight about the actual workings of EBM-methodologies, such as the RCT, when they are rolled out in people's lives.[8]

In this dissertation, I approach the question of intervention complexity from a different angle. Rather than engage in epistemological or methodological discussions about which design fits where, how to design a trial, how to evaluate a trial or what is a genuine way to account for complexity, I am interested in examining the complexity of one particular trial through an ethnography-based cultural analysis. In so doing, I leave aside the general theoretical discussions within public health research to follow recent social science scholarship on the configuration between interests in changing people's behaviour and public health research and practice, as well as ethnographies of how the RCTs work in practice.[9] In what follows, I thus situate my project at the intersection between critical public health studies and RCT ethnographies with the aim of delineating the everyday life of realising a trial-based lifestyle protocol as my field of study.

Critical Public Health Research

Over the years, much social science research has been carried out to unveil the mechanisms of power and social control that underlie governmental attempts to promote health and wellbeing. Scholars have used concepts, such as 'healthism' (Crawford, 1980), 'medicalization' and 'social control' (Zola, 1972), to expound on how certain ideas and practices concerning health, the body and disease construct and reinforce certain subjectivities and responsibilities; in particular, how problems of health, body and disease often get situated at the level of the individual within contemporary societies. Many social science scholars have stressed how the individual within the regime of contemporary public health (Bell, 2016) is 'morally obliged' to respond flexibly and rationally to calls for healthy living by making healthy choices and that this has increasingly become the hallmark of what it entails to be a 'good citizen' (Alftberg & Hansson, 2012; Ayo, 2011; Bell, 2016; Karlsen &

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[8] See for instance Okwaro et al. (2015).
[9] My decision not to engage further with these discussions in the public health literature also relates to the fact that biomedical researchers in GO-ACTIWE was not concerned with them.

Villadsen, 2016; Lindsay, 2010; Mathar & Jansen, 2010; Mol, 2008; Petersen et al., 2010; Rose, 2007; Vallgårda, 2009).

Many of these studies focus on health discourses and how the body, everyday life and health are made into sites of intervention. As have been noted, in these critical public health studies, Foucault's concepts of biopower, governmentality, and liberal government through freedom have been a strong inspiration in attempts to expose the underlying constraining and productive mechanisms of public health practice and policy (Sharon, 2015; Timmermans & Gabe, 2002).[10] For example, foucauldian scholar Nikolas Rose (2007) has described how disease prevention, risk management, and health promotion have replaced an earlier focus on treatment, especially in Western countries, and how this shift has led to the emergence of a new form of citizenship comprising what he calls 'biological citizens'. Rose defines 'biological citizens' as those who, in line with biomedical norms and through new medical technologies, make the body a biological object that can be optimised, altered and subjected to continuous control and monitoring in order to avoid disease and propel improvement. As Rose has summed up this subject, "Today, we are required to be flexible, to be in continuous training, life-long learning, to undergo perpetual assessment, continual incitement to buy, constantly to improve oneself, to monitor our health, to manage our risk" (2007, p. 154).

In this type of analysis, the GO initiative and, more specifically, the GO-ACTIWE project can be seen as alliance partners in what Rose, channelling Foucault, describes as "the task of the management of life in the name of the well-being of the population as a vital order and of each of its living subjects" (2007, p. 52). The GO initiative and its various projects, from this perspective, constitute an apparatus of power/knowledge that produces and reinforces particular subjectivities and ideas of the body. Although such governmental perspective provides critical insights into the workings of contemporary public health machinery, it simultaneously tends to elide the situated complexity and diversity of contemporary health care, health promotion, and illness prevention (Moreira, 2013, p. 28; Niewöhner et al., 2011, p. 742). Reviewing recent critical social science engagement with public health research in particular, its engagement with the notion of health behaviour can provide a pathway to the situated workings of contemporary RCT-based health intervention research.

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[10] Rose (2007) has described biopower or biopolitics not as a concept, but as a perspective that "brings into view a whole range of more or less rationalised attempts by different authorities to intervene upon the vital characteristics of human existence—human beings, individually and collectively, as living creatures who are born, mature, inhabit a body that can be trained and augmented, and then sicken and die." (Rose, 2007, p. 54) As a methodological approach, governmentality has been used variously to study how institutions, practices and particular ways of knowing work as power mechanisms in modern societies by focusing on the practices, discourses, rationalities and techniques through which governments and authorities try to produce certain kinds of citizens.

Against Health Behaviour

As a distinct focus in critical public health research, a string of social science studies have recently placed critical focus on what sociologist Kirsten Bell (2012) has described as 'the behavioural turn' in EBM and by implication also public health research and practice more generally. The general critique focuses on the ways in which trial researchers apply the RCT and its companion of assumptions more or less directly to issues relating to people's everyday life practices (Bell, 2012; Blue et al., 2016; Cohn, 2014; McLaren et al., 2007). In particular, Bell (2012) has noted that the RCT expels culture, meaning, and context when dealing with interventions in people's lives as isolated interventions into processes inside a universal biological body. As Bell (2012) put it, while problematising the coupling between biomedical models of disease and 'behaviour':

> Attempts to transform individual 'behaviours' in the name of rectifying unhealthy lifestyles are treated as equivalent to physical intercessions into the human body to modify the course of disease. Interventions retain their efficacy across time and space because culture, meaning and context are irrelevant. (p. 318)

The above quote reflects a more general social science critique that concerns the biomedical model of disease and the way it is reproduced in issues that concern what people do in their everyday lives. In what anthropologists Parker and Harper (2006, p. 1) have called a 'factorial' model of disease, social and cultural factors constitute simply one sample of a host of other factors that one can choose to take into account (or not) and target to change the course of disease. A central critique in this field of research focuses, more specifically, on the role of psychological models of behaviour[11] in informing both public health research and intervention practices; in particular the concept of 'health behaviour', which has become ubiquitous within public health research, practice and policy.

According to Bell (2016), this concept has been a prerequisite for 'the behavioural turn' in public health, because it has made it possible to define and conceptualise 'complex social practices as analogous to human physiology, (i.e., isolable and intervenable)' (p. 183). Bell's argument is that the concept configures people's everyday life practices as isolated and confined things that can be intervened and transformed through equally confined and isolated interventions. In a behavioural framing, everyday life activities, such as eating, smoking, exercising and drinking, becomes 'eating

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[11] Behavioural approaches to health promotion have drawn on theories from social psychology, such as the Social Cognitive Theory (Bandura, 2004), Health Belief Model (Becker, 1974), the Theory of Planned Behavior (Ajzen, 1991) and currently nudging theories have also entered public health. While some such theories take into account the potential impact of wider social factors, they focus primarily on individual action and choice as the key mechanisms for improving health behaviour. Although there are variations in theories, sociological critiques highlight that the various models are equally mechanistic and deterministic, and that they mobilise an idea of people as primarily driven by cognition (see Cohn, 2014; Cohn & Lynch, 2015).

behaviour', 'smoking behaviour', 'exercise behaviour' and 'drinking behaviour', which can be correlated to particular risk assessments and made into targets for research, intervention, and information campaigns.

This behavioural framing of people's everyday life activities has found widespread purchase in public health research and practice work. For example, in Denmark the so-called KRAM factors,[12] which is the Danish acronym for diet, smoking, alcohol consumption and exercise, has been brought forth as the primary targets for municipal activities regarding health promotion and illness prevention (Aarestrup, 2007). The KRAM factors, coupled with particular public health research fields, thus constitute one obvious example of how a behavioural framing, configuring what people do as isolatable and context-independent activities that can be intervened to improve health, has become a central category in public health practice and policy.

Despite the recent increased focus on context, complexity and social determinants of health in public health research (Marmot, 2005), social science researchers have criticised that the ways these concepts are used fail to take into account the social, material and emotional dimensions of people's health-related practices, and the way they unfold, become routinised, and change (Blue et al., 2016). According to medical anthropologist Simon Cohn, one of the key problems with the concept of health behaviour is that it has become increasingly naturalised within public health research, even though it allows little insight into what is at stake when people perform health-related practices. The concept, he has argued, abstracts away much of the complexity at play in what people actually do in their everyday lives (Cohn, 2014). In fact, as Cohn has emphasised, descriptions of context and attempts to situate the individual in his or her physical and social environments indirectly comes to support and reproduce a focus on the individual and his or her responsibility. As Cohn (2014) explained:

> As a consequence, although discussion of context may ostensibly resemble adoption of a more sociological perspective, by preserving the delineated characteristics of health behaviour and pre-empting a focus for causal explanation, its inclusion frequently serves simply to maintain, rather than revise, conceptualisations of health behaviour. (p. 160)

Cohn's criticism by extension is that the concept of health behaviour also shuns questions about politics, power and ideology, as well as more structural issues of social inequality.

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[12] KRAM factors stem from a larger population survey commissioned by the Danish Ministry of Health in 2006 (National Institute of Public Health, 2006). The KRAM factors have since become an integral part of health promotion and disease prevention efforts in Denmark, which in 2007 had to taken over by municipalities. In that context, guidelines have urged the municipalities to work evidence-based and give their citizens a KRAM, which means 'hug' in Danish (Danish National Council for Public Health, 2006).

Health interventions informed by the concept of health behaviour, he argued, are inevitably political as questions about responsibility and agency ultimately end up converging on the individual, who is expected to make rational and healthy decisions on the provision of information (Cohn, 2014, p. 160).

Providing a broader perspective, sociologists Fran Baum and Matthew Fisher (2014) have connected the consolidation and institutionalisation of a behavioural focus to a general political shift in many Western countries, from welfare liberalism to neoliberal systems of governance, in which minimisation of governmental influence on the labour market and welfare programmes constitute key tenets. According to these authors and others, the widespread acceptance and institutionalisation of individualised, biomedical, and behavioural perspectives on health and illness within health policies and systems support the dominant ideology of individualism, which characterises many high income, free market societies (Baum & Fisher, 2014, p. 218).

From Health Behaviours to Health Practices: Unpacking Healthy Living

As a reaction to the behavioural turn in public health research, practice, and policy, sociologists and critical public health researchers have suggested the concept of 'social practice' and other practice theories as superior alternatives to psychological theories of behaviour with regards to investigations and interventions into what people do in their everyday lives. According to Cohn (2014), one of the strengths of a practice-oriented approach to people's health-related actions is that practices, as opposed to ideas about health behaviour, are always situated, local, material, composite and collective, and thus not a result or outcome of an individual's mental processes, intentions, beliefs or motivations alone. Cohn's argument is that by taking a practice approach, one escapes the psychologising and individualising tendencies, which often follow from a focus on health behaviour. In addition, one might escape the tendency to seek causal explanations of why and what makes people act. Further, one cannot avoid questions about power and politics, as these are integral to any attempt to change what people do from a practice perspective.

Supporting the practice-approach, Blue et al. (2016) advocate a paradigm shift in public health research towards a more practice-based approach to questions of how people live and how people's lives might be changed. Their suggestion is:

> to stop thinking about risks to health as if they were some latter day equivalent of a bacteria or a germ working their pathogenesis on the individual human body and to see not individuated selves who can be prompted to change, but people enmeshed in social arrangements that are defined and constituted through the practices they enact, whether for good or for ill (p. 47-48).

The conceptual contribution to public health from social science is thus the suggestion to make practices, rather than individuals, the focus of inspection and intervention, and thereby to open up complex questions concerning the creation, coordination, synchronisation, change, and maintenance of people's health-related practices (Blue et al., 2016, pp. 47–48).

As part of this critical engagement with the behavioural turn and public health research in general, a wide range of studies exploring people's health-related practices as they unfold in different everyday life contexts have surfaced in recent years. Consequently, a large corpus of studies working from various practice theories[13] have unpacked the social and material complexities of cycling practices (Larsen, 2016; Nettleton & Green, 2014), fitness practices (Pedersen & Tjørnhøj-Thomsen, 2017), self-monitoring practices (Cohn & Lynch, 2015), walking practices (Harries & Rettie, 2016), physical activity practices (Barnfield, 2016) and eating practices (Halkier & Jensen, 2011; Vogel & Mol, 2014). Like the more theoretical and conceptual critique outlined above, many of these empirical studies position themselves in relation to the concept of behaviour, suggesting that everyday life is much more complex than any behavioural framing of what people do in their everyday lives can account for.[14]

From Health Practices to Trial Practices: Unpacking the Social Effectiveness of Trials

Despite these incisive critiques and the upsurge in studies unfolding the complexities of people's health-related practices, few studies have examined how people become 'enmeshed in social arrangements' (cf. Blue et al., 2016, pp. 47–48) within the trials and intervention projects that aim to promote and produce knowledge about certain 'health behaviours'. Few studies have explored ethnographically the social dimensions, complexities and practices involved in making people's lifestyles and health behaviours into objects of RCT-based inspection and intervention. In particular, little is known about the ways in which people's everyday lives entangle with biomedical logics and practices of intervention and the social consequences and implications of trialling health behaviours and lifestyles.

One notable exception is Hulvej Rod et al.'s (2014) article, in which they reflected upon their experiences as two anthropologists, a psychologist and a public health researcher delivering a public health intervention project designed to reduce dropout and drug use through a programme aimed at teachers in vocational colleges in Denmark. In their study, they worked from the outset that

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[13] These scholars draw from a variety of practice-oriented theories and draw variously from theorists, such as Pierre Bourdieu, Michel Foucault, Theodore Schatzki, Elisabeth Shove, Annemarie Mol and Anthony Giddens.

[14] As an addition to the focus on 'health practice', social science researchers have recently highlighted the significance of non-human actors' matters of public health and propose to consider the role of objects and materialities in public health (Cohn & Lynch, 2017; Rock et al., 2014).

understanding the effects of a public health intervention must involve a reflection on its 'social effectiveness', i.e. how 'shared understandings' and 'exchanges' between the implied actors are created, and how social relationships are (re)configured in the process of intervening. More generally, they suggested that intervention research should go beyond simply asking about what works and instead should ask, "how programmes – and intervention research projects – serve to create, maintain, transform (or perhaps suspend) social relations" (Hulvej Rod et al., 2014, p. 306). Conceptually, they drew from anthropological theories of exchange and proposed the 'spirit of the intervention' to suggest how an implementation of an intervention depends on the establishment of social relationships, in which 'something' is exchanged and flows continually between the implied actors. In particular, they highlighted brochures, PowerPoint presentations, and verbal explanations as some of the shifting forms exchanged between the teachers and them (Hulvej Rod et al., 2014, p. 303). Crucial to their argument is that *what* is exchanged may vary and have different forms. As such, the spirit of intervention cannot be identified as a fixed property, but instead as 'an emergent outcome of the intervention' (p. 305).

With their focus on 'social effectiveness' and the notion of 'the spirit of the intervention', these authors thus shift attention from simply focusing on whether a given health intervention work in terms of improving pre-established health parameters to consider the wide range of practices, materialities, and social relationships that must develop between not only intervention staff members, but also between intervention staff and target population for the intervention project to work at all. Their basic, but crucial, point is that health interventions that are not socially effective will most likely never work (Hulvej Rod et al., 2014, p. 306). In contrast to the above studies of health practices, Hulvej Rod et al. (2014) point to the relationship between people's health practices and the health intervention projects, which attempt to change them, as a crucial theme for cultural analytical engagement. With their focus on the 'social effectiveness' of interventions, I contend that they propose explorations of the everyday lives of health intervention projects, which need to be established for these projects to work, as an important cultural analytical project to be taken up.

With the present dissertation, I aim to contribute to this agenda by exploring the everyday life practices of the GO-ACTIWE trial. In taking up this agenda, I suggest that the field of ethnographic studies of RCTs and the social dynamics and practices they articulate can sharpen this project. In what follows, I thus turn to review a selection of studies from what I term the field of RCT ethnography.

RCT Ethnography

In parallel to the social science critique of public health and its various interventions, a series of ethnographic studies working from different theoretical outsets have explored the expansion, transformation, and cultural and political significances of RCTs (and associated biomedical methodologies) in different societal contexts. The hallmark of these studies is an ethnographic focus on how RCTs are conducted in intersections of industrial interests, local, national and global health initiatives, and patients' and citizens' diverse needs, identities and everyday lives (see Will & Moreira, 2010).[15] Although many of these studies concern trials in societal context that differ greatly from Denmark, a brief outline serves to show what can be at stake in the practice of conducting trials and the complexities between trials and their surrounding contexts that become visible when approaching trials ethnographically.

A key theme within this research field focuses on the relationship between trials and particular organisations of patients. With his classic study of AIDS trials in the 1980s in the USA, sociologist Steven Epstein (1995), for example, has described how the social significance of the RCT shifted from research to care and treatment options and how AIDS activists became partners in the construction of credible knowledge (p. 424). Several studies have continued this line of inquiry and explored how patient organisations try to influence biomedical research processes, form new partnerships with biomedical research, and appropriate biomedical discourses and practices to carry out interest-specific research outside established scientific communities (Callon & Rabeharisoa, 2003; Langstrup, 2011; Rabeharisoa, Akrich & Moreira, 2014). These studies variously configure the relationship between everyday life and biomedical research and knowledge as a matter of 'biosocialities' (Rose & Novas, 2005), 'patient activism', and, more generally, as controversies across divides of experts and laypersons about what counts as relevant knowledge.

The question of what makes people participate in trials also has been the focus of much scholarship. In that connection, ethnographic studies have explored how broader patterns of social and economic inequality shape people's decisions to enrol in what are sometimes dangerous trials and how the development of new drugs has become a site of unregulated labour and economy. For example, studies have shown how lack of access to health services and income opportunities propel trial recruitment and participation, and, more generally, how these processes form part of a wider

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[15] As mapping out in detail the richness of this research field is beyond the scope of this dissertation, I have delimited the following review to a selection of studies dealing with issues that relate to or can be used to sharpen my interest in the practical completion of the GO-ACTIWE trial. In particular, I omit studies on, for instance, political economy and controversy that emerge around trials and how RCTs through the spread and consolidation of EBM, which has become an authoritative device in government and policy that strengthens particular ideas of evidence and truth (Timmermans & Berg, 2003; Wahlberg & McGoey, 2007; Will, 2009). In addition, I leave out studies of the epistemological basis and historical emergence of the RCT and the role of EBM (Cartwright, 2007; Dehue, 1999; Marks, 1997).

economic exploitation of the underprivileged of our times (Abadie, 2010; Petryna, 2009; Rajan, 2007). In that connection, Melinda Cooper and Catherine Waldby (2014) have coined the concept of 'clinical labour' to articulate the kinds of material and bodily transactions upon which bio-economy, bio-value and pharmacological innovation depend through an analysis of how surrogates, donors and research participants become workers under uncertain and precarious labour conditions when engaging in biomedical research. Introducing the notion of labour in the context of biomedical research is partly a provocation meant to highlight how biomedical value in many cases builds upon "the experience of self-transformation—commodified" (Cooper, 2008, p. 24). The notion of labour also serves to dislodge ethical questions regarding human experimentation from bioethics to instead address these as an integral part of what they describe as a post-Fordist labour process. In some of these studies, the relationship between trials and participants is configured as a matter of economics and, more precisely, as a matter of how different scales of economics—attempts at earning livelihoods and big business—meet in specific trials. Torin Monahan and Jill A. Fisher (2015), for instance, have shown how economic insecurity in everyday life makes trial participation a viable way of earning a livelihood among what are categorised as healthy volunteers in American drug trials. They thus show how certain people's bodies become sites for economic gain and transaction and thus the locus in which biomedical interests and everyday life meet.

In that connection, a central contribution also has been the critical unpacking of bioethics regulations and procedures of informed consent, which attempt to ensure that trial participation is not based on "coercion, undue in influence, or deception," as the so-called CIOMS Declaration[16] stresses (2016, p. 33), but rather altruistic undertaking while care and research must be kept separate. By going beyond such formal bioethical regulations, ethnographic studies have shown how not only unregulated forms of transaction, but also colonial histories, structural inequalities and relations of power at different scales constitute fundamental mechanisms in the realisation of trials (Geissler, 2005, 2013; Høyer & Hogle, 2014; Kingori, 2013). Anthropologist Peter Wenzel Geissler (2013) has shown, for instance, how biomedical researchers engage in a form of strategic 'unknowing' of the structural inequalities of the research context in African countries, and thus how societal context of research in some way or another pervades the clinical encounter and the process of biomedical research. More generally, Geissler unfolded how weak and fragile public health systems increase the incentive for poor states to accept external help and funding from old colonial

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[16] The CIOMS (Council of International Organizations of Medical Sciences) guidelines are one of several sets of bioethical regulation guidelines of experiments with humans. Other ethical guidelines include the Nuremberg Code, which was formulated after World War II, and the Declaration of Helsinki. Central Principles in the bioethical regulation of human trials include informed consent, i.e. that the participant voluntarily and well-informed autonomously decides to participate, and beneficence, i.e. that researchers have the welfare of participants as a central objective (CIOSMS, 2016).

powers and thus how the trope of 'the African laboratory' is re-articulated through clinical trials (p. 14).

Related studies have explored how the establishment of clinical research enterprises in local contexts can spur public controversy, unsettle established social orders and re-articulate ingrained patterns of mistrust between medical and local communities, and how these contestations influence the completion of trials. For instance, anthropologist Catherine M. Montgomery and Robert Pool (2017) have described how a HIV trial in Zambia gave rise to rumours about Satanism, blood stealing, and witchcraft, which variously challenged the completion of the trial. These studies show, in different ways, how health problems and epidemics in Africa create the basis for new colonial relationships and new dynamics between research and intervention; between scientific investigation and governmentality; between states and their publics; and between researchers and researched.

Ethnographies of Biomedical Research in Denmark

While the above-mentioned studies and others help illuminate serious and important issues of structural inequality, they also direct analytical attention away from other significant conditions in regards to the understanding of trial practices and, in particular, away from other types of trials, such as health promotion, behavioural lifestyle trials and university-based trials. As anthropologists Norma Morris and Brian Balmer (2006) point out, any meeting between research staff and trial subjects should be understood as social situations that are shaped not only by the particular nature of the trial in question, but also by the wider societal systems and cultural contexts within which particular trials unfold (p. 999).

As a welfare state with a universal, free, public and tax-funded health care system, unemployment benefits, thorough bioethical regulation and prohibition of payment for trial participation, Denmark constitutes an altogether different societal context than the ones in focus in many of the above-mentioned studies. In Denmark, precarious histories and patterns of inequality do not afflict the relationship between citizens, patients and volunteers, and biomedical research projects in the same way. Rather, the relationship between the population and biomedical research is characterised by a much greater degree of trust, integration, and inclusion (Svendsen, 2007, p. 33).

On the question of trial participation, a report commissioned by the Danish Health Authorities (2008) emphasised that around 100,000 Danish citizens participate in health research each year, that two-thirds are willing to do it again and, more generally, that the Danish population welcome participation in health research. The report concludes that the bioethical regulation of health research in Denmark ensures credibility, that people 'feel safe' and 'trust' researchers will treat data carefully, and that these factors are important in regards to the relations between citizens and

biomedical researchers and projects (Health Authorities, 2008, p. 24). The report also emphasises that the Danish population is a homogeneous group thoroughly registered in various health statistics and biobanks, which makes Denmark an obvious place to conduct clinical research. Recently, improving the infrastructures of patient involvement in clinical research, and, in particular, improving the contact between research projects and the population, has received political attention. One outcome is the establishment of a state-issued online platform, where researchers can advertise research projects and recruit citizens.[17] The aim of launching this platform was to improve what a previous health minister described as the 'match-making' between researchers and citizens.[18]

Considering these features, a focus on trials conducted in Denmark or similar welfare states can help to elucidate mechanisms other than socio-economic conditions as an explanation for trial participation and the kinds of public and state–citizen relations that public health research depends on and creates. In addition, a focus on less precarious trials (compared with experimental drug trials and HIV trial) may give rise to other explorations of the practical realisation of RCT logics as they unfold in people's everyday lives. Further, a focus on university-based trials, rather than market-based ones, can lead to a different portrait of the RCT, than the governmental, powerful and resourceful machineries that figure in many of the above-mentioned studies.

In that connection, reviewing some of the ethnographic studies from Denmark that have focused on the everyday work involved in reconciling research and care in trials constitutes an instructive starting point for sketching out possible lines of inquiry into the workings of the GO-ACTIWE trial. In what follows, I, therefore, look into a set of Danish studies that have unpacked some of the work processes that goes into the practice of biomedical research in Denmark.

The Mundane Activities of Biomedical Research in Denmark

Anthropologist Mette Nordahl Svendsen and historian Lene Koch (2011) have explored how researchers and participants in treatment for depression, along with researchers in a short-term pharmacogenomics research project in Denmark, perform 'emotional labour' during their research encounters. Working from close empirical descriptions of emotionally charged research encounters, their analysis unpacked how the establishment of altruistic motives required effective handling of emotions, and how latently and already established state–citizen relationships needed to be re-articulated as research-specific relationships between researcher and participant.

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[17] The Danish eHealth Portal a joint national and regional effort to support communication between healthcare professionals and citizens via IT. The Tab of the website is called Become a research participant (sundhed.dk)
[18] Danish Health Ministry (2013).

They thus unpacked the work involved in "generating human raw material when the "life" of life science research is not only a blood sample but also a vibrant human biography" (Svendsen & Koch, 2011, p. 782). Their analysis thus point to the routine work that lies in creating the right kind of participant with the right kind of motivation for the particular trial and how this work in the clinic is central in the conduct of biomedical research. Concerning the GO-ACTIWE trial, their study thus spur questions about the work involved in creating research-specific participants and the particular ways in which this work unfolds in clinical encounters.

Anthropologist Sarah Wadmann (2013) follows a similar line of inquiry in her study of the establishment of informed consent in a multi-centre drug trial that tested a treatment for cardiovascular effects in patients with multiple concurrent chronic disorders, including diabetes and cardiovascular disease. Her study highlighted the significance of close relationships and trust between researchers and participants, and how the sustainment of intimate relationships with research staff members, rather than information about the technicalities of participation, constituted the key orientation of the patient participants. The analysis showed how trial participation for this group of patients becomes a way of living with chronic illness and how establishing trust relations constituted a prerequisite for both good treatment and good research. Wadmann's general argument is that a possible consequence of intimate trust relations between researchers and participants is that patients will be less critical in relation to questions about risks and what tests they accept to participate in, which can be ethically problematic. Wadmann thus points to the solidarities, not imagined in ethical research regulation, that emerge between researchers and participants, and how trust becomes a key social component in the clinical encounters that drive the process of biomedical research. Regarding the GO-ACTIWE trial, the study calls attention to the significance of participation motivation, the kinds of social relations that emerge in the process of trialling, and how these social processes come to influence both practices of research and practices of participation.

With anthropologist Klaus Høyer, Wadmann (2014) also has examined the intimate trust and care relationships between researchers and participants that arise after procedures of informed consent in a hospital-based cardiovascular drug trial in patients with chronic disease. In the article, Wadmann and Høyer highlighted how these social relationships create 'moral friction', which they describe as productive dynamics between research and care activities and ambitions. In order to explore how research and care in practice interfere with each other and coexist in complex ways, they went beyond formal worries about cases of 'therapeutic misconception' (Appelbaum et al., 1982), i.e. research participants' excessive or misunderstood idea of the individual benefits of research participation. For example, they showed how patients cared for researchers through 'selective

reporting', although such activities will likely bias the data. They also showed how researchers experienced a moral friction when they helped participants receive easy access to specialists by sidestepping doctors and the established health care pathways.

From the analysis, Wadmann and Høyer (2014) argued that bioethical regulation and guidelines that seek to separate and maintain research and care as two incompatible activities work from a misunderstood dilemma. Bioethics, they argued, instead needs to recognise how participants in many cases are genuinely interested in producing good data and how researchers, too, in many cases are sincerely interested in taking good care of research participants, and thus how care and research activities can coexist in trial research (p. 19). They thus broach the pertinent question regarding the relationship between research and care at the heart of the GO-ACTIWE trial, whose basic premise was that the protocol could serve both scientifically valid lifestyle research aims and support a meaningful lifestyle change process. In relation to the GO-ACTIWE trial, the study directs the attention towards the ways in which researchers and participants handled the relationship between research and care, or rather research and lifestyle change, and the frictions that emerged in the course of the trial.

The dynamics between research and care is also the focus of ethnologists Astrid P. Jespersen, Julie Bønnelycke, and Hanne H. Eriksen's (2014) study of how researchers engaged in situated care practices in the production of data in a university-based trial in Denmark that tested the health effects of physical activity as obesity prevention in a group of moderately overweight men. The authors showed how researchers engaged in two types of 'body work': objectification through disciplining and subjectification through care. In particular, they highlighted how researchers reminded and helped trial subjects to stick to the exercise protocols and how the trial participants became enrolled in a heterogeneous collective as a part of their participation. They thus pointed out how care practices and the organisation of sociomaterial care arrangements are integral to the production of scientific facts in trials, despite that these activities are erased from the final publications and trial reports.

From their analysis, Jespersen et al. suggested that practices of lifestyle change might as well be situated "in the heterogeneous working of the many actors involved in the daily practice of physical activity", rather than in the individual (p. 656). They thus emphasised the extensive work that researchers must do to conduct exercise trials and how research and care in these trials must coexist, as they are mutually constitutive. They also showed how the implementation of such trials relies on establishing specific collectives around the participants. In relation to the GO-ACTIWE trial, this study directs the attention towards the day-to-day work that researchers did to keep participants adhering to the protocol, but also how participants responded to and enrol researchers and their care

and research practices into lifestyle change projects, i.e. how research activities in practice came to serve ends beyond data production.

The Everyday Life of Trialling

The above-mentioned studies form part of a broader ethnographic project of examining the complex socialities that unfold in trial research. This dissertation makes two overall contributions to this field of research. First, this dissertation contributes to the field by exploring the day-to-day practices in a lifestyle trial and by articulating the complex ways in which people's everyday life and trial logics and practices tangle in the process of trialling lifestyle interventions. As Bell (2016) has pointed out in her recent review of social science work on EBM and the rise of RCT-based intervention research within public health research and practice, most ethnographic studies have focused on pharmacological drug trials (p. 95).[19]

Second, while the above studies articulate the social processes and dimensions involved in the production of biomedical research, they do not focus on the underpinning protocols and, therefore, the specificities of the research projects in question. Because the authors take delineated issues, such as ethics, informed consent, and entanglements between care and research, as their analytical points of departure, the studies provide little insights into the day-to-day work that researchers and participants do to complete and comply with a long-term trial protocol, such as the one underpinning the GO-ACTIWE trial. With this dissertation, I thus aim to contribute to this literature with a set of analyses that focuses on the actual trial protocol and the work involved in realising it. In doing so, my overall goal is to introduce 'the everyday life of trialling' as an alternative to familiar routes, such as politics, ethics, bio-economy, and bio-socialities, as analytical entrances in the ethnographic study of trial research.

My focus on the entanglement between lifestyle change and research in the process of trialling means, in other words, that my project is situated in the cross-section between the ethnographic study of RCTs and critical public health studies of people's health practices. As a consequence, I refrain from taking up a set of obvious lines of inquiry. For one, I do not engage with the phenomenological experience of fatness or obesity, exercising, the experience of losing weight, or how participants (and researchers) perceive, conceptualise and live with obesity and overweight. Although key to many participants' motivations for participation and an underpinning theme of the research in general, obesity, fatness and weight never seemed to make up an distinct concern or

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[19] For a notable exception, see Jespersen et al. (2014).

issue for participants or researchers, for whom obesity constituted a backdrop to their focus on exercise, health parameters and metabolism.

Following this, I do not explore the exercise practices promoted by the trial as more or less circumscribed practices in the same way that the above-mentioned practice–theory-based studies have done. This is because the practices intertwined with other trial-related practices and logics, and they were thus—from my perspective—impossible (and problematic) to tease out as an isolated or individual and analysable practice in itself. Therefore, one will not find in-depth practice-oriented analyses of what it means and entails to cycle to and from work or to work out in a gym. More generally, I do not focus distinctively on the participants and their perspectives on, for example, health, their bodies, risk, or their 'lifeworlds', which is an established line of inquiry in several studies and especially within medical anthropology.

Many of these analytical choices and their implications relate to my decision to draw on theoretical perspectives from the interdisciplinary research field of Science and Technology Studies (STS), especially as they have been developed in connection with the study of biomedicine. This choice is rooted in my analytical interests in the practical implementation of the trial and that STS offers a number of theoretical resources for studying science as a practical enterprise. In the following, I simply outline the overall theoretical orientations that have informed my work, as each article mobilises a more distinct theoretical approach. Subsequently, I provide an outline of the content of the dissertation.

Approach: Exploring Trial Work and the Everyday Life of Trialling

The overall theoretical project that informs this dissertation concerns situating science in particular social and material practices (Law, 2002), or as John Law and Annemarie Mol (2001) put it, the goal is to bring 'the sciences down to earth' (p. 610). The key theoretical assumption in STS is that reality (or ontology) and representations of reality constitute products of particular ways of performing these realities into being. As Mol (2002) put it, "ontology is not given in the order of things, […] instead, ontologies are brought into being, sustained, or allowed to wither away in common, day-to-day, sociomaterial practices" (p. 6). Scientific work, from this perspective, does not happen inside the heads of brilliant scientists but in heterogeneous practices (Law, 2004). In the words of Mol (2000), this approach considers "knowing not as a faculty of the human mind, but as an activity of the human body and the instruments it puts to use" (p. 82). In this approach, studying a trial entails a commitment to situate the trial in material and social everyday practices and an analytical sensibility towards the techniques, materialities, forms of knowledge, and social and material relations through which different entities come into being as actors in a trial.

Following this approach to science, I, therefore, do not take epistemological and theoretical questions about how science or trial research should ideally be conducted as my starting point. Instead, I explore how certain epistemological concerns are dealt with and handled in mundane, social and material trial practices, along with the work that researchers and participants do, rather than what researchers say in final reports, textbooks, or theoretical discussions, or what participants think. As Mol (2011) points out, *work* constitutes a central concept in STS, especially STS in relation to biology and biomedicine, because it directs attention towards that which scientists, doctors, and patients do in practice when they treat and know the body. As Mol put it:

> [The notion of work] shifts some of the attention from the results of research processes and the principles laid out in textbooks, to what happens in laboratories and clinics. It invites one to link questions to do with how bodies are represented, to questions about how they are handled. Anatomists and surgeons cut bodies with sharp knives; histologists colour tissues so as to make 'structures' visible under a microscope; neurologists carefully hit knee tendons with a rubber hammer and in doing so induce reflexes; gastroenterologists insert small cameras into the intestines – emptied out for the occasion – and technicians prick veins so that blood samples may be measured. Nurses teach people to inject their own insulin, wash patients who may or may not collaborate, feed tiny babies and dress bedsores and wounds. On and on it goes: in and with their various ways of working, scientists and professionals put bodies to various tests. No wonder that bodies, in their turn, respond to these tests in different ways. [...] This is not just a matter of interpretation, but a physical – fleshy, material – phenomenon as well. For in 'tests', invariably, in one way or another, knowing and intervening intertwine. (pp. 467–468)

In the above quote, Mol calls attention to the complex realities that come into view if one takes 'work' and what is 'done' in practice as the starting point for studying biomedical research. She highlights how different ways of working on, knowing or what she often terms 'enacting' the body entails a practical, material, and transformative engagement with it. When studied in practice, knowing, and intervening go hand-in-hand. Thus, Mol underscores the performativity of knowing by highlighting how different health professionals work on the body. Each professional uses a particular set of techniques and materials to know and work on the body and each professional works to put the enactment of a specific body to the test to enable a particular outcome. Such outcome could be a surgical incision, diagnosis, measurement, care or cleanliness. These outcomes, however, are not guaranteed. The risk of failure is ubiquitous due to the comprehensive roster of entities and potential actors involved in each practice. Success is an accomplishment, an achievement premised upon the ability to work relations together in ways that effectuate certain outcomes.

For Mol, 'enactment' is an important concept, because it emphasises how (knowledge) practices are performative. With the concept, she intends to highlight what knowing does and entails in practice, and what knowledge practices makes of bodies, subjects and the world. In contrast to

concepts such as 'construction', 'making' or to some degree 'performance', the concept of enactment does not suggest a pre-existing master subject or that reality is divided into a backstage and a front stage. Enactment instead suggests that objects, subjects, and entities are staged, and they come into being in heterogeneous practices and arrangements where the central actors cannot be determined in advance. The concept also helps to make the point that bodies (or other entities) cannot exist free from the relations and materialities of these practices. Particular kinds of entities rely on the continuous enactment of the practices that perform them into being. As Mol (2002) emphasised, "objects come into being – and disappear – with the practices in which they are manipulated" (p. 5). In this view, particular realities (ontologies) must be worked on continuously. Thus, attending to how the body is done, enacted, worked upon and tested in different practices is a way to learn about the multiplicities, differences, heterogeneities and products of science, and how knowing and intervening links in intricate ways.

This approach also makes it possible to appreciate and study the products or effects of knowledge practices. As Marc Berg and Madeleine Akrich (2004) have noted, "The "lived body" is not reduced by its encounters with things and technologies - rather, these encounters are what brings it to its specific life. Such trials are what perform bodies; such trials embody us" (p. 12). Thus, the body becomes through the trials and tests it undergoes. Bodies are performed and brought to 'its specific life' in heterogeneous encounters. As Bruno Latour (1999) also posited, "It is through trials that actors are defined" (p. 311).

In light of these theoretical orientations, a trial comprises a comprehensive set of social and material practices through which bodies, but also subjects, everyday life routines and social relations, are 'put on trial' to bring about 'a specific life'. In this dissertation, I set out to explore the 'tests' involved in making a trial work, the work participants and researchers do to ensure certain outcomes, and the practices that come to comprise the 'specific (everyday) life' that emerges in the process of realising the protocol. Thus, when I write about the everyday life of trialling, I refer to the kinds of work and practices that goes into making the trial work. Accordingly, I approach the participants' exercise practices and lifestyle change projects as intimately dependent on, related to and entangled with the researchers' various research practices. In this dissertation, I thus approach lifestyle change and lifestyle change research, biomedicine and everyday life in terms of their entanglement, co-production, and co-constitution, rather than taking these as separate practices or spheres.

Overall, then, this dissertation attempts to articulate what anthropologist Charlotte Brives has conceptualised as 'clinical ontologies' (2013). With her study of a trial that tested the effectiveness of two drugs in the prevention of mother-to-child HIV transmission during breast-feeding in Burkina

Faso in West Africa, she articulated how the trial 'generates both the results and the objects required to obtain these results' (Brives, 2013, p. 16). Working from the theoretical assumptions outlined above, Brives identified how different trial-related practices depended on and produced certain ontologies, and how these ontologies came with particular norms and ways of determining, measuring, and doing what is good and bad in a particular situation. Her study analysed, for instance, how trial procedures went hand-in-hand with the promotion of particular norms about what it means to be a good mother, and thus how the influence of the trial extended beyond the clinical site to the everyday lives of the participants in a variety of ways. The potential of focusing on concrete trial work is thus that one becomes able to examine the trial-specific everyday life, which is needed to produce trial evidence about the health effect of exercise. In other words, a focus on the intricate ways in which participants and researchers, 'everyday life' and 'biomedicine', and lifestyle change practice and lifestyle change research co-entangle and co-produce in the process of trialling allows one to articulate the 'trial ontologies'[20] needed to make health interventions socially effective.

Outline of Dissertation

Part I comprises two chapters. In Chapter 1, *Elegance, Workability, and Muddiness*, I focus on the ways in which 'everyday life' was discussed and configured in the conception, drafting, and implementation of the GO-ACTIWE trial protocol. In the chapter, I start from the idea that everyday life is generated through various problematisations, which configure it differently. Through the analysis, I show how the trial protocol came into being in a tension field between ideals of scientific elegance and everyday workability, and how 'everyday life' in the process was problematised in various ways. Based on the analysis, I argue that studying the 'everyday life of trialling' as a specific problematisation of everyday life in the conduct of RCT-based health intervention research can yield insights about the social processes that go into making a health intervention project work.

In Chapter 2, *Performing the Trial as Field*, I unpack the everyday life of trialling through an account of my fieldwork activities in the GO-ACTIWE project and how I have carried out my study. After sketching out a performative approach to constructing an ethnographic field, I describe the practices through which I have generated the materials for the four articles that make up the central analytical contribution of the dissertation. By exploring my various engagements in the mundane practices of the trial, I show how the trial worked through various configurations of researchers,

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[20] Here, I use the term *trial ontology* rather than *clinical ontology* to underscore that the GO-ACTIWE trial and its practices did not simply concern clinical encounters (or laboratory tests), but rather that the trial involved a variety of trial-related practices that went beyond the lab or clinic, such as the prescribed exercise sessions. By the notion of *trial ontology*, I thus refer to the whole range of activities prescribed by the protocol.

participants, procedures, technologies and practices, and how these arrangements of trial work spurred a trial-specific everyday life into being. My central argument is that understanding how trials *work* requires an exploration of the social productivity of methods and the everyday practices, social and material relations, and tests that constitute a particular trial.

Part II comprises four articles. Article 1, *Recruitment Tests*, co-authored with Line Hillersdal and Astrid Pernille Jespersen, focuses on participant recruitment. By following the recruitment scheme in the GO-ACTIWE trial, the article shows how potential participants go through a set of complex tests in which they are configured into different relations with the trial project. By analysing promotional material, introductory meetings, screening procedures, laboratory tests and randomisation procedures, the article shows how the participants are called upon as health subjects, positioned as members of a research population, examined as individual research subjects, sampled as a laboratory bodies and randomised as trial-specific health subjects. The article argues that the trial participant must be considered a multiple figure enacted in relation to the specific social, material, and bodily practices that make up a particular trial project. The analysis suggests that completing trials rely on continuous recruitment practices and the continuous enactment of trial participants into the social and material relations that the trial relies on to work.

Article 2, *Proper Vision*, picks up where the first article left off, with an analysis of the trial researchers' work of monitoring the participants when they leave the project's facilities after the initial recruitment practices and return to their particular everyday lives to exercise five times a week for six months. The article focuses on long-distance control and, in particular, on how the researchers managed to control and ensure participants' compliance from their position at a small office, far away from the participants. The article foregrounds how the researchers, with the help of data tables, heart rate monitors, email correspondence, and meetings, try to create insights about and make interventions into the participants' compliance with the exercise protocols. I argue that monitoring participants must be seen as an achievement to do with creating a 'panoptic effect' through various and productive ways of seeing, knowing, and monitoring at a distance.

Article 3, *Routines on Trial*, focuses on the participants' work in the trial and how they make the exercise protocols into exercise routines in their everyday lives. The article highlights how routinising the protocols comprise construction work to do with organising everyday life to fit the demands of the trial protocol and bodywork to carry out the exercise sessions in certain ways. Through three participant stories, the article shows how the implicit logics about everyday life and exercise in different ways challenge the participants and how these challenges amount to trial-specific everyday life practices, which includes the daily work of making the protocol into a routine. The main argument is that exploring the 'roadwork' that specific health interventions demand is a

way to understand the implicit norms and the hidden work involved in processes of lifestyle change as well as the social implications of health interventions.

Article 4, *Self-Care in Harness*, also focuses on the participants and their work in the trial. The article examines how participants used the trial as a technology to work on themselves as subjects, and how the personnel, knowledge forms, and technologies of the trial allow the participants to arrange practices of self-care. Through an analysis of the participants' rationales and bodily, social and material participation, the article articulates how self-care forms basic work in the realisation of the trial. More generally, the article points to a paradox in how public health research that seeks to support individual lifestyle change in practice depends on establishing particular collective arrangements, and thereby points to a disconnect between the collective processes of public health research and its individualising mobilisation in policy.

In the final chapter, *Conclusions*, I sum up the dissertation and suggest that the four articles have provided insights into how trialling generates and works through trial-specific everyday lives. Rather than a passive, ready-made and default context of research, I suggest that everyday life in relation to health interventions should be understood as the work practices through which a trial and the projects it gathers comes to work. In this view, trials and everyday life generate each other in a continuous practice of trying to make them work together. To sum up, I discuss the bearings of this insight on the practice of trialling healthy lifestyles and how ethnologists can go about studying trials and other health intervention projects.

PART I

1. Elegance, Workability, and Muddiness

Problematising Everyday Lives in the GO-ACTIWE Trial

Robust Trials

The increased focus on inscribing the complexities of people's dealings with matters of health and illness into the design and test of health interventions in the hope these will eventually be successful in changing people's health behaviours means that trial researchers are increasingly faced with demands to meet rigorous methodological requirements, while producing evidence with external validity (Will, 2007, p. 86). According to sociologist Catherine Will (2007), these disparate demands urge trial researchers and statisticians to develop strategies that redraw the boundaries between research and practice. Such strategies include the 'selection' of particular groups of people and patients through negotiations of inclusion criteria to improve the likelihood of finding a strong relationship between the hoped-for benefit and an intervention. 'Incorporation' of existing organisations, systems, and elements of practice is another strategy. In addition, 'bracketing' of the social complexities of trials through statistical operations is a way to meet calls for generalisable knowledge.

Within health intervention research, another strategy to increase generalisability and the external relevance of health interventions is to include qualitative researchers in the design and implementation of health intervention trials. For example, in their influential guidelines on trialling, the British Medical Research Council (MRC) proposed to incorporate qualitative research (e.g., interviews, ethnographic observations, and case studies) as part of a mixed-method approach in preparing RCTs for complex interventions to improve health (Campbell et al., 2000). The guidelines suggest that qualitative research can contribute to trial design by identifying the active ingredients of an intervention, by examining the compatibility between specific groups and specific interventions, by articulating the belief, attitudes, and behaviours of the groups in focus, and by contributing to understandings of why an intervention works (p. 8–9).

These strategies can be said to form part of an overall attempt to "contextualise" knowledge production in the contexts that need it, i.e., 'the contexts of application' (Nowotny et al., 2001, p.

186). This coupling between interdisciplinary collaboration, interests in complexity, and societal impact of interventions can be said to reflect a general tendency within research and research policy to stress problem-solving, application, and innovation as the central purposes of research (Barry & Born, 2013). According to sociologists Helga Nowotny and Micheal Gibbons, two of the authors behind the influential books *The New Production of Knowledge* (Gibbons et al., 1994) and *Re-Thinking Science* (Nowotny et al., 2001), this reflects a new contract between society and science that began forming in the twentieth century. In this contract, the parties no longer remain separate, but rather organise and relate in ways that not only allow science to speak to society, but also society to speak back to science in the production of what these authors have called 'socially robust knowledge'. In an article, Gibbons (1999) indicated that this kind of knowledge is characterised by three features:

> First, it is valid not only inside but also outside the laboratory. Second, this validity is achieved through involving an extended group of experts, including lay 'experts'. And third, because 'society' has participated in its genesis, such knowledge is less likely to be contested than that which is merely 'reliable'. (p. 13)

'Social robustness', according to Gibbons, concerns the flexible adaption of the production of knowledge to the concrete and local conditions of the context of application so that the knowledge produced is forced to work within not only the laboratory, or the university more broadly, but also within the relevant societal context in focus. This requires researchers from different disciplines to work in collaboration with actors in the context of application. For these authors, this way of organising research is considered an ideal. The resistance that the production of knowledge encounters in the connection between wide spectrums of actors, all of whom must be able to recognise the value of the knowledge, is what creates social robustness (Svendsen, 2009, p. 39). In this view, social robustness is not merely asserting the health benefits of exercising a certain number of minutes a day—regardless of how reliable such results may be in the laboratory—if those to whom the knowledge is intended do not find the results appropriate. Social robustness, therefore, refers to a form of alliance creation in which various actors participate in the production of knowledge.

Yet, while settings beyond the laboratory—institutional, private, or organisational—are now advertised as valid targets of health intervention research, social science scholars have stressed that the complexities and contexts of people's dealings with health and illness remains underdeveloped themes within intervention research and practice (Cohn et al., 2013; Broer et al., 2017; Shoveller et al, 2016). Despite the interest of capturing the complexities of people's everyday lives, these tend to

be considered only if they can be removed from the final equation of trial evaluation and only if they can be identified as facilitators or barriers to health-related activities. In health interventions, people's everyday and social lives are often treated as either reinforcing or limiting factors of individual abilities and choices to comply with certain guidelines (Ioannou, 2005, p. 266).

Commenting on health intervention research in particular, Cohn (2014) has argued that the problem is that public health research and its underpinning theories models and methods are ill-equipped to take into account issues of context because the complexities of context in many cases cannot be made into isolable variables in meaningful ways. As he put it: "[h]ealth behaviour remains contrasted against a backdrop of interrelated factors that fall outside the specifics of research because they have not, or often cannot, be rendered into variables" (p. 159). Cohn thus points to a discrepancy between the methodological requirements of quantification in intervention-based health research and the everyday contexts that this form of research seeks to consider. In this context, Cohn's query broaches questions about how "everyday life" was considered as a site for the trial, or as a context of application in the GO-ACTIWE trial. In other words, how is everyday life configured in the intersection between ambitions to meet standard methodological requirements and ambitions to produce knowledge that is valid beyond the laboratory?

Everyday Life as Problematised and Problematising

While the concept of everyday life is often used in a self-evident manner, everyday life can indeed be configured differently and be put to various uses. As ethnologist Marie Sandberg has noted, everyday life has become a key focus of interests from private and public organisations who call on ethnologists and other cultural researchers to identify possibilities for change, innovation, and governance in everyday life (Sandberg, 2014). As she put it:

> Within soft capitalism logics, everyday life – including its most intimate private spheres – becomes the number one zone for improvement through which populations may be encouraged into healthy aging and lifestyles, better parenthood and further education, or even to reduce climate change (p. 8).

One of Sandberg's points is that ethnologists ought to respond to these calls carefully and resist what she describes as the "ugly version" of everyday life conceptualisations, i.e., uncritical versions of everyday life, which reduces it to 'user needs', 'beliefs', 'motives', 'opinions', etc. She thus points out how the idea of everyday life as a more or less stable sphere, world, culture "out there", or object in itself that ethnologists can understand, make intelligible, and available for transformation and improvement is adamant within many change-oriented projects. Her point, however, is that

everyday life is a dynamic term that lends itself to various uses and re-workings, including ethnological ones, and that a key tenet in an ethnological approach to everyday life is to look into, interfere with and rework these various uses.

The underlying theoretical point is that everyday life—what it is and what it means—is configured, conceptualised, and materialised through different problematisations that can be practical, normative, or theoretical (Damsholt, 2015). As ethnologists, Tine Damsholt and Morten Krogh Petersen have explained:

> ethnological studies of everyday life do not consider everyday life to be an entity or an object in and by itself, but as an object configured and shaped in specific forms through shifting agendas and interests or [...] problematizations. (Damsholt & Petersen, 2014, p. 5)

The performative argument made above is that different projects and interventions into everyday life produce and act upon different versions of everyday life. Everyday life, in this view, is thus not a particular stable and self-evident part of reality "out there", but a phenomenon, which is constituted into being—discursively, materially, and socially—within particular relations between actors and entities, which make everyday life problematic, recognisable, intervenable, and knowable in particular ways (see also Hastrup, 2011; Petersen & Munk, 2011). By referring to the processes of defining a problem and the strategies used to address it, the notion of problematisation thus points to an interviewing of ontology and epistemology; of knowing and intervening. In other words, making everyday life into a problem that requires a solution or intervention is a way to generate everyday life. This also implies that studying problematisations is a way of taking part in the process of generating and problematising everyday life.

In that connection, the ethnologist's job could be to discern and intervene in the ways in which everyday life is problematised. This agenda can be taken up by exploring, for instance, how everyday life is always already problematised and problematising (Damsholt & Krogh, 2014), how critiques of everyday life are already embedded in practices of everyday life (Birkbak, Petersen, & Elgaard Jensen, 2015; Michael, 2006) or how everyday life revolutionises new technologies rather than the other way around (Löfgren, 2014). Another strategy is to explore how different versions of ("the good") everyday life coexist, conflict, and become objects of work and engagement (Damsholt, 2015), or how articulations of everyday life can spark controversy and specific publics into being (Petersen & Munk, 2011).

With these perspectives in mind, I use this chapter to unfold how everyday life was problematised in the conception, drafting, and implementation of the GO-ACTIWE trial protocol. In so doing, my aim is to explore how everyday life and the trial were co-produced in the development of a trial

protocol that could be valid in the laboratory and in people's everyday lives. Additionally, the chapter serves as an introduction to the trial and its basic rationale, assumptions, and interests.

The chapter is organised as follows. First, I describe the origin and the basic rationale of the trial based on an interview with one of its main architects. Second, I focus on the development of the protocol based on my experiences during my internship prior to my appointment as a PhD student with the project. In doing so, I describe the basic assumptions behind the trial design and how I assisted in incorporating everyday life into the protocol. Third, I unpack how the final protocol formalised demands for methodological rigour and everyday life relevance. Fourth, I look into the trial researchers' reflections about the everyday lives of the participants and their work in ensuring compliance with the protocol. Last, I provide a brief glimpse into the researchers' work to implement the protocols in the participants' everyday life, and discuss what I term the 'trial-specific everyday life' as a particular problematisation of everyday life that calls for ethnological attention.

The Origins of the GO-ACTIWE Trial: Everyday Life as Ideal Context

The foundation for the research in the GO-ACTIWE project was laid long before my involvement, which dates back to my research internship in the winter of 2013/14 and my appointment as a PhD student in March 2014.[21] At the time of my internship, the project had already been in the early stages of development for several years under the auspices of another RCT-based research project by the name of FINE, which involved scholars from biomedicine and ethnology.[22] A brief outline of this project is necessary to understand the design of the GO-ACTIWE trial.

The FINE trial involved 60 healthy, sedentary, and moderately overweight men aged 20-40 years, who were randomised to a 12-week trial comprising a control group with no exercise and two interventions of high dose physical exercise and moderate dose physical exercise in everyday life. The trial design was based on the Health Authority's official recommendation, which encourages adults to be physically active for 30 minutes every day and it tested whether working out for 60 minutes would be twice as healthy on selected health parameters. The biomedical researchers of the trial concluded that this was not the case for several crucial health parameters and proposed that investigating other ways of being physical active in everyday life that provide the same health effects in future trials could be relevant for public health (Reichkendler et al., 2014). The FINE trial thus

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[21] The internship lasted for one semester and served as the basis for my Master's thesis on interdisciplinary knowledge production. During the internship, I attended meetings regarding the preparation of the protocol, reviewed literature, and completed an ethnographic study on cycling in everyday life.

[22] This project was conducted as part of the research initiative, UNIK-Food, Fitness and Pharma, at the University of Copenhagen.

represented a form of public health research that directly aims to support the promotion of physical activity by producing knowledge about exercise for and through everyday life.

In several respects, the GO-ACTIWE trial developed further the research and health promotional ambitions of the FINE trial. For one, the GO-ACTIWE trial continued the collaboration between biomedicine and ethnology, thereby furthering the focus on both cultural and physiological aspects of exercising in everyday life. This disciplinary alliance, which materialise a particular coupling of health research, everyday life, and health promotion, was emphasised in the management of the GO-ACTIWE trial, which comprised a professor of biomedicine and an associate professor of ethnology. Another continuity was that several of the junior researchers from the FINE project re-engaged in higher positions and as those responsible for completing the GO-ACTIWE trial. More specifically, three PhD students [ASG, JSQ, and MB] with backgrounds in public health, medicine and nutritional science and a postdoctoral researcher [MRL] in sport science were to manage the trial on a day-to-day basis with assistance from a varying group of students from public health and biomedicine. In practice, their work included participant recruitment, exercise supervision, and biomedical data collection throughout the timespan of the trial, October 2013 to June 2016.

Since the roots of the GO-ACTIWE trial were embedded in the FINE trial, many central decisions concerning the overall research organisation and the trial design had already been made and related directly to features of the FINE trial. For example, the GO-ACTIWE trial was to be executed according to the principles of the RCT in the participants' everyday lives and to measure the same health outcomes and involve interventions comparable with those tested in the FINE trial. The GO-ACTIWE trial also built on the official recommendation. However, the GO-ACTIWE trial was distinctive on four central features. One, the GO-ACTIWE trial included both women and men. Two, the trial lasted for six months,[23] rather than three months, to test hypotheses of exercise routinisation and the long-term health effects of physical activity. Three, the GO-ACTIWE trial was set up to test different exercise types (modality), including active commuting by cycle, instead of different exercise amounts (dose). Four, the trial had to act as a vehicle for a set of PhD projects that had to investigate everyday exercising from biomedical, public health, and ethnological approaches. Compared with the FINE trial, the GO-ACTIWE trial was thus more extensive and ambitious in regards to producing knowledge about exercise interventions that could be relevant for people in their everyday lives.

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[23] Originally, the trial was designed to last for 12 months. The length was shortened to make the trial more appealing and to release resources for recruitment work.

In what follows, I unpack how everyday life was conceptualised as the context of trialling in the conception of the trial based on an interview with one of the main architects behind the design.[24]

Trial Ideals: Scientific Elegance and Everyday Workability

One of the key features of the GO-ACTIWE trial was the ambition to consider everyday life and produce knowledge to "improve wellbeing and health in everyday life", as the name of the trial suggests. As one of the main architects of the trial and day-to-day trial manager, MRL, recounted in an interview in which we talked about its origins and rationale, the ambition was "to look at what people do in their everyday life and then test it in a biomedical way" and by doing so to test a "behaviour that people actually have". As he explained, "Basically, I wanted to find out how easy it can be to be physically active".

In that connection, the inclusion of active commuting by cycle as one of the interventions to be tested was the unique selling point of the trial. Indeed, it was *the* feature, which separated the trial from previous trials that have mainly tested structured forms of physical activity in the leisure domain or laboratory. According to the researcher, the need for strict control in performing trials means that trial researchers have "forced people to work out in our [read: biomedical] ways, and not in their own ways". As an integrated form of exercise in everyday life, active commuting, in contrast, served as an emblem of a potentially easy way of achieving the health effects of physical activity, which has already proven its relevance and workability in everyday life. Here, his own everyday life as a Copenhagen cyclist played a key role in the conception of the trial. In the interview, he recounted how he became inspired when cycling to work and came to think whether "we can achieve the same health effect by everyday cycling as with structured exercise in a gym". In the interview, he elaborated:

> It was pretty simple in my mind: we have something that people actually do here in Copenhagen, namely cycling to and from work, and we know from population studies that there is a correlation between mortality and obesity parameters and different kinds of physical activity. We know that people, who are regularly physically active, are less obese, die later and so on. [...] So, this was what drove me. I was like: "Okay, we are going to set up a trial to test experimentally the usual treatment, which has been the laboratory-like physical activity, against something that people actually do and then do it in a randomised trial". (MRL, trial manager)

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[24] Although the main lines of the trial result from an interdisciplinary collaboration between the senior researchers in the project, I focus primarily on the biomedical aspects of the preparation and implementation of the protocol. This is because the biomedical researchers handled the final drafting of the protocol and its practical implementation and that their interests and requirements were of crucial importance for its design. Additionally, I only focus on my involvement in its completion, and thus make no claim to represent or talk on behalf of the general ethnological engagement in the project.

As he described, the basic ambition with the trial was to subject a proven and evidently widespread everyday life routine to rigorous biomedical testing and to produce evidence regarding a way of being physically active that already works in everyday life. Through the interview, I learned that the basic ideas for the trial stemmed from several discussions among the leading actors from the FINE trial, each of whom had offered different ideas of how to make a trial relevant in relation to what "people actually do". For example, interests in exercise routinisation over time and the time saving potentials of high-intensity exercise informed the design of the trial.

However, as I learned in the interview, during my research internship, and throughout my engagement in the trial project, the ambition to take into account everyday life often went hand-in-hand with the ambition to make an "elegant study", as the biomedical researchers sometimes described a trial complying with the scientific tenets of the RCT. In the interview, I asked the principal investigator about the phrase, and in the following, I quote at length our conversation because it articulates an inherent tension between ambitions to make a socially relevant trial and ambitions to make a scientifically elegant one:

Me: I've heard you guys talk about an elegant study several times. What is an elegant study?

MRL: We use that about RCTs with a clear hypothesis and a clear design that tests the hypothesis with state-of-the-art methods.

Me: Is that something you strive for?

MRL: Yeah, no doubt! [...] Obviously, one reads some of the major groups' trials and one is overawed about them, and one thinks: 'Wow... I would like to do that!' As a researcher one would really like to do that! We talk about that data writes itself, or the story writes itself, and that one should not have to turn every stone to find out what's up and down. But rather that one say, 'we are investigating this, and then you set up a study in a specific way to answer the question. Naturally, the simpler the hypothesis; the simpler the design. A simple question requires a simple design! But we are doing lifestyle research, and there are so many factors that influence things. So, it becomes a little more muddy.

Me: Is there a tension there? Between elegance and muddiness?

MRL: Yeah, totally there is. Well, when I read an elegant study, I sometimes feel a little unsure about what the meaning is. I do not doubt that it is high-level research, that they use good methods, and that it has been costly to make. But what about when it goes into the real world, does it work? Does it make the world better? [...] So, one is overawed because a trial is beautiful and elegant, but as a scholar and as a private person I'm left with a little emptiness. The good, positive results, how are they to be implemented in everyday life, so they will work for people? So that people somehow become happier, more healthy, and more beautiful and so forth. As scientists, we have a goddamned duty to make something that works for people. Of course, we also have to keep the academic banner flying about everything. But we also have an

obligation that it must benefit society and we need to communicate what it is that we've found.

In their study of RCTs in HIV research, sociologists Mike Michael and Marsha Rosengarten (2013) have examined how the idea of the RCT as the "gold standard" method, despite continuous internal critiques of its shortcomings, remains as what they describe as "an attractor – a point toward which the RCT should be moving [...]" (p. 77). In their study, they also described how the notion of the gold standard works as an "informal or tacit nexus of connotations" of purity, goodness, incorruptibility, and stability, which serve as standards against which RCTs are assessed, designed, and executed (p. 77). "Gold standardness", in other words, is something that an RCT should embody. They thus point to how a particular set of ideas and ideals about how a trial should be carried out—what a good trial is—has material effects on the practice of trialling.

In the main architect's reflections above, the ideal of gold standardness figures alongside workability as another ideal of what a trial should embody. On the one hand, the main architect articulated the ideal of 'the elegant study', which is simple, clear, and self-evident. In his remark, the elegant study figured as both a personal ambition (i.e., he is overawed) and a scientific requirement (i.e., "keeping the academic banner high"). However, he simultaneously doubted the ability of elegant studies to produce knowledge that works for people in their everyday lives, which he emphasises as another ideal and the ultimate purpose of health intervention research. In particular, he discussed the socially meaningful trial, which produces evidence that will work for people in their everyday lives and promotes healthy and good lives. In the interview, he thus emphasised two trial ideals, "elegance" and "workability", that relate to everyday life in different ways. In the ideal of the elegance trial, everyday life is a barrier and a problem for achieving reliability and ultimately something that is (and must be) disconnected from the production of knowledge. In this ideal, the controlled laboratory constitutes the ideal setting for the production of knowledge. In the ideal of the workable trial, in contrast, everyday life is a resource—the ideal context for the production of knowledge—and the context that trial results ultimately have to work for and benefit.

In the interview, MRL thus highlighted the fundamental challenge facing the researchers as well as the participants and the fundamental challenge about which this dissertation deals. It concerns the challenge of realising a trial that is both scientifically elegant, state-of-the-art, simple, self-evident, clear *and* meaningful, workable, and relevant for people in their everyday lives. Mapping onto what Nowotny et al. (2001) and Gibbons et al. (1994) have described as 'reliable' and 'socially robust knowledge', the notions of 'elegance' and 'workability' encapsulates two seemingly incompatible ideals, both of which carry an associated package of methods, requirements, and norms about what is 'good'.

In what follows, I revisit my internship to examine how these ideals were incorporated in the making and implementing of the trial protocol. In doing so, I show how everyday life was difficult to handle within the RCT logic and that realising ideals of 'everyday life workability' and 'scientific elegance' together constituted a muddy affair, which implied multiple problematisations of everyday life.

Trial Truisms: Basic Assumptions about Everyday Life

In trial research, protocols are core technologies with multiple purposes (Timmermans & Berg, 1997). A protocol is a scientific design document, which describes the methodological and theoretical basis for the intervention and evaluation, including methods of randomisation, data analysis, and statistical power calculations (Mathews, 2006, p. 183-184). Protocols also create links to external actors, such as ethics committees, stakeholders, and journal editors. In addition, a trial protocol functions as an operating manual or a 'script' for executing a trial (Timmermans & Berg, 1997, p. 275). A trial protocol describes, for example, the inclusion criteria, the intervention specifications, delivery methods, timeline, examination procedures, etc. Thus, a trial protocol constitutes a document in which criteria for scientific elegance and everyday workability are formalised into prescriptions, standards, and requirements (Rushforth, 2015). Before I explore the final protocol, I first examine the basic assumptions and understandings of everyday life that the final protocol is built upon.

The Domains of Everyday Life and the Perfect Model

At the time of my internship, the key concern was to ensure that the protocol accommodated the biomedical researchers' interests, met the key criteria for RCT-based research, and that it was possible to execute the protocol practically. During joint meetings, we discussed more specifically questions regarding the intervention specifications, timeline, funding, personnel, laboratory tests, methods, recruitment, and how the trial should be advertised or "sold", and made attractive to participants. Engaging in these discussions was difficult as a new entrant unfamiliar with trial research. Particularly, I struggled to determine the interests that had to be met, understanding the biomedical jargon, and my role as a research intern. At the same time, it seemed that the protocol was continuously being developed in between the joint meetings and that many ideas about the execution and core design of the trial were no longer up for discussion. In particular, two assumptions were crucial in how everyday life was considered in the trial protocol.

The first assumption concerned the idea that everyday life is divided into "domains". At the meetings, this idea was substantiated when the trial manager, MRL, presented the trial rationale by

showing a graph from a study that had reviewed time use data from the US, UK, Brazil, China, and India to assess and forecast the energy expenditure used in different "domains of daily life" (i.e., occupation, domestic production, travel, active leisure, and sedentary time) (Ng & Popkin, 2012). The graph had a seductive simplicity and obviousness to it. Via colour-graded layers, it figured everyday life as a layer-cake of separate energy consuming activities from 1965 until 2030. The graph displayed that the 'transportation domain' (shown by a white band, see figure 2) had not changed and would not change during the 1965-2030 period. The rationale that the graph supported was that the transportation domain constituted a domain of everyday life, not already occupied by other activities, and that the less energy-intensive activities that took place here, such as car and public transportation, could be replaced with more energy-intensive activities, such as active commuting by cycle. Combined with epidemiological reports that point to the health benefits of active transportation, the graph, in other words, underscored the relevance of testing active commuting by cycle for public health.
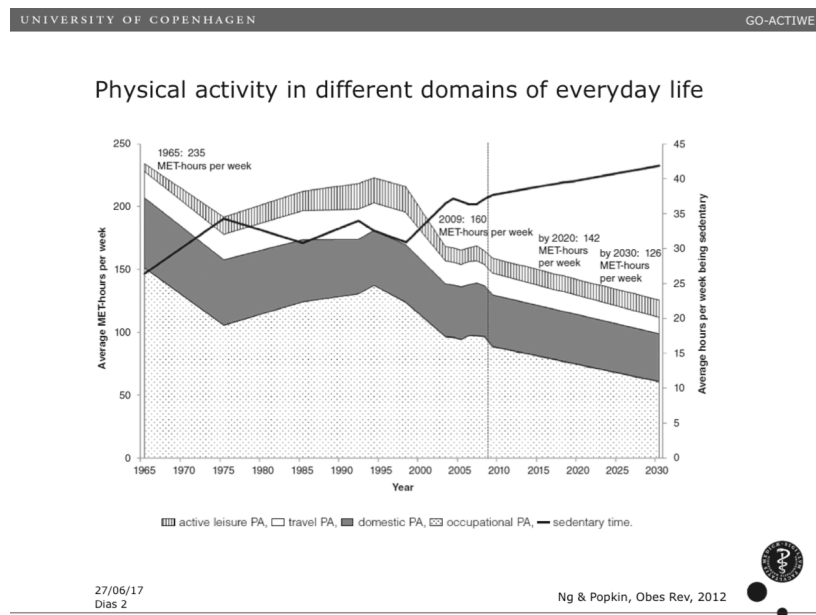
Figure 2: Physical activity in the domains of everyday life.

Despite the disparity between Denmark and the countries examined in the study, none of us questioned the relevance of the graph or the notion of domains. One reason may be that the notion of domains allowed for a self-evident way of talking about exercise in everyday life. For example, these words often accommodated the above-mentioned graph when it was displayed at different occasions, "We all know that physical activity can take place within different domains of everyday life …". The idea of domains of everyday life also made it possible to distinguish between interventions in the leisure time domain, which was regarded more standard and interventions in

the transportation domain, which was a novel target within the trial research community and of apparent public health relevance. This was also evident when MRL foreshadowed the GO-ACTIWE trial and the potentials of exercise in the transportation domain in a press notice about the FINE trial:

> Another interesting scenario is to study exercise as a form of transport. Exercise is fantastic for your physical and mental health. The problem is that it takes time. If we can get people to exercise along the way—to work, for example—we will have won half the battle. (MRL, trial manager)[25]

The excerpt above shows how the notion of the transportation domain supported the social relevance of the trial and the idea of active commuting as a potentially timesaving and integrable way to exercise. The quote also shows how the idea of exercise in the transportation domain enabled the problematisation of a particular part of everyday life as a site for health promotion and in particular how active commuting was not only figured as transportation, but as a means in the "battle" against obesity.

Figure 3: This picture has routinely been used to illustrate Copenhagen as a model.

Regarding the practical completion of the trial, the appropriateness of the city of Copenhagen as the intervention context constituted another core assumption. Renowned for providing the world's best conditions for cycling, comprising approximately 429 km of cycle paths and green bicycle routes, Copenhagen was an obvious site to conduct the trial.[26] The importance of the city's cycle-friendly infrastructure in making the trial possible was regularly highlighted, such as when the city was referred to as "the perfect model" and represented in PowerPoint presentations via images of cyclists. The well-established cycle culture in Copenhagen, in which all of us took part, in other words, functioned as a concretised ideal of an existing and meaningful exercise practice in everyday life. Simultaneously, the city provided an existing material framework, where this life in fact could be

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[25] University of Copenhagen, *News*, 30 minutes of daily exercise does the trick, August 22, 2012.
[26] Municipality of Copenhagen (2013).

tested in a biomedical way. Copenhagen as a 'perfect model' and everyday life as divided into 'domains' thus constituted two "trial truisms" about everyday life that made it possible and obvious to pursue ideals of scientific elegance and everyday workability in one trial.

An Ethnological Pilot Study: Cycling as Rhythms in Everyday Life

Although the biomedical researchers handled the details of the protocol, I became involved when I was invited to conduct a pilot study on cycling in everyday life. I presented the results of the project at one of the project meetings and I dwell a moment on the presentation because the situation shows how RCT requirements configure opportunities for interdisciplinarity and ambitions of considering everyday life in RCT-based health research. The meeting took place at the Faculty Club, which is an area at the Panum Institute (UCPH) that constituted the project headquarters. All the so-called "core group meetings" took place in this area, whose location on the top floor makes it possible to take a panoramic view over the bicycle city of Copenhagen. As usual, one of the senior researchers gave an introductory presentation on the main rationale of the trial. Next, the three PhD students presented their projects, all of which included hypotheses that required an RCT-based trial of exercise.

My presentation differed as it described a pilot study rather than a well-defined PhD project. In brief, my study was based on interviews with four experienced cyclists in Copenhagen and four people who only cycled sporadically. I had named the presentation, "Everyday life Cycling – to create a new rhythm in everyday life?" and the overall purpose of the study was to contribute to the completion of the active commuting protocol. Presenting the study, I indicated that my conclusions could be relevant to questions concerning 'exercise intensity', 'distance', and 'routinisation', which were key themes at that particular moment. The pilot study was thus an attempt to bring ethnological perspectives on active commuting in everyday life to the table.
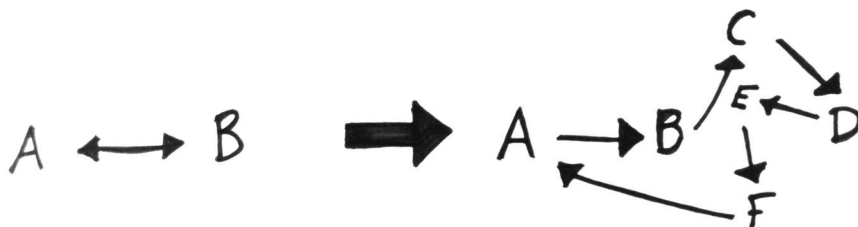
Figure 4: Drawing from concluding slide from my presentation. The drawing suggests how active commuting in everyday life does not entail two fixed, but rather multiple interchanging destinations. Drawing by author.

One of my main conclusions was that the idea of active commuting as an activity that takes place between two fixed destinations is a reduction of cycling as a daily life practice, since it often includes a varying number of destinations. My point was that the transport domain in everyday life was to be understood as dynamic rather than as an established temporal and spatial structure suggested by the notion of domains. Inspired by the French philosopher Henri Lefebvre's (2004) concept of 'rhythmanalysis', I suggested that cycling in everyday life is practised rhythmically and that it is a bodily, sensorial, and material practice that links several destinations, temporalities, spatialities, and practices together in everyday life. I also pointed to other conditions in everyday life that might have an influence on people's decisions and opportunities to cycle (e.g., family configurations, experience, work life, and infrastructure). Through lengthy empirical quotations, photographs, figures, and theoretical perspectives, I thus introduced what I took to be a more complex and heterogeneous version of active commuting in everyday life.

While I am sure my empirical points resonated with the researchers who were all experienced cyclists, they also jarred with the requirement that cycling had to be configured as a confined "intervention" relatable to an "effect". That I might have highlighted an empirically recognisable, but conceptually unsuitable version of active commuting became clear when one of the PhD students interrupted me while I was introducing the concept of rhythm and, in an acknowledging but bewildered way, said, "I have never heard anything like it! And I'm not at all sure I understand what you mean, but please continue".

In the period following the meetings, the biomedical researchers worked to make the active commuting intervention and the two forms of leisure time exercise interventions comparable before drafting the final protocol. That the researchers designed the exercise interventions at separate meetings suggests how the exercise interventions had to be defined according to certain biomedical and quantitative criteria and not in relation to our collective experience as everyday life cyclists, common sense, or ethnological graduate research. In other words, the version of active commuting in everyday life that I introduced was not marginalised because it was "wrong", but because cycling in everyday life had to be constructed as an altogether different intervention to be included in the trial design. The RCT could not accommodate an understanding of cycling as a life situation-specific, geographically rooted, and experiential bodily practice. Instead, cycling in everyday life had to be quantified and made to fit external and internal research criteria.

As philosopher Nancy Cartwright has argued, the RCT is a "clincher" method, i.e., a method that aims to confirm conclusions and to make causal claims; however, "narrowness of scope" is often a consequence (Cartwright, 2007, p. 12). In particular, the commitment to causality and statistical operation comes to shape the nature of the object of intervention, both materially and temporally.

In RCT-based research, making interventions into "quantitative objects" (Rosengarten & Michael, 2013, p. 73), in other words, is a prerequisite for testing a hypothesis about a causal relationship between an intervention and an effect: in this context, between a cycle routine and health parameters.

Although quantification as a mode of problematisation cannot be underestimated in the making of a trial protocol, the limited influence of my pilot study on the protocol might also relate to the fact that my way of articulating cycling in everyday life was not inviting in regards to completing the protocol. While the researchers' biomedical jargon circumscribed my possibilities of engagement, my own ethnological jargon limited the possibility of introducing new perspectives into the protocol. In addition, my limited ability to influence the protocol might relate to the fact that I had no ready-made epistemological criteria, which the trial protocol needed to accommodate and thus no authority to make claims about the design, and more generally that I had no authoritative voice at the table as an intern.

The above anecdote from my internship serves to show how ambitions to inscribe everyday life into the protocol was mediated by the disciplinary organisation of the trial and epistemic criteria, which did not consider ethnological findings, our shared experiences as everyday cyclists, or the vibrant cycling culture that unfolded outside and below the large windows at the Faculty Club. In what follows, I leave my internship to describe how ideals concerning workability and elegance were formalised in the final trial protocol.

Between Two Stools: Efficacy and Effectiveness

The ambition to test 'what people actually do in a biomedical way' meant the final protocol fell "between two stools", as commented by an expert in exercise trials at a meeting.[27] With this expression, he referred to the distinction between efficacy and effectiveness trials. Within trial-based health research, the distinction refers to differences in how trial researchers design, execute, and evaluate trials and it assists reviewers, policy makers, and practitioners in assessing the quality and general application of a trial (Pors & Johannsen, 2013, p. 49-58).

In short, efficacy trials, also called explanatory trials, refer to trials that test whether an intervention produces the intended effect under ideal circumstances (Meinert, 2012, p. 81). Such ideal circumstances could be a laboratory in which participants perform different activities under

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[27] Reproduced from a field note from the first SAB-meeting. SAB stands for Scientific Advisory Board and it constitutes a body of appointed experts that oversees research projects to ensure quality. Once a year, the GO initiative assembles for so-called SAB-meetings, in which all work packages presented the progress of the research in plenary followed by sessions with appointed SAB-members, who would comment and give advice on the research progress. The appointed SAB-member for the GO-ACTIWE project was an acknowledged exercise trial researcher.

strict monitoring. Effectiveness trials, also called pragmatic trials, in contrast, refer to trials that test whether an intervention produces the intended effect in the "real world" or under normal or routine circumstances (Meinert, 2012, p. 80). Such circumstances could be clinical, organisational, or everyday life settings in which close monitoring are not possible.

Although trials rarely fit into the distinction spot on, it is useful to highlight how the final protocol aimed to meet ideals of everyday workability and scientific elegance. In what follows, I thus simply use the distinction to unpack how the protocol contained both what I call elements of elegance and workability.

Elements of Elegance

Efficacy trials are often associated with high "internal validity", i.e., trials in which bias has been limited to ensure that the relationship between an intervention and an effect can be said to be causal with confidence. These trials often involve strict inclusion and exclusion criteria, high compliance requirements, controlled intervention contexts, and narrow hypotheses, which do not necessarily have direct public health or clinical relevance (Gartlehner et al., 2006). These trials embody the ideal of gold standardness and elegance described above.

In some aspects, the GO-ACTIWE protocol bent towards the tenets of an efficacy trial. For example, the trial included randomisation, which ensures that the treatment and control group are as similar as possible except for the intervention under consideration by distributing potential variations in the research population randomly. Randomisation also ensures that neither the participant nor the researcher influence the participants' group allocation and thus their ability to skew the results of the trial in a particular direction. While randomisation constitutes an element of elegance, because it minimises bias, it also counters the ideal of everyday life workability because it renders the participants' own considerations about the appropriateness of the interventions in their everyday life irrelevant.

As another element of elegance, the trial included a control group, which is a subsample of the research population in question that is not exposed to the intervention. A control serves as a basis for comparison to evaluate the efficacy of the other interventions.[28] The idea of control group rests on an ideal of the researchers' causal power and ability to determine who and what may change in an experiment, and, in particular, an idea that people and their everyday lives remain unaffected by the experimental situation. Furthermore, like the randomisation principle, the principle of the control

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[28] For ethical reasons, the participants in the control group were not kept to a strict regimen. Instead, the researchers asked the participants in the control group to maintain their "habitual lifestyle" throughout the trial's six months, after which they would receive the opportunity to take part in a similar exercise intervention to those tested.

group relate narrowly to the individual participant as a biological research material that is isolated from context and everyday life, not as a subject that is enrolled in an everyday life or in a scientific project. These procedures, in other words, do not relate to everyday life as anything but a passive, stable background that is not to be considered.

While the participants in the control group received no guidelines, the participants in the exercise groups had to comply with strict exercise instructions. The goal of full participant compliance linked to the ambition of measuring the actual health effects of full compliance with the exercise protocol, and not the participants' intentions to exercise. Normally, trial researchers only aim for full participant compliance under controlled circumstances, such as in a laboratory. However, the idea was that Copenhagen's cycling-friendly infrastructure and the number of public gyms available in combination with exercise monitors and supervision would enable high compliance. This ambition built on the assumption that the existence of infrastructure and the provision of technological and human resources in itself would facilitate protocol compliance in the participants' everyday lives.

Specifically, the protocol prescribed active commuting by cycle in the transportation domain and high-intensity and moderate-intensity exercise in the leisure time domain as the three exercise interventions. All exercise interventions prescribed five weekly workout sessions, during which women had to burn 320 calories and men 420 calories. In the moderate- and high-intensity groups, the participants had to exercise at 50% and 70% of VO2max, respectively, and remain at these heart rate levels during each workout. In the bicycle group, women had to cycle 9 to 15 km per day and men 11 to 17 km. During all workouts, the participants had to carry the heart rate monitor and upload exercise data to an online platform twice a week, from which the researchers could retrieve the data for review and control.[29]

The intervention protocol also stipulated that the participants should "not change their other habits" by, for example, taking up more exercise than prescribed or changing their diet. The protocol thus built on an ambition to measure the precise and isolated effect of a controlled and isolated intervention in the participants' energy balance. However, as suggested, this ambition relied on the participants' commitment to comply with the protocol and their active participation in making this version of exercise in everyday life possible as an object of research by keeping their everyday life unchanged.

Scientifically, the trial was designed to measure the effects of the prescribed exercise on a set of predefined and primarily biomedical health outcomes, which were categorised according to

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[29] The heart rate monitor was connected to an online platform, to which participants had to upload their exercise data by connecting the monitor to their computers. From here, the researchers had access to information regarding the participants' exercise sessions, e.g., information about exercise time, exercise location through GPS data, heart rate average, and energy consumption.

significance into primary and secondary outcomes. For this particular trial, the primary biomedical outcome, whose statistical criteria also determined the number of participants required for the trial, was peripheral insulin sensitivity, followed by endogenous thrombin potential and body composition.[30] These primary outcomes were reserved to one article, which were to be submitted to a high-ranking physiological journal. While the trial was statistically powered to these outcomes, it also included an extensive list of secondary outcomes and measurements that were earmarked for the researchers' PhD projects which comprised journal articles they had structured to answer particular hypotheses concerning the relation between the exercise interventions and particular health outcomes.

One project examined the long-term effects of exercise on energy balance and appetite regulation, another examined predictors of individual changes in insulin sensitivity in response to physical exercise, and a third investigated the effects of long-term active commuting and structured exercise on cardiovascular biomarkers, self-reported health, and exercise motivation. The trial thus functioned as a vehicle for multiple, distinctive, and isolated projects, each of which was set up to address a delineated set of data, hypotheses, methods, and research interests. With the exception of one PhD project, which examined exercise motivation and barriers towards physical activity through a questionnaire-based study, none of the formal trial endpoints related directly to questions regarding the actual practice of exercising in everyday life.[31] Rather than being an object of research per se, everyday life was configured as a practical arena, in which the trial would take place, a context that could be controlled for through statistical manoeuvres, and an implicit societal background for the results.

The researchers generated material for their projects during the scheduled laboratory test periods, at baseline [before the intervention], three months, and six months.[32] The test program was to yield distinctive and precise biomedical hypotheses, all of which presumed high participant compliance. Each test period comprised four test days in the laboratory, during which the participants underwent a long line of tests, including meal tests, biopsies, fitness tests, and blood glucose tests. Besides this test program, the participants also had to perform home measurements, including filling out food and sleep diaries and questionnaires, wearing activity monitors for seven days during

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[30] Having high statistical power (a large data sample) increases the likelihood of avoiding so-called type-2 errors, i.e., to avoid mistakenly rejecting a hypothesis concerning effect when there is in fact an effect to be detected. A large sample increases the ability to register statistically the effect of interest (Juul, 2012). In the GO-ACTIWE trial, the original power calculations estimated inclusion of 170 participants, who would go through the interventions.

[31] Other questionnaires relating to everyday life connected to the trial protocol include questionnaires on quality of life, activity level, sleep, and eating (Rosenkilde et al., 2017).

[32] One and a half months into the exercise intervention, the participants were required to come to the laboratory to perform another fitness test to adjust their individual exercise prescriptions. After 18 months, the participants were invited to take part in a short test day as a follow-up program.

each test period and taking urinal and faecal samples. Several of these tests involved state-of-the-art laboratory methods designed to answers scientific questions about physiology, metabolism, and the cardiovascular system, with little immediate clinical or everyday life relevance.

Table 2. Schedule of outcome assessment in GO-ACTIWE

	Screening	Baseline Test day 1	Baseline Test day 2	Baseline Test day 3	1½ months Control visit	3+6 months Test day 1-3	1-year follow-up Visit
Structured tests							
Anthropometrics	X	X			X	X	X
Resting electrocardiography	X	X				X	
Blood pressure	X	X				X	X
VO₂ peak	X		X		X	X	X
Exercise electrocardiography	X						
Resting metabolic rate		X				X	
Blood samples		X		X		X	X
Tissue biopsies		X				X	
Hyperinsulinemic euglycemic clamp		X				X	
General questionnaires		X				X	X
Fecal, urine and saliva samples		X				X	
Magnetic resonance imaging			X			X	
Meal and exercise challenge				X		X	
Visual analogue scales				X		X	
Free-living assessments							
Diet registration				X		X	
Sleep diary				X		X	
Accelerometry				X		X	
Mobile application				(X)		(X)	
Doubly labeled water				(X)		(X)	
Wireless weights				(X)		(X)	

VO₂peak: Peak oxygen uptake, X: measured in all participants, (X): measured in a sub-sample (51/188) of the participants

Figure 5: Table of outcome measurements (Rosenkilde et al., 2017).

Elements of Workability

Several features of the trial protocol also subscribed to the tenets of effectiveness trials, which refer to a type of trials that are often associated with high external validity and generalisability. These trials often involve diverse trial populations, interventions suitable for delivery and implementation in the 'real world', lower compliance requirements, and endpoints that have direct relevance for public health (Gartlehner et al., 2006).

In contrast to some efficacy studies, the GO-ACTIWE trial included what was described as a broad and diverse research population, which was formally characterised as healthy, sedentary, moderately overweight (BMI 25-35),[33] and physically inactive women and men between 20 and 45 years of age.[34] Overall, this research population was considered a representative sample of 47% of adults in

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[33] Body Mass Index (BMI) is a mathematical formula to calculate the correlation between an individual's height and weight, which is often used to assess the underweight or overweight of populations. BMI is calculated as: body weight / height^2.

[34] Inclusion criteria: healthy, no habitual engagement in structured physical activity, BMI: 25–35 kg/m2, and Caucasian ethnicity. Exclusion criteria: body fat percentage below 32% for women and below 25% for men, VO2peak N 40 ml O2/kg/min for women and N45 ml O2/kg/min for men, habitual use of medicine, smoking, fasting plasma glucose N 6.1 mmol/l, blood pressure N 140/90 mm Hg, abnormal resting or working electrocardiography, parents or siblings diagnosed with type 2 diabetes, VO2peak: peak oxygen uptake determined during graded exercise on a stationary cycle. For women: follicle stimulating hormone concentration N35mU/ml, pregnancy or planning of pregnancy within the coming year. (Ronsenkilde et al., 2017).

Denmark who, according to certain epidemiological assessments, are at risk of becoming obese and developing various lifestyle diseases. The biomedical researchers sometimes described this population as a group with "a large prevention potential" because they are still healthy and therefore in a position to avoid getting sick by starting a more active lifestyle.[35] Ensuring that the research population on selected parameters represented an established and well-known segment of the population was thus a way of inscribing robustness and relevance into the trial protocol.

The ambition to produce evidence regarding exercise of societal relevance was also evident in the three exercise interventions in the trial protocol. As is apparent from the list below, each of the exercise interventions built on a health research-specific argument and a rationale of everyday workability:

1. MOD: LTPA [leisure time physical activity] of moderate-intensity (50% of VO2peak). The exercise dose in this group corresponds to the recommendations by many health authorities of at least 150 min per week of moderate-intensity physical activity.

2. VIG: LTPA of vigorous intensity (70% of VO2peak). The aim with this group was to achieve a marked effect on the cardiovascular and musculoskeletal systems and to investigate the importance of the time saving aspects as compared to with MOD.

3. CYCLE: Active cycling commuting to and from work, education, or similar. The aim with this group was to investigate the health effects of active commuting as compared to LTPA and the potential for routinisation of an exercise regimen outside of the leisure time domain.[36]

The list shows how each exercise intervention description made a strategic link to "society" or "everyday life". More specifically, the first group built on the official recommendation, which is an obvious connection to the existing public health agenda of promoting physical activity. The second group worked on a rationale of "time efficiency", which posits that exercising at a higher intensity can minimise the time that one spends on exercise and in that way constitutes a workable way of integrating exercise into everyday life. The third group rested on the expectation and assumption that transport exercise can bring about the same health effects as structured physical exercise and that it could be a meaningful and healthy alternative. In other words, active commuting by cycle and high-intensity exercise was included as two alternative and possible integrable, workable, and

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[35] See Appendix B for table of basic participant characteristics.
[36] Description for control group: "For the participants in CON, no intervention was prescribed for the first 6 months. We asked participants in CON to maintain their habitual lifestyle, but for ethical reasons strict requirements to do so are not feasible. Participants in CON were offered individualised lifestyle advice with emphasis on physical activity and a 1-year membership to a fitness centre after study completion as an incentive not to change their lifestyle during the study period" (Rosenkilde et al., 2017, p. 125).

relevant ways to comply with the official recommendation that the trial tested via the moderate-intensity exercise group.

Concerning the practical implementation of the trial, workability was inscribed into the protocol by prescribing circuit exercise, which does not require additional prerequisites, and by providing the participants with a free membership at the largest chain of fitness centres in Denmark, bicycles, exercise supervision, and heart rate monitors. The trial protocol built on the basic assumption that these provisions would be attractive to people and that the trial protocol, by supporting projects of lifestyle change, would be feasible to complete in practice. More generally, the basic presumption regarding the completion of the trial protocol was that it could serve both scientifically valid lifestyle research aims and support a meaningful lifestyle transformation, making it beneficial for both researchers and participants.

Although the six-month duration of the trial can be seen as a weakness in regards to upholding full participant compliance with the protocol, this timespan enabled answering questions concerning the health effects of prolonged exercise and routinisation, which constitute two important public health issues. The subtitle of the GO-ACTIWE project, "From lifestyle intervention to lifestyle routine", encapsulated this ambition to produce knowledge about both the introduction and routinisation of exercise in everyday life and the underpinning assumption that the interventions tested were sufficiently applicable and meaningful to become routines automatically.

The Ideal Order and its Disorders

In the above section, I have shown how elements of the protocol configured "everyday life" as a negligible background, an implicit assumption, a resource for the trial, and as an indicator of social relevance. Yet, despite the various attempts and measures to accommodate both requirements of elegance and workability, the flowchart and the timeline (see figure 6 and 7) that was used to depict the trial design expresses the foundational rigour that the RCT corroborates.
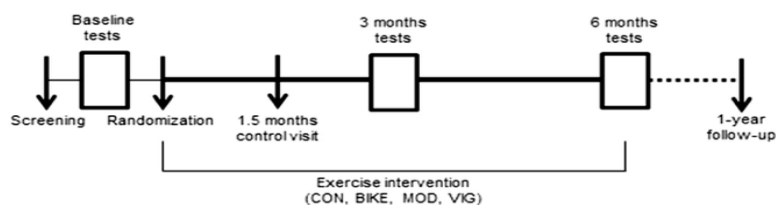
Figure 6: Overview of the GO-ACTIWE timeline. The white boxes show 3-day test regimens and arrows show 1-day visits.
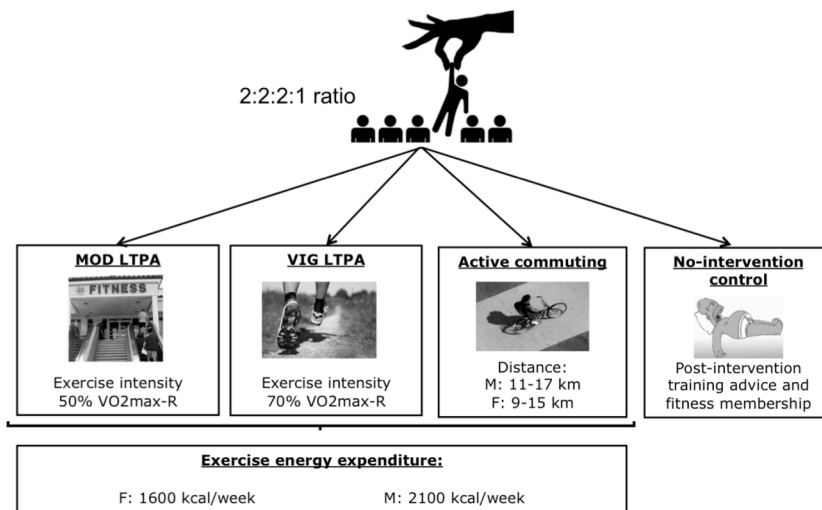
Figure 7: Structure of the intervention. Slide from PowerPoint presentation.

As iconographic standard elements, the flowchart and the timeline illustrate what an intervention is and should be in RCT research. Further, they express the ideal order and progress of the trial. In this order, an intervention, as shown by the boxes in the flowchart, constitutes a defined, discrete unit, whose content and efficacy may be quantified, standardised, and measured over a defined period with clear milestones. If one follows the iconography, the ideal progress of the trial operation was to drive the participants and researchers from milestone to milestone, in and out of the laboratory and the domains of everyday life, towards a final assessment against a set of well-defined and predetermined parameters. These iconographic elements embody and depict the underlying "simplicity" and "elegance" that the RCT corroborates and the rigour that characterised the overall plan that the participants and researchers had to realise and make into an everyday life routine during the trial.

On a practical level, the researchers' projects required eligible participants who would agree to keep their heart rate at a specific tempo and burn an exact amount of calories during five exercise sessions per week over the course of six months in their everyday lives, which most likely comprised other activities. In between these activities, the participants also had to take part in testing in the laboratory according to the test program. Essentially, the researchers' biomedical research projects relied on establishing certain bodily and social orders and keeping these orders stable and consistent throughout the six months. Using the words of STS scholar Karin Knorr Cetina, one can say that in a trial such as the GO-ACTIWE trial, "features of the social world and more generally of everyday life, become played upon and turned into epistemic devices" (Knorr Cetina, 1992, p. 119). In this light,

the exercise interventions, as they were defined in the protocol, were 'epistemic devices' through which the biomedical researchers set out to produce data and answer their hypothesis about the health effect of exercise. The realisation of the GO-ACTIWE trial protocol, in other words, rested on succeeding in producing and enacting a particular everyday life routine into being in a continuous manner through measurement, monitoring, and control.

Yet, as sociologists Stefan Timmermans and Marc Berg have argued, attempts at standardisation and ordering cannot help but create disorder (Timmermans & Berg, 2000). However, rather than being opposites, orders feed off of the disorders they give rise to because disorder invites actors to take on the work needed to re-establish a particular order, "an Order can thrive only when it nourishes its parasite - so that it can be nourished by it" (p. 55). Their basic point is that attempts at standardisation give rise to work that transforms the everyday life that ought to be standardised. When looking at the researchers' preparation of their work during the trial, it becomes obvious that they did not expect a frictionless implementation of the trial protocol, but that they had prepared different ways to rectify its disorders along the way.

In what follows, I unpack how the biomedical researchers imagined their role in the implementation of the trial order. In doing so, I highlight how the practical work of realising the trial protocol implied the production of another version of everyday than the ones imagined in the conception of the trial and built into the formal protocol.

Handling Everyday Life along the Way

Instead of being set up to evaluate ways of delivering the interventions or the workability of the interventions, which is common in similar lifestyle research trials,[37] the purpose was to test whether the interventions exercise worked to improve delineated health parameters. In the GO-ACTIWE trial, exercise supervision, control, and monitoring were thus a means to a goal of compliance and not an end, outcome, or measure in itself. As the researchers' work of ensuring participant

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[37] Another distinction relevant to understand the design of the trial as well as how it balanced rigour and relevance is the difference between a health outcome trial and a behavioural change trial, which is used within experimental exercise research (Courneya, 2010). In health outcome trials, the primary purpose is to examine the effects of an exercise intervention on a set of delineated outcomes, such as respiratory fitness, body composition, or a particular biomarker. A health outcome trial thus resembles the efficacy trials mentioned above, as it evaluates the precise effect of an exercise intervention that participants have followed with full compliance. The primary purpose of 'behaviour change trials', in contrast, is to examine the effects of how an intervention is delivered to a group of people and how and whether a certain intervention mode ensures a certain outcome. Such a trial could test a certain way of providing exercise supervision that is based on a certain therapeutic theory or a particular psychological approach. The overall aim of such trials is to investigate the role of the intervention in the process of change, i.e., the mode of intervention itself. Such trials are sometimes associated with effectiveness studies, and they often evaluate behavioural interventions that resemble those used in routine practice or ones that can be transferred into practice (Courneya, 2010, p. 8). Although the GO-ACTIWE trial categorises as a trial that tests behaviour in trial registration and obviously aimed to change what people do in their lives, the trial appears as a health outcome trial in light of this distinction.

compliance was not considered as part of the intervention or as an intervention in and of itself, they were not standardised, controlled, or accounted for systematically according to a certain theory, model, or script. Instead, the researchers had planned and in practice delivered the exercise interventions to the participants through what has been called a "kitchen sink" approach, i.e., an ad hoc approach to compliance that incorporates as many behavioural support techniques and motivation strategies needed to achieve full compliance (Courneya, 2010, p. 8).

The Exercise Manifesto

The researchers' "kitchen sink" approach was outlined in the so-called "Exercise Manifesto", which was a broad guideline for the researchers' exercise supervision and monitoring work. The manifesto highlighted how the researchers in practice did not assume a frictionless completion and that the trial protocol would align unassisted with the participants' everyday lives, but that they set out to handle the participants' everyday life as an integral work of completing the trial protocol. The researchers' plan was to engage directly in achieving the bodily and social order that the protocol demanded. In fact, the "Exercise Manifesto" specified that the three PhD students and the postdoc were "responsible" for the participants' compliance and that it had to be "as close to 100% as possible". In practice, the three PhD students [JSQ, ASG, and MB] managed one exercise group each, while the postdoctoral researcher [MRL] was responsible for the control group.

The manifesto specified a set of general strategies for the "compliance work". For example, the manifesto instructed the researchers to check and verify the participants' compliance data regularly and to contact the participants by telephone in case of missing data to find out whether the lack of data simply was due to "forgetfulness" or due to a "real problem". The manifesto also instructed the researchers to review the participants' compliance and discuss how to solve "compliance problems" in plenary at weekly meetings. However, the manifesto stated that compliance problems had to be solved along the way and immediately upon discovery, "It is important that acute problems are not postponed to the meeting, but that the problems are solved right away so that compliance is kept as high as possible" (Exercise Manifesto).

In the case of low compliance or problems, the manifesto prescribed that the researchers should make "a plan" in collaboration with the participant and that they should consider the need for daily contact or supervised exercise to re-establish participant compliance. The manifesto also included a section on 'motivational interviewing', [38] which encouraged the researchers to motivate the

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[38] Importantly, these conversations did not happen according to the counselling approach, which is known as Motivational Interviewing, developed by clinical psychologists William R. Miller and Stephen Rollnick (1995). Rather, the conversations were unscripted and informal.

participants by inquiring into their exercise motivation before the randomisation, upon attendance in the laboratory, and whenever needed. The manifesto also urged the researchers to emphasise their academic motivations in relation to the trial and to stress the importance of compliance for both exercise and control groups:

> Before the randomisation, we do a motivational interview, in which the research subject first comment on their motivation for trial participation and exercise. Next, we describe our motivation and why it is important to exercise: no exercise, no results. So, it is absolutely vital that the subjects follow our exercise instructions, and to the maximum practicable extent to maintain the daily exercise. Also, inform the subjects that the control group is of great importance to us and that we cannot complete the study without it. (Exercise Manifesto)

The contents of the Exercise Manifesto makes clear how the researchers imagined themselves to play a major role in the exercise practices of the participants and how they set out to engage with, evaluate, and assess their workouts through the notion of protocol compliance, rather than everyday workability. The contents also reveals how particular social processes, researcher-participant relationships, and coordination of motivations were cast as important, but rather unspecified mechanisms in establishing the orders that the trial protocol required. So, while the complexities of everyday life and the possible disorders resulting from the practical process of trialling could not be fully considered in the trial protocol, they could be addressed as 'problems to be solved' during the trial.

The existence of these strategies for compliance suggests how the overall aim to test the health effects of 'exercise in everyday life in a biomedical way' in practice necessitated a reconfiguration of the participants' particular everyday lives through close coverage and monitoring, and how the researchers' day-to-day work of managing the trial was enrolled as key resources in achieving protocol compliance. Indeed, the manifesto set the stage for a particular social entanglement between the participants and the researchers in the work to ensure workability and elegance in practice. As another problematisation of everyday life, the Exercise Manifesto related to the specific participants in the trial and their everyday lives as potential problems in regards to achieving protocol compliance; problems that could be solved through the engagement, commitment, and intervention of the researchers.

Trial Trouble: Tinkering with the Mechanisms of Everyday Life

When I began my fieldwork in March 2014, some months after the launch of the trial,[39] the relationship between the participants' everyday lives and the prescriptions of trial protocol evidently did not always align. "Muddiness", not simplicity, was the order of the day. Compliance with the trial protocol clearly required an effort from both the researchers and the participants, whose everyday lives only sometimes allowed for the kind of standardisation and control that the iconography of the trial stipulated:

> MB: So, she takes a ride in the morning, and then she gets in her car and drives off to work.
> JSQ: Are you kidding me?!
> MRL: How far away does she work?
> MB: Approximately 40 kilometres...
> Me: Who is she?
> MB: It's JOLI [participant]. You should really talk to her.
> SU: But, then what she's doing is not in the least way active commuting.
> MB: Nah, but it's the reality.
> (Excerpt from weekly meeting)

The above exchange stems from one of the early weekly meetings among the trial personnel and it illustrates a discrepancy between protocol and practice, which turned out to be a common problem. According to the protocol, the participant (JOLI) had to commute to and from work. The protocol prescribed a round trip distance of 11 to 15 km for women. However, JOLI had a round trip of 80 km. JOLI's solution to the problem was to take a cycle ride in the morning before driving off to work in her car. She would then take another cycle ride when she returned home from work in the afternoon. JOLI's solution thus did not follow the protocol. Rather, she did a pragmatic approximation to active commuting to and from work as defined in the protocol. As MB notes, JOLI's solution was "reality".

Here, I propose to understand MB's comment as a reference to the fact that in the reality of realising the trial protocol, the protocol sometimes did not fit the participants' lives. I also take his comment to suggest that the trial protocol and the problems it generated gave rise to a particular "reality" in which both the participants and the researchers would do certain trial-specific things to work out the situated discrepancies between scientific criteria and everyday life conditions. In particular, I take it to suggest that a certain everyday life emerged in the process of trialling and its associated processes of problem-making and problem-solving. The productivity of trialling is evident in the following quote in which MB, who managed the active commuting group, describes how the

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[39] Participant recruitment began in November 2013 and continued until October 2015 (Rosenkilde et al., 2017).

"theory" of active commuting in everyday life might have been off and how his work during the trial included trying to integrate the commuting protocol into ongoing, particular, and complex everyday lives:

> MB: We had a theory that it would be easier to get physical activity into the transportation domain. But, in fact, many things are happening in the transportation domain, shopping, child delivery, and other logistics, that aren't in the leisure domain, in which one can be like, 'Now I'm off work, and now I'll go to the gym.' The transportation domain is much more fixed. So, there it's about adapting the things they have to do in the transportation domain, so it fits with their cycling.

> Me: Are you surprised?

> MB: Yes, no doubt. In fact, I expected that I would hear more about the physical work of cycling than about the difficulties of getting to the supermarket on the way home, because it takes longer to cycle or whatever it is, or they can't carry all three children on the cycle, or things like that. So, I've been a bit surprised about how much these things matter. I expected they could work out such things themselves, without involving me. Of course, there are participants, who make it work by themselves. But, there are other cases, in which I have to decide on tiny little things in their lives, which they gradually fix themselves. In the beginning, however, they all really need to learn how to do things.

In a cursory analysis, one could interpret MB's comments as proof that the version of everyday life that I introduced through my pilot study was more appropriate than the one inscribed into the protocol, than the "theory". However, such an interpretation would overlook the points that MB conveyed in the interview. In fact, MB did not simply bemoan that the theory behind the protocol did not fit the everyday lives of the participants. Rather, he talked about a trial that, despite challenges, was in full swing. He described about his direct involvement in the cycling intervention and how he had become a specific kind of researcher with specific knowledge of and influence in the participants' everyday lives. In particular, he described that he listened to the participants and their various challenges, that he tried to customise their everyday lives to the protocol, that he became involved, that he made decisions about "tiny little things", and that he had to "teach them how to do things." MB, in other words, recounted how his work during the trial involved attempting to make a routine that would be meaningful as both lifestyle change research and lifestyle change practice and how making this work involved both specific kinds of knowing and intervening in the participants' everyday lives.

In that way, MB's remark suggests how everyday life was problematised in a distinct way during the implementation of the trial protocol. In the process of trialling, everyday life was not a passive background "out there" like when we were sitting in the Faculty Club, hearing me gabble about random cyclists' everyday lives through Lefebvre's rhythmanalysis, or looking at graphs of

aggregated everyday life domains constructed from data gathered elsewhere in the world. During the trial, in contrast, everyday life was lively, happening, real, and 'done' (Mol, 2002) in situated trial-related practices, which concerned trying to make the various problematisations built into the trial design and protocol *work* in a specific group of people's everyday lives.

One consequence of this work was that the exercise interventions went far beyond what the heart rate monitors captured. As MB reflected when I asked him about the intervention during an interview:

> When I say "intervention", then I'm asking, in an entirely primitive way, do they exercise what they have to exercise? All those other factors around this are both interesting and necessary to take into account to do the intervention. But, in the end, we are measured by the simple question: did the participants do what they were supposed to do? Then, both you and I know that not everything is in any way so uniform and simple as one ends up presenting things when one is finished and will report the biomedical findings. So, what we call the intervention that is the exercise. However, there is no doubt that it is a life intervention or a lifestyle intervention when we begin to tinker with the mechanisms of their everyday lives. So, in this perspective, everything they tell us is related to the intervention, because we are tinkering inside their daily lives.

In the interview, MB articulated two different logics of what an intervention is. In the one logic, the intervention is a simple matter of compliance. The intervention constitutes the exercise prescribed, measured, and quantified. The intervention is a confined muscular and metabolic work measured in kilocalories that one can relate to a biological outcome. In this logic, other things that might matter do not count. This logic resembles that which underpins what I have described as an efficacy trial, but also that which underpins the ideal of the elegant study. In the other logic, an intervention is much more diffuse and blurry, with no clear boundary between intervention and context or researcher and participant. In this logic, the intervention includes "all those other factors" and the work that MB did when he "tinkered with the "mechanisms" of the participants' everyday lives'. MB thus articulated a difference between a physiological intervention, which cut directly through everyday life into the biological body, and a social one, which works in and through the social and material complexities of everyday life, and how the success of the latter was crucial to the success of the former.

MB's remarks also resonate with what the science philosopher Bruno Latour (1987) has described as the Janus-face of scientific practice. On one side, science takes the form of blackboxed facts, models, and results. This is science in its "ready-made" form. On the other side, science is in action or in the making. What he has called, science-in-action, in other words, refers to the controversies, uncertainties, and practical work of producing and negotiating the social, material, and technological

relations and orders that will allow the production of facts to happen (Latour, 1987). In light of this distinction, MB's remark above can be said to highlight the muddy relations that go into producing simple and uniform biomedical findings. In particular, his remark suggests that the practical work of completing the trial worked through a particular form of problematisation of everyday life as 'mechanisms to be tinkered with and problems to be solved', and more specifically that the trial protocol to be workable, robust, and thus methodologically satisfactory, required a trial-specific everyday life, comprising trial-specific subjectivities and social relations.

From Studying Barriers and Potentials to the Everyday Life of Trialling in Action

The trial-specific everyday life that arose through trialling in action prompted me to reconceptualise the ethnological study I had planned based on the original project description and to deflect from the concept of everyday life that it built upon. In brief, the original project description sketched out a qualitative study of "the potentials and barriers towards physical activity becoming a daily routine in different domains of everyday life" (Project Description, unpublished). According to the description, an ethnological field study focusing on a sample of the participants should run parallel with the trial and contribute with knowledge on "determinants of physical activity in different domains of everyday life". The original description focused on the participants and their everyday lives, which it implicitly highlighted as a specific ethnological research domain to be understood, mapped, and analysed from within to uncover potentials for exercise, health, and wellbeing. As such, the project formulation reproduced the idea of everyday life that the basic trial design rested on, namely that everyday life is "out there" and divided into domains that contain different potentials and determinants of physical activity that can be uncovered through ethnological cultural analysis. Accordingly, I initially framed my project as a study of routinisation of physical activity in everyday life focusing on technology, embodiment, and motivation. I based my study on the assumption that the trial set-up would not play a significant role, and I set out to make a study that would focus on the participants and their exercise practices in their everyday lives.

However, the above account of the researchers' work in combination with observations from my initial fieldwork among the participants called for a perspective that could account for the complex relationships between the trial, its researchers and protocol, and the participants' everyday life that emerged and a consequent departure from the original project description. As hinted above, the researchers and the trial protocol influenced the participants' exercise practice and everyday lives in ways impossible to ignore. Important observations included the researchers' monitoring work and its importance to the participants' motivation and compliance as well as the ways in which the heart

rate monitors linked the participants and the researchers together with various outcomes. The following images (figure 8 and 9) and comments from a participant in the active commuting group by the name of Clara exemplify the trial and researcher's influence, and the somewhat peculiar specificity of the everyday exercise practice that the trial promoted:

Figure 8: Normally, I would NEVER have cycled in such weather, and I've got a lot of "You're not cycling in that weather are you?!" comments from my husband and some colleagues, to whom I have answered, "I need to do it or else I'll get kicked out of the project". But the truth is I've actually enjoyed cycling in the harsh weather and have been extra proud and energised when I've survived the trip. (Photo and caption by Clara, participant in the active commuting group)

Figure 9: All the technical things… It's cumbersome (time-consuming) to put on before each cycle ride, but it's also super motivating to see the progress be uploaded and that one has cycled the same trip faster than last time, and that one has hit the 1600 calories mark this week, etc. (Photo and caption by Clara, participant in the active commuting group)

The above pictures and comments come from a participant in the bicycle group by the name of Clara, whom I asked to document how GO-ACTIWE influenced her in her everyday life. The first picture and remark highlight what I propose to approach as 'a trial-specific exercise practice'. In the comment, she states that cycling under the auspices of the trial is different from a "normal" cycle ride, as she, nor her colleagues or husband, would never venture into a snow-covered landscape by cycle. The key difference seems that in the trial, she "needs" to do it to comply with the protocol and to avoid being excluded by the researchers. The comment thus highlights how the everyday life practice of cycling to and from work was inscribed into a specific network of researchers and scientific principles, how cycling under the auspices of the trial was both a lifestyle practice and a research practice, and how these trial-specific aspects had certain influences on the participants' exercise practice, persistence, and motivation. The second picture and comment highlight the heart rate monitor the participants had to put on each day during the intervention, and how it was both impractical to wear every day and motivating because it provided detailed information about the exercise. The pictures and comments also suggest that the realisation of the protocol was characterised by ambivalence; it was cumbersome *and* empowering, ordinary *and* extraordinary, and that overcoming these tensions required a particular sociality and work.

For me, these observations suggested that understanding 'the potentials and barriers towards physical activity becoming a daily routine in different domains of everyday life' relied on studying the trial-specific everyday life that emerged in the process of trialling. The point is that the "everyday life with exercise" that I could study in the trial was already crowded with trial-related actors, under trial-specific re-construction, and entangled with the trial researches' day-to-day trial work of controlling and caring for compliance with the protocol. A study of the muddy work of making and aligning criteria for elegance and workability was therefore essential for understanding what it means to change lifestyle under the auspices of the trial. Trialling in action, in other words, implied the creation of a trial-specific everyday life, i.e., the particular set of practices that the realisation of the trial protocol relied on and gave rise to. This dissertation deals with this particular problematisation of everyday life.

Conclusion

In this chapter, I have explored the problematisations and versions of everyday life that emerged in the conception, drafting, and implementation of the GO-ACTIWE trial protocol. First, I showed how the trial was born out of a tension between ideas of everyday life as the ideal context for biomedical trial research and ideas about the laboratory as an ideal context. Next, I described how the notion of time domains as a conceptualisation of the temporal organisation of everyday life and the cycling

city of Copenhagen as the context of the experiment functioned as two truisms, two basic assumptions, in the thinking behind the trial design. Based on my pilot study, I showed how I attempted to introduce ethnological perspectives on cycling in everyday life and how the disciplinary organisation of the trial personnel and biomedical requirements of quantification circumscribed how everyday life could be incorporated into the protocol. Subsequently, I focused on how ideals of elegance and workability were formalised in the final protocol and how the elements of the protocol variously related to everyday life as an irrelevant background, an implicitly available material arena, a resource, and an indicator of societal relevance I then indicated how the realisation of the trial protocol relied on establishing a particular social and bodily order and highlighted how the researchers imagined themselves as central actors in achieving and maintaining this order. By providing a brief glimpse into the everyday life practices during the trial, I showed how the participants' everyday lives were problematised as mechanisms to be tinkered with during the process of trialling and how lifestyle change research and lifestyle change practices entangled in various ways. In conclusion, I suggested that the everyday life of trialling in action constitutes a research domain for ethnological engagement.

More broadly, the chapter has shown how ambitions to consider everyday life in health intervention research are mediated through different forms of problematisation of everyday life, which produce different kinds of everyday life. Hence, the chapter has shown how everyday life in the development and execution of a trial protocol is not a singular or stable entity, but an object that emerges through different ambitions, figures, concepts, and practices. More specifically, the goal was to articulate how the actual protocol implementation constituted a particular problematisation of everyday life, in which lifestyle research and lifestyle change, RCT, and everyday life, are co-produced through the practical work of realising the protocol. The analysis thus raises questions about the kinds of work involved in the realisation of the trial protocol and how ideals of elegance and workability are realised in practice. In this case, central analytical questions emerging from this perspective on everyday life become: *What kind of work goes into the establishment and maintenance of the everyday life exercise routines that the trial's knowledge production relied on? What ontologies did these routines require? How did participants and researchers succeed in realising the social and bodily orders prescribed?*

My overarching approach is to focus on the work involved in creating and maintaining these routines and the social-material relations, work and trial subjectivities they require. In doing so, I follow the protocol, which positioned the participants and researchers as the main actors in its implementation; the participants should exercise the routine and the researchers supervise and ensure compliance. In other words, the trial's realisation depended on the creation of a mutually

meaningful exercise routine; a routine that was both scientifically elegant and workable in everyday life.

Before I explore this work in the four articles of the dissertation, I use the next chapter, *Performing the Trial as Field*, to describe how I engaged in and worked on the everyday life of the trial through my fieldwork.

2. Performing the Trial as Field

The Everyday Life of Studying a Trial in Action

Performative Storytelling and Field as Performance

The commitment to situate knowledge production in concrete practices that defines the performative approach that I work from in this dissertation implies that producing ethnological knowledge about biomedical knowledge production is also bound in situated practices and a way of enacting the trial. As sociologists John Law, Mike Savage and Emily Ruppert (2011) have argued, social science as well as biomedical methods are "fully of the world that they are also active in constituting" (p. 5). Methods, they contend, are situated in different historical, social, and political circumstances and variously shaped according to specific advocators' agendas (p. 5). Furthermore, methods participate in the enactment of the phenomenon under consideration by submitting it to specific materials, ideas, rules, requirements, and forms of analysis, i.e., different knowledge practices. As I noted through Mol in the introduction, knowing the body (or other things) is done through various instruments, which constitute it differently.

Elsewhere, Law has underscored the performativity of the stories that different methods produce (Law, 2004; 2002). In fact, he has suggested that stories in technoscience[40] are often material and have material effects:

> [...] when we tell stories these are performative. This is because they also make a difference, or at any rate might make a difference, or hope to make a difference. Applied in technoscience, the argument goes further; in fact, it is quite radical. It is that there is no important difference between stories and materials. Or, to put it a little differently: stories, effective stories, perform themselves into the material world — yes, in the form of social relations but also in the form of machines, architectural arrangements, bodies, and all the rest. This means that one way of imagining the world is that it is a set of (pretty disorderly) stories that intersect and interfere with one another. It means also that these are, however, not simply narrations in the standard linguistic sense of the term. (Law, 2000, p. 2)

In the above excerpt, Law argues that stories are performative because they help structure the organisation, construction, and enactment of the world: what it is and should be made of. In this perspective, one can think of reports from "elegant trials" as stories that have material and social

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[40] The term, technoscience, is often used in STS scholarship to indicate that science and technology are not separate domains or pure forms, but rather that they are co-constitutive, and consequently talk about science and technology as isolated from their practical applications is unproductive (Latour, 1987).

effects in the form of particular ways of constructing protocols and executing trials. Accordingly, this dissertation also comprises a set of stories that performs the trial, although it undoubtedly will have less material effects on the practice of trialling than reports from elegant trials. In any case, it performs the trial in a way that hopes to make a difference. Law's argument regards what Annemarie Mol has called 'ontological politics' (1999). With this term, she connects the word ontology, i.e., what that belongs to reality, with the word politics, to emphasise how the conditions of possibility for what is real is not given. As she put it, "reality does not precede the mundane practices in which we interact with it but is rather shaped within these practices" (p. 75). Given what is real is 'enacted' in various practices, it is political what realities (or ontologies) that certain practices (material, technological, social, democratic, or scientific) support. To paraphrase the philosopher of science Donna Haraway (2015), the political implication of a performative approach to storytelling is that it matters which stories tell stories about technoscience projects, and in this case the GO-ACTIWE trial (p. 160).

Law has attempted to take on such performative or 'ontopolitical' responsibility in his book *Air Craft Stories* (2002) about the British military aircraft, TSR2. In the book, Law's central argument was that the aircraft was not one but multiple, since it was enacted through a variety of aircraft-related practices, which do not amount to one single, coherent aircraft, and therefore not to one singular narrative. In fact, the multiplicity of the aircraft caused it to never be realised. The challenge Law set for himself was to tell stories about the aircraft in a way that recognises its multiplicity, complexity, and fractionality and to acknowledge that his stories also perform the aircraft. Another central argument in his book is that the aircraft also performed him as a researcher as he tried to know and write about it. His relations to the aircraft (or rather aircrafts) in various ways circumscribed the stories he could write. Without going into details, Law's general point is that a researcher's relationship to his or her research object is multiple rather than singular. A research object, in other words, is constituted along with a particular subject in embodied, social, and material ways. These various subject-object relations sometimes interfere with each other and sometimes align to allow certain stories to be told (p. 59).

Although Law's argument concerns the question of how to tell, write, and narrate stories about technoscience projects in ways that acknowledge multiplicity, one can apply his argument to fieldwork in technoscience projects and the ways in which a cultural analyst constructs fields and objects of research and how these technoscience projects in turn enact the cultural analyst. Following his argument regarding the material performativity of storytelling, one can think of fieldwork as another way of trying to make and order social, embodied, and material relations. Therefore, if fieldwork is a particular way of performing the trial, then it begs the following questions: How have I performed the trial as a field and object through my fieldwork and analytical

practices? What kinds of engagements and social relations have shaped my (embodied, social, and analytical) engagements with the trial? How has the trial shaped my projects? What has captured my ethnographic gaze? What did I leave outside my analytical frameworks?

Law's points on the performativity of knowing resonate with anthropologists Simon Coleman and Peter Collins' argument concerning 'the field as performance' (2006).[41] In discussing the tendency within anthropology to approach the ethnographic field through spatial metaphors, Coleman and Collins has proposed 'performance[42] as an alternative metaphor to capture how anthropologists construct ethnographic fields throughout the process of research. Instead of viewing the field as a pre-existing geographical locale or an autonomous, bounded container of culture, they suggested that one thinks of the field as performed and "framed by boundaries that shift according to the analytical and rhetorical preferences of the ethnographer [...]" (p. 17). In particular, Coleman and Collins used the metaphor of performance to highlight how the field emerges through what they describe as "a play of social relationships established between ethnographers and informants that may extend across physical sites, comprehending embodied as well as visual and verbal interactions" (p. 12). In this formulation, Coleman and Collins point to the character of the relationships that one develops through fieldwork and to the ways in which multiple actors take part in constructing an ethnographic field. They thus use the notion of performance to highlight the productivity of fieldwork and the ways in which social interactions between ethnographers and their interlocutors are generative of specific objects, worlds, and relations (p. 12).

Coleman and Collins' rejection of the idea of the field as a fixed place "out there" can also be applied to the idea that everyday life is a certain place, site, or sphere. In this perspective, everyday life rather constitutes a product of fieldwork and analysis, rather than a pre-existing fixed place, and therefore a joint and multiple object that exists in multiple versions and practices. In the previous chapter, I made a similar argument by outlining how everyday life was problematised in various ways: as rhythms, as an ideal context, as a set of domains, as a city, as a context with barriers and potentials for physical activity, as a passive background, and as a "problem" to be dealt with during

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[41] By connecting Coleman and Collins and Law and their distinct projects, I acknowledge that I skip key discussions regarding their respective differences and similarities and that I gloss over fundamental discussions about the field and anthropological fieldwork. However, coupling Coleman and Collins' notion of the field as performance and Law's argument about storytelling as performative enables me to situate my study in the GO-ACTIWE trial in a way that acknowledges that the trial was grounded in methods and research practices, including my own.

[42] In the introduction, I indicated that Mol, among others, has criticised the term "performance" because it suggests that there is one doer behind the deed, and that one can divide the world into backstage and front stage. In this chapter, however, I use the term performance to describe the creation of my field and object. In this regard, I follow Coleman and Collins who do not engage with Annemarie Mol, as their use of performance is linked to another discussion regarding the idea of 'the site' within anthropology. They use the term to emphasise how the field rather than pre-exist the cultural researcher's encounter with it, becomes through his or hers commitment and positioning. Therefore, when I use performance in this chapter, it is not a change of perspective or to signal that I "performed" the field out of my own free will, but rather that my field was performed in the sense of enacted in and through various practices.

the trial. And, in this chapter, I articulate yet another version by outlining how I performed the everyday life of trialling in action as a field of ethnological inquiry.

In that connection, the strength of Coleman and Collins' idea of the field as performance is that it includes the work ethnographers do when they are not "in" the field as a crucial part of constructing and locating it. In this perspective, fieldwork does not refer only to co-presences and physical encounters in particular places. Instead, the ethnographic field emerges as the interim product of a continuous work of creating and recreating it through social, embodied, and analytical engagements:

> Unlike conventional notions of fixed places, performances can be seen as repeated or transformed over time, and we think that such a characteristic captures the sense that fields (and associated relevant 'contexts') are created anew each time the ethnographer, with or without informants being physically present, invokes the field in the process of research or writing. Thus the field as event is constantly in a process of becoming, rather than being understood as fixed ('being') in space and time, just as the audience for the performance can shift between academic and research locations [...]. (Coleman & Collins, 2006, p. 12)

In the above quote, Coleman and Collins suggest that the field is practised and translated each time it is "invoked" in the research process. With the notion of performance, they thus point to the way the ethnographic field *becomes* into being, rather than how it *is.* This prompts one to consider how shifting audiences, institutional cultures, collaborations, theories, research strategies, and fieldwork practices shape one's field of inquiry. While their use of the notion of "invocation" might connote a sense of imaginary, immateriality, or that the field is a mental construct, I propose to extend the metaphor of performance through Law to consider how 'the field' is materialised, embodied, and rehearsed through various engagements and also how these engagements are circumscribed in various ways.

Following Coleman and Collins, I take as my methodological starting point that the field is something ethnographers (with other people and things) craft in a continuous, heterogeneous, and iterative process. In this view, the field is performed in conversations with interlocutors, transcribing and analysing these conversations, writing and re-writing field notes, taking pictures, doodling, remembering, talking, naming, framing, and writing papers and presentations for different occasions, and, of course, in being challenged and surprised throughout the process. As noted by ethnologist Astrid Pernille Jespersen (2008) while elaborating on Coleman and Collins, ethnographic fieldwork can be characterised as a "choreographed process of ordering heterogeneous materials" (p. 58). By pointing to movement, embodiment, scripted situations, and positioning the notion of fieldwork as choreography broaches questions about the steps of my field choreography through (and consequent performance of) the everyday life of the GO-ACTIWE trial.

Field Choreography: Re-tracing the Steps, Re-performing the Trial

In my case, the field and my field materials emerged through a choreography, which comprised visits at the project facilities at the Panum Institute, participation in exercise sessions, interviews with participants, and analytical work at my desk at home or at the faculty of the Humanities, a 20-minute cycle ride from the project headquarters at the Panum Institute. This choreography mapped onto the spatial distribution of the trial and its constituent practices that emerged from the basic division of labour that characterised the completion of the protocol. In this spatial distribution of the trial, the participants had to exercise in their everyday lives, while the researchers had to monitor and support them from their office at the Panum Institute, where the participant in turn had to come for laboratory tests on scheduled times throughout their participation. This general division of labour created a spatial distribution of the trial into practices, which, to paraphrase how both participants and researchers talked about the spatiality of the trial, took place "inside" Panum and "outside" Panum, "in the lab" and "out there in everyday life", and "under controlled circumstances" and practices "under free-living circumstances".

In my overall map of the field, Panum has formed a more or less stable structure, whose various scripted activities all related to a changeable group of participants' trial-specific exercise practices. My view and idea of the spatiality of the trial thus relates more to the researchers' than to the participants, who only had to attend the Panum Institute for tests at baseline, three, and six months, and who therefore may not have thought about the Panum institute as the centre of the trial. In other words, one consequence of my position as a researcher was that the Panum Institute emerged as a hub in a GO-ACTIWE-specific network of trial-specific exercise practices in participant-specific everyday lives.

In what follows, I reflect on how I have performed the everyday life of trialling as a field of ethnological investigation and how various trial practices have performed my fieldwork and me as an ethnologist. In doing so, I describe the practices I took part in, what I did, how I positioned myself, how I was positioned, and how I have tried to capitalise analytically on these various engagements. Following the arguments made by Coleman and Collins and Law, the following account constitutes a particular performance of the trial and a particular way of re-tracing the steps. As an analytical staging, the account presents what was indeed a messy fieldwork in an ordered narrative. The account, therefore, also presents a particular version of the trial and its practices, which neither claim to represent the trial or my engagement in total. My distinct purpose, rather, is to articulate how field working in the everyday life of the trial entailed being part of a method sociality, which prompted me to engage in multiple positions that offered different analytical opportunities. Acknowledging this 'multipositionality'—who one is in different field sites—has allowed me to capture the complexity of the trial in addition to how my multiple positions point to the

multipositionality of both researchers and participants (Marcus, 1995; Vernooij, 2017) [43]. In retracing my field choreography, I have thus chosen to recount the trial through my commitment and thereby to situate the genesis of the four articles in fieldwork experiences and their particular form and content in the character of my involvement. The more general purpose of the following account is to initiate the articulation of the everyday life of trialling, i.e., those mundane trial practices, which enacted the trial protocol into being.

The remainder of the chapter proceeds as follows. First, I describe my fieldwork at the Panum Institute and how I participated in various trial-related practices. Second, I describe my fieldwork among the participants and how I explored the everyday life of trial participation. Finally, I provide a brief description of how I have performed the everyday life of trialling at my desk.

Fieldwork at the Panum Institute

Throughout the course of the three-year trial, the Panum Institute was a bustling house filled with trial-related activities. On any given day, one could find a researcher in a laboratory performing a blood glucose test or a biopsy with a participant, who would lie fixed on a bed in hospital garments, while squirming in pain, laughing over a researcher's joke, or yawning over the tedious laboratory procedures. Meanwhile, in another lab, another researcher and a group of students would try to incite a participant to perform to exhaustion on an exercise cycle by cheering in unison, or take up a potential participant's medical history. In the office, a third researcher would plan test days, answer emails from participants, and maybe handle paperwork. On some days, I would interview a participant in the backyard, in the corridor, or in a vacant laboratory regarding their participation in the trial. In addition, once a week, the trial staff would assemble in the joint office or the lunch area on the third floor to discuss the progress of the trial. Every six months or so, the "core group" and I would mount the stairs to attend meetings at the Faculty Club on the sixth floor, and once a year, all researchers from the GO initiative would gather here to present their research before a board of international scientific expert advisors. Thus, the project facilities at the Panum Institute and its various nooks and crannies made up crucial sites, where the participants, the researchers, and I would work on the trial and where we all would be 'put on trial' (Berg & Akrich, 2004).

At first, the Panum Institute made me think of the hospital that Annemarie Mol explored in her book, *The Body Multiple* (2002), in which she described atherosclerosis and its multiple enactments at different sites on a middle-sized Dutch university hospital. In the book, Mol set out to explore the

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[43] The term 'multipositionality' refers to the various positions that one occupies in fieldwork. The term thus links a feminist interest in 'positionality', i.e., an interest in accounting for one's subject positions with the idea that one as a fieldworker moves between different practices, alliances, and social constellations that situate one's knowledge production in significant ways (Vernooij, 2017). Here, I use the term to emphasise how I was positioned and attempted to position myself in the various trial practices that I took part in.

multiplicity of the disease by unpacking how different versions of the disease are 'enacted' in different practices and sites. She showed, for instance, how atherosclerosis is enacted in the outpatient clinic through palpation and interviewing and how it is enacted in the pathology laboratory through dissection and microscopy, and how these various enactments of the disease, despite their ostensible incommensurable differences, still are made to "hang together" (p. 33).

While my analytical errand has not been to examine the multiplicity of the trial, the idea that the trial was 'done' differently in multiple (more or less stable, defined, and scripted) trial practices inspired me to map out the trial as a 'multi-sited' research project (Marcus, 1995), i.e., as an assembly of practices that extend across multiple social spaces and activities.[44] The idea of the trial as enacted in multiple sites has allowed me to organise my fieldwork as focused stints into selected trial practices, and indeed to choreograph my engagement with these trial practices by accentuating some practices over others.[45] In addition, this way of mapping the field allowed me to consider the multiplicity of my fieldwork, and how my project and I were both positioned in different ways in different practices. With these considerations in mind, I now delve into the everyday life trial practices at the Panum Institute.

Laboratory Work: Handling Bodies and Subjects in Practice

Laboratory testing was one of the key activities that took place at the Panum Institute. The consecutive recruitment of participants and their staggered intervention trajectories meant that several test activities took place at the same time. While serving various purposes and yielding different data, all tests involved face-to-face or physical engagement between the researchers and participants, who were put on trial through questionnaires, cycle tests, blood tests, meal tests, interviewing, scanning, weighing, and various kinds of measurements.

My position as a project member meant that arranging visits was easy and that the researchers welcomed my presence. Often on the heels of one of the researchers, I observed and took part in the various practices that the researchers would do in a day's work, ranging from putting nametags on

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[44] Anthropologist George E. Marcus (1995) has used 'multi-sited ethnography' as a term for ethnographic research strategies that try to collapse established distinctions between the local bounded site and the global world system as two different sequences or contexts that require their respective methods. In an article, he referred, more specifically, to ethnographers who try to locate the "world system" in practices, rather than remain in one site, in an attempt to follow people, stories, metaphors, or objects as they move from place to place and configure in different social spaces. Here, I use the term both as a way to spatialise the trial into various practices, but also as a way to follow the practices of the trial.

[45] A consequence of this way of conceptualising the field is, among other things, that Panum has been a stable site, understood as a concrete place, and the participants' exercise practices and everyday life as more fluid, emerging, and temporary practices that have come into being through my encounters and conversations with the participants (and the researchers). This means that there has been a difference in my fieldwork at the Panum Institute and in the participants' everyday lives, which is also reflected in my analyses. The analyses that are based on fieldwork at the Panum institute are more driven by observation and participation (Article 1 and 2), whereas the analyses, which focus on participants, are more driven by interviews (Article 3 and 4). In other words, the conditions of my fieldwork have influenced the materials I have used and the ways in which I have designed the articles.

test tubes and calibrating laboratory devices, to performing complicated tests procedures on the participants' bodies. Sometimes, the researchers enlisted me as a "helping hand" and asked me to dress up in white pants and a white coat or a green t-shirt and put on plastic gloves to assist them. Some of my tasks included putting used needles into the bin, holding the participants' hand during biopsies, or drawing blood samples from the peripheral venous catheters that the researchers had placed in the participants' arms.

During these field experiences, the researchers often treated me as they treated the students,[46] for whom laboratory work was a part of their education and one of their assigned tasks. Due to the reliance on internships and student labour, the test days also functioned as learning situations in which the researchers would instruct the students to do specific tasks according to the principle 'See One, Do One, Teach One', as one researcher described the educational mantra. During these tests, the researchers at the same time involved the participants in the procedures. In fact, their authority in the laboratory seemed to reside in their practices of managing, instructing, and guiding the practices in the lab. The educational atmosphere made my presence an integral part of the laboratory practice. Yet, unlike the students who had to become competent actors in the laboratory, my involvement did not include systematic training or individual responsibilities. Neither was I enrolled in the laboratory roster. Procedures, such as taking blood samples, giving local anaesthetics, and doing biopsies, for instance, were not part of my duties. Because of this, I never gained the same level of competence in care or laboratory work as the other students. Yet, while I was not expected to or interested in becoming a laboratory worker, the educational atmosphere meant that the researchers often asked me to engage in different practices. This provided me with chances to gain hands-on experiences of laboratory work and an embodied sense of how not only the participants' bodies were tested in the laboratory, as can be seen in the following field note, which describes one procedure:

> A laboratory assistant by the name of Caroline and I have been assigned to manage the last section of the screening examination of a woman, who has been given the acronym, JACA. We have to do two test procedures: an ECG (a record of a person's heartbeat through electrocardiography to check for irregular heart rhythm) and a physical test on the exercise cycle. When she enters, MB (a researcher) introduces us to her and says Caroline and I will take it from here. We have gathered the equipment on a trolley for the first procedure: the ECG; a bundle of cables that we have to connect to the disposable stickers we have to place on JACA's body; a sealed bag of stickers; the standard operating procedure guide, which lists the various steps; an illustration showing where to place the patches on the body; and the ECG monitor device.

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[46] Through the course of the trial, students from the biomedical and public health sciences spend a semester or two on the project.

First, Caroline outlines the procedure and asks JACA to lie down on the bed. Saying nothing, she insinuates that JACA has to take off her shirt. JACA picks up the hint, takes off her shirt, and lies back on the bed. She is only wearing gym pants and a sports bra. Caroline then feels around JACA's upper body to find the places highlighted on the illustration. After some time, she stops because JACA's bra is in the way. Somehow identifying the problem, JACA gets up, takes off her bra, and says, "I've got four kids, so nudity doesn't bother me". I am surprised, especially because Caroline had just described how the undressing part could be a little awkward, in particular, because I am a guy.

After stripping down, JACA then lies back again with bare torso, her breasts flattening out on each side of her body. In a rush, Caroline tries to shield off the bed by pulling a curtain around the bed. But, the curtain only works halfway down one side of the bed, doing nothing to cover JACA. While JACA lies bare-breasted on the bed, Caroline suggests that I try to place the stickers. She instructs me to feel for the cavities between the ribs and to look for the places marked on the illustration. I do as she says and grope around JACA's upper body. It's difficult. I have no idea how hard to press on her body. I can feel the cavities, but I have no idea how far down the line I am. I try a few times to feel and count the holes between her ribs by following the guide, which shows how the electrodes should be placed on the torso of a slim man, reminiscent of Da Vinci's Vitruvian man in proportion.
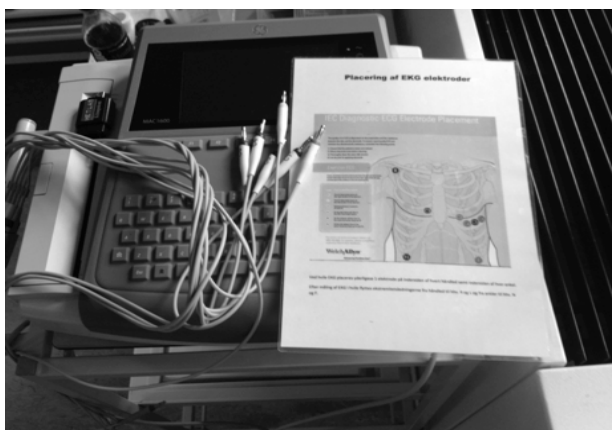
Figure 10: The ECG and the guide showing where to place the electrodes. Photo by author.

After some time, JACA burst out in a laugh, while she cries out, "AWWWWW!" and says I have "cold, hard fingers", and that I push "too hard". I stammer that I have not tried the procedure before and that I'm in training. In an attempt to make the situation bearable, I try to make a joke about it being a "strange day", where she has to be groped by some cold hard fingers and to exhaust herself on an exercise cycle. We all laugh awkwardly, before Caroline takes over for me. After some attempts, Caroline finally finds the right places on JACA's body and instructs me to feel too and to put on the stickers. I feel on JACA's torso and then begin to put on the stickers by systematically feeling for the cavities in between JACA's ribs according to Caroline's pointing fingers and the illustration. Afterwards, we connect the electrodes to the stickers and start the device, which tracks JACA's heart rhythm for a short while, after which the device prints out a graph. Then, Caroline asks me to take the graph to MB, who has to check it for irregularities. MB looks and feels at the graph for a couple of minutes, before he puts on a signature and says that it looks fine. When I come back, JACA is sitting on the edge of the bed dressed in her sport clothing and talking with Caroline. The heart is approved and we can move on to the physical test, which will determine whether she is in too good of shape to participate in the trial.

(Field note, Screening, Panum Institute)

The above field note shows how a simple procedure, such as taking an ECG, is an achievement that involves a variety of entities, whose compatibility and collaboration is not given in advance. In particular, the note illustrates awkward differences between a Vitruvian man on a drawing and a round woman on a bed, an unpleasant contact with a body and cold, hard fingers, as well as an attempt to conceal a naked body and malfunctioning curtains. A key challenge to overcome in the laboratory concerned the creation of functionality across social, bodily, and material differences.

The field note above also illustrates how my fieldwork involved situations that demanded my active involvement and how I became part of the sociality needed for the method to work. While I took the participatory engagement of the trial work to be a challenge, taking part in the laboratory procedures was also instructive for my understanding of the embodied nature of knowing in the laboratory and how laboratory work not only concerned proper handling of bodies and technologies, but also emphatic care and social intelligence. Taking part in the laboratory procedures, I learned that the researchers and their personalities were crucial devices in choreographing the objectification and subjectification of the participants (see Cussins, 1996), and how the relation between research and care was an embodied ethical practice, rather than something that could be settled in advance (Greenhough & Roe, 2011).

Although the above note shows what one following anthropologist James Spradley (1980) can understand as "complete participation" (p. 58-62), my fieldwork around the laboratory practices seldom had that participatory intensity. In general, I attempted to refrain from actively trying to take on laboratory work and instead let the researchers determine when my involvement would be appropriate. One reason was that I did not feel comfortable nor competent performing laboratory work despite the researchers' close monitoring and the participants' apparent indifference to the educational atmosphere. Another reason was that I thought a lesser degree of participation would enable me to capture better the choreographies, materialities, and social dynamics of the lab. As anthropologist Charlotte Aull Davies (2008) has argued, full participation, or immersion, in the practices of interests is not in itself a guarantee for a high quality ethnographic experience. Rather, the nature and degree of participation relates to particular analytical interests and situated possibilities (p. 84-85).

Therefore, whenever the researchers did not enrol me as a "helping hand", I tried to keep an observant stance during the procedure and to engage only in the informal conversation that filled the gaps in between the structured test sequences. If possible, I tried to ask questions about the procedures and to join the researchers' informal conversations with the participants, and thus to enrol as an actor in the procedures in that way. I used the same strategy in other activities that involved the researchers and the participants, e.g., during screening interviews, randomisation procedures, and anthropometric examinations.

Because many of these examination situations often involved precarious activities, such as undressing, pain, or disclosure of personal information, I seldom took field notes on-site. Another reason was that laboratory practices, in spite of their objectifying character, made up social and precarious situations, in which everyone present had a responsibility for keeping the situation together (see above field note). For these reasons, I took withdrawing from the situations to write field notes in a focused manner to be inappropriate. Instead, I tried to jot down 'scratch notes' (Sanjek, 1990, p. 95) on my cell phone or on a piece of paper when I left the laboratory to pick up things, during lunch breaks, or afterwards.

Following the wet practices in the laboratories and examination rooms and following the test trajectories that had been scheduled for the participants allowed me to gain insights into the various tests through which the participants (and researchers, and the trial more generally) had to move through. In my position as a "laboratory assistant", I thus learned about the "fleshy practices" (Mol, 2002, p. 31) that might result in a clean graph or data set, and how realising an 'elegant trial' in the laboratory went hand-in-hand with accomplishing a "good experience", as the researchers described it.

Article 1, *Recruitment Tests,* builds upon these insights through an analysis of the recruitment practices and the set of tests that the participants had to pass to become research participants. Following the recruitment protocol, the article describes the participants' first meeting with the trial through an advertisement, and then unpacks the subsequent information meeting, screening examination, baseline tests, and randomisation procedure. A common thread in the article is the relationship between the trial both as a research project and as a lifestyle project, in addition to how this relationship was tested and handled in each situation. The article, however, does not constitute a full-blown analysis of the laboratory work and the test programs that the participants had to undergo. More generally, laboratory work, although crucial and decisive for the trial, has received little attention in this dissertation and the four articles. One reason is that face-to-face clinical encounters and work at bedside is well explored (see Cohn, 2008; Jespersen et al., 2014; Johnson, 2013; Moreira, 2004; Svendsen & Koch, 2011; Yates-Doerr, 2012) and I wanted to cover new ground by exploring other forms of trial work, such as control and care at a distance.

Office Work: Care and Control at a Distance

During my fieldwork at the Panum Institute, I also followed the researchers at work in their office, which made up their primary workspace whenever they were not working in the laboratory. In the office, the researchers performed tasks, such as trial management, data handling, test planning, and "compliance work", which was the term for their work of ensuring that the participants followed the protocol. Although appearing trivial compared with the vivid practices in the laboratory, the small

office emerged as a key site during my fieldwork. One reason was that it functioned as the starting position from which I ventured into the various practices happening in the laboratories and examination rooms nearby, and as a corner to which I could withdraw from the activities to jot down notes. Another reason for its significance was that I spend two weekdays at the office for approximately six months during the first part of my PhD project to acquaint myself with the trial and its practices and to help the researchers who always needed an extra hand. In that connection, I handled clerical duties, such as attending the project email, filing data, and assisting the researchers in their compliance work by journalising the participants' exercise data. During this period, I also took part in the weekly junior meetings on the ongoing and daily progress of the trial. After that, I visited the Panum Institute regularly, but in a more unstructured manner in connection with interviews, observations, and meetings.

Through this engagement, I took part of the researchers' everyday life during the trial and got to know their working patterns and routines. The range of tasks made me aware that the participants were not the only ones who had to change their lifestyle. The four researchers also had to re-structure their life to the demands of the trial; they had to spend long days at the office to complete trial tasks and they had to be flexible about scheduling test days and communicating with the participants. These demands meant the researchers had little time to attend to their academic interests, such as completing assignments for courses and working on their individual dissertations. As one researcher described, "Right now, I just accept that it is not the time to work with motivations and cardiovascular stuff. I do other things, other kinds of things".[47]

Figure 11: The researchers' office at the ground floor at the Panum Institute. Photo by author.

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[47] The researchers' hard and time-consuming work during the course of the trial also meant that there was little time for scientific collaboration or interdisciplinarity, and more generally, that such activities were not prioritised in the project.

Some of these "other things" included motivating the participants on a daily basis by writing emails and talking to them over the telephone to ensure their compliance with the protocol at a distance. As the researchers did much of this compliance work on their own, each one with their eyes fixated on their computers, the office work initially seemed difficult to engage with ethnographically. Except for an occasional outburst of frustration about participants with poor compliance, a joke, a brief exchange of words, or a visit from a student with a question, much of the office work happened in silence with the researchers handling "their own" participants and tasks. In other words, the office work was boring, trivial, and similar to my own office work. Unlike the face-to-face and "fleshy" meetings taking place in the laboratory, the compliance work and much of the work on the participants' exercise happened in ways with little participatory ethnographic quality. The imperceptibility of the office work and the weird sense that the work was crucial but inaccessible were frustrating at first. In particular, the fact that the researchers' compliance work primarily played out as informal telephone conversations and brief email correspondences, which I was and could not be a part of, was a source of frustration. In the office, I thus had to accept that I was not, and would not, be part of the intimate relationships between the researchers and participants that drove forward the trial protocol on a day-to-day basis.

However, the office opened as a field when I obtained access to the main email account and the digital archive, when I had to help the researchers with clerical tasks. While the access did not allow me to become part of the direct interactions between the researchers and participants, it was an entrance into the infrastructural and archival dimension of the trial and to the correspondences between the participants and the researchers that found its way to the main email account. Attending to the email account, which I did periodically, provided me with insights into the everyday incidents of the trial and what the participants reported, (e.g., brief exchanges concerning flat tires, sickness, missing exercise sessions, and technological problems with the heart rate monitors). On one hand, the email account allowed me to explore the communicational aspects of how the researchers' tried to monitor the participants' compliance at a distance, while on the other, the trial archive enabled me to explore the categories and protocols, which structured the researchers' daily work of monitoring the participants.

In particular, the Excel tables that the researchers used to monitor the participants' exercise data caught my analytical attention. I was struck by how these tables enabled the researchers to perform different types of overview and interventions, and how the table functioned as a device for micromanaging the participants' compliance in order to realise both ideals of elegance and workability. As Winthereik et al. argued (2002), the notion of fieldwork as performance sometimes misses how researchers cannot control the construction of their fields and objects and how 'recalcitrance' in the field can 'make available' new ethnographic objects and insights (p. 55). For me,

the challenge of gaining access to the intimate relations between the researchers and the participants prompted me to focus on the materiality of the researchers' compliance work.

While I was a "laboratory assistant" under strict supervision in the lab, I was more an "ethnographer of science" in the office. By browsing through the digital data archive and the diagrams, calendars, and overviews covering the walls and the piles of trial-based paperwork and journal articles covering the desks, I learned how office work implied a different skill set. While working in the laboratory required touching, feeling, engaging, and embodied multitasking, office work called for organisational skills and secretary work, such as typing, filing, calculating, planning, and above all, an ability to communicate through writing and talking over the telephone.

Following the researchers at work enabled me to ask questions that were more informed and to explore the somewhat obscure character of the everyday life that unfolded at the office: an everyday life that had crucial importance for the everyday life of trial participation. In particular, browsing through the protocols, documents, and written materials allowed me to open some of the black boxes in their conversations and banters during office hours:

> JSQ boasts about EJWE's numbers. MB seems impressed but also a little sceptical with EJWE's recent numbers from the fitness test, which show a significant increase in his fitness.
>
> MB: He must be a high responder, huh!?
>
> JSQ: He just has no trouble making it happen! He is a machine - he can almost do it (the fitness test) by himself.
>
> MB: Well, it's great, but are you sure he is not exercising more than we prescribed?
>
> JSQ: He is a kind man, and he is disciplined too.
> MB replies: You're lucky… It works damn well in your group!
>
> JSQ: Arhh.. I have KEEL (another participant) and he, I'm sure, will be cumbersome.
>
> MB: Well, we all gotta have a problem child.
>
> JSQ: Well, don't you remember MASR (a third participant)? You, know, the guy who dropped out. He was very difficult.
>
> (Field note, the researchers' office, Panum Institute)

As indicated above, the researchers' conversations were rather esoteric. However, after some time, I learned to decipher whom the researchers talked about when they used acronyms and what they meant when they described the participants as "machines", "problem children", "high responders", "difficult", "cumbersome", or "disciplined". Taking part in the everyday humdrum of the office and my position as a project member enabled me to ask them to elaborate on what seemed to be

naturalised acts of control and care. In doing so, I was surprised by how much they knew about the participants and their lives as well as the unspecified and common sense nature of their motivational work. When I asked about their approach, the researchers often had a hard time finding the right words to characterise it. Often they simply explained, "it's just practical", "it's pretty straightforward", "we just do whatever necessary to make it work", "we do whatever it takes", or "it's just natural for me to act the way I do". Nevertheless, they often elaborated these vague descriptions through accounts of what they did in practice, which allowed me to probe the practicalities of care and control at a distance and how this work was linked to different technologies, clerical practices, and in particular, to the researchers' compliance with their close relationships with their participants. The latter is evident in the banter below, in which MB, in jest, doubts the compliance numbers in ASG's group of participants.

> MB: Have you made a Penkowa[48] with your numbers [participants' compliance], since they look so good?
>
> ASG: "It's just love, MB!"
>
> (Exchange between researchers in the office)

In addition to informal conversations, I conducted structured interviews with the four researchers, both one by one and as a group, as well as with a group of the students who assisted the researchers.[49] The purpose of the interviews was to gain insight into their different tasks, roles, and experiences of working as researchers and exercise supervisors. To this end, I sought to integrate my preliminary insights and to introduce concepts from my reading to spark discussion and joint reflection regarding the trial (e.g., discussions about distinctions between efficacy and effectiveness, and care and research). Thus, the interviews and my informal conversations also made up occasions, in which I could explicate my research interests for my project colleagues and give them a chance to engage with my project. They did so by forwarding emails from exchanges with participants that they thought I would find interesting and by keeping me in the loop by including me in their ongoing email correspondences concerning the progress of the trial. In that sense, the researchers were steady conversation partners in the development of my research interests.

In addition to providing me with detailed insights into the mundane workings of realising the trial protocol, the interviews, and my more informal interviews, appeared to make up a kind of pause for reflection for the researchers who did not have the time to withdraw from the day-to-day practice of

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[48] A reference to a significant scandal concerning scientific fraud and data manipulation in Denmark.

[49] I did a part of my fieldwork among the researchers at the Panum Institute with anthropologist Line Hillersdal who studied the collaborative processes in GO as a part of a joint interest in interdisciplinary collaboration.

managing the trial to reflect upon their work. As one researcher explained, "As I've said before, it's actually only when we have these conversations with you that we reflect upon what we do." The interviews and conversations, in that sense, functioned as ethnological interventions into their work by opening the everyday life of trial work for critical reflection in another register. Therefore, although we did not share an epistemic interest, we influenced and shaped each other's projects through continuous conversations regarding the progress of the trial.

For my part, article 2, *Proper Vision*, constitutes a more or less direct product of this engagement. Although the article, which I wrote for a cultural analytical journal, is not a direct contribution to the researchers, it reflects my close engagement with them and my attempt to re-articulate some of the challenges that they faced during the trial. Focusing on the practicalities of the researchers' compliance work, the article shows how the researchers were able to "see" and monitor the participants in different ways from their office and how these different ways sought to produce specific effects. The article thus attempts to analyse a work practice, which were undocumented but crucial for the realisation of the trial. The article also highlights the basic challenge that faced the researchers, i.e., to control a trial from a position that offers little opportunity for controlling and overseeing of the trial. Hence, it explores the fundamental challenge of conducting controlled trials beyond the laboratory in people's everyday lives.

Qualitative Work: Gathering Data on the Conveyor Belt

> Collecting data is a collective project! A successful intervention depends on a collective effort. So, for example, many of the data I need are gathered on the test day that ASG is conducting, and her project depends on that I send questionnaires to my subjects and so on. So, right now, it's just like a factory or a slightly smaller business that has to be run. (MB, researcher)

Unlike the trial researchers and the participants, whose work in the trial was dictated by the protocol, my fieldwork was not inscribed in the overall research protocol. However, one exception is an interview survey, which I had prepared in collaboration with the ethnological project leader. In brief, the survey consisted of two components: a baseline and a follow-up interview survey. All participants were interviewed as part of the first test day in the baseline assessment and in connection with their voluntary follow-up examination 12 months after their intervention. In both instances, the interview followed a standardised interview guide comprising 16-20 questions. The themes covered in the baseline interviews by the interview included civil status, previous experience with exercise and reasons for enrolling in the trial, group preferences, and everyday life organisation. The follow-up interview covered themes such as exercise routinisation, technology, and learning.

The overall purpose of the survey was two-fold. First, the goal was to produce qualitative knowledge regarding the trial population as a supplement to the primary biological baseline assessment by identifying the participants' motivations, exercise experiences, and expectations. Second, the aim was to engage with the hypothesis concerning intervention and routinisation by investigating how participants had developed their experience from the trial, and whether trial participation had prompted physical activity to become a routine in everyday life.

In conducting these interview surveys, I emerged as what I propose to understand as a qualitative data collector working on a kind of data-producing conveyor belt. The automated and fast-paced data sampling was underlined when the researchers gave me a fixed time slot between a two-step test procedure at the baseline tests in the laboratory to run through the interview guide, while the participants were lying in bed in hospital garments. In this somewhat awkward space, ethnology was configured as a data collection method, which, like a biomedical procedure, generated samples in the form of "personal information", "preferences", and "experiences". That the participants were on a kind of conveyor belt was also evident during the follow-up examinations, in which my interviewing constituted the last procedure in a tight test sequence of scanning, weighing, blood sampling, max testing, and questionnaire surveying.

Methodologically, one can argue that the interviews did not meet standard criteria for ethnological interviews in that they were too brief, superficial, and variously compromised by the setting. Additionally, one can level the criticism that this type of inquiry reduces ethnological cultural analysis to mere data collection and that it 'factorialise' people's lives into discrete, static entities (Parker & Harper, 2006, p. 4), thereby reproducing problematic ideas of people (Law, 2009). While such arguments are appropriate, I contend, however, that the interviews served purposes that cannot alone be evaluated by standard methodological criteria, the character of the material, or its analytical predispositions. While we (the project leader and I) initially considered the interview surveys as a methodological experiment of "installing an ethnological component"[50] in the RCT test battery that would yield qualitative data in a systematic way, the interviews took on a different life, when I handed over the task of doing the interviews to the researchers.

In practice, it turned out that the interviews became an opportunity for the researchers to gain initial insights regarding the participants that could be of use in their subsequent compliance work and relied on detailed information concerning the participants' life situations, work life, familial relations, and so forth. While talking was integral to the practice of laboratory testing, the interview

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[50] We presented this idea in a paper titled, "Installing an Ethnological Component", at the 33 Nordic Ethnology and Folklore Conference: "CO" – Co-productions, collaborations, contestations August 18-21, 2015. In the paper, we discussed the surveys as one component of a broader and differentiated ethnological engagement with biomedical trial research, comprising project management, critical and more monodisciplinary cultural analysis (this dissertation), interdisciplinary collaboration, and qualitative data collection.

constituted a more structured inquiry into the participants' everyday life, which yielded insights that would not otherwise be articulated in informal chatting. The baseline interviews, in other words, morphed into a productive component that would facilitate the process of acquaintance that the laboratory methods gave rise to. On several occasions during my fieldwork, I overheard the researchers refer to insights from the baseline interviews about the participants' everyday life organisations, exercise experiences, and life histories, which suggests how "ethnology" came to participate in the performance of the trial in another way than through my fieldwork and project management.

   For my part, conducting the baseline interviews also proved to be a good way to select participants for my project, as they allowed me to talk with a large number of the participants. In addition, the follow-up interview provided me with a chance to meet with the participants that I had followed during the intervention again and to obtain another perspective on their trial experience. More generally, the survey also served to link me to the overall progress of the trial by requiring my attendance at the Panum Institute on a regular basis throughout my engagement. This synchronisation of my project and the trial plan also aided the enactment of GO-ACTIWE as an interdisciplinary research team since I met the researchers regularly.

   As a "qualitative data collector", I thus participated in the data-producing "factory" or "business" functioning of the trial, as one researcher put it. Particularly, I learned how the methods not only yielded data for subsequent analysis, but also made up occasions for developing the social relations upon which the trial depended (both internally in the research group and between participants and researchers). Therefore, although I have not written this dissertation from the position of "a qualitative researcher", my work on the conveyor belt made clear how the everyday life of the trial unfolded through methods and how collecting data according to the protocol was a driving force in the completion of the trial.

Management Work: The Big Picture of GO-ACTIWE the Research Trial

> Dear all,
> We have a GO-ACTIWE core group meeting on Wednesday from 9-11 in Faculty Club. The purpose of the meeting is to take stock of the practical aspects of GO-ACTIWE but also to think strategically and discuss "the big picture". I would like to make a presentation on the latter. Will someone from the junior group report on the practical aspects? In addition, does anyone have any topics or presentations?
> Greetings […]
> (Invitation to core group meeting from the professor)

During my engagement in the trial, I also took part in project meetings and conferences, many of which took place at the Faculty Club. These various events were, as I have tried to show so far in this

chapter, central sites for enacting the GO-ACTIWE trial and my project in particular. As described in Chapter 1, the "core group" of the GO-ACTIWE, which included an associate professor of ethnology, a professor of biomedicine, a postdoc, the three PhD students, and myself, met a few times a year in the Faculty Club. The general purpose of these meetings was to "take stock", "think strategically", and "discuss the big picture", as the leading professor describes in the above meeting invitation. While these "direction group meetings", as they also went by, only took place a handful of times per year, they were important for the completion of the trial because they assembled us (the researchers) as an interdisciplinary research project and provided an occasion for the enactment of the trial as an elegant trial.

In what follows, I provide a synoptic description of how the trial was enacted at these meetings with a focus on their form rather than their content. The description is, thus, not neutral but rather an intervention (Jespersen et al., 2012, Vikkelsø, 2007), which attempts to broach questions regarding collaboration and the overarching narrative of the trial, in addition to how these issues have influenced my fieldwork.

The direction group or core group meetings at the Faculty Club by and large followed the same script. Usually one of the leading biomedical researchers introduced the trial, its basic rationale, and structure by displaying the trial flowchart and timeline, after which we would discuss the specific items on the agenda. Functioning as a chairperson, the lead professor orchestrated which discussions belonged at the table and which belonged elsewhere. In general, details from the day-to-day office work or "hardcore" biomedical discussions rarely entered the joint meetings at the Faculty Club. Instead, the trial appeared as an arrangement of black boxes, which were opened one by one for review, control, and adjustment. One meeting agenda, for instance, ordered the trial into these constituent components: "Funding", "External collaboration", "Test days", "Care work", "PhD projects", "Publication plans", "Manpower", "Budget", "Endpoints", and "Recruitment".

This process of isolation and abstraction allowed us to assess the progress of the trial in relation to the original protocol and the established questions and interests that it was set up to deal with. The meetings, for instance, often served as occasions to reiterate the scientific validity of the trial through discussions regarding "control", "randomisation", "endpoints", "statistical power", and other principles that supported the notion of the "elegant trial". Because, these discussions were absent in the daily business of running the trial, the meeting was a crucial site in which the researchers could rehearse the internal significance of the principles that supported the internal validity of the trial.

As suggested above, the meetings at Faculty Club primarily concerned the management of the trial protocol. Yet, they also functioned as events for the occasional performance of GO-ACTIWE as an interdisciplinary research project involving both ethnological and biomedical approaches. This performance often took the form of yearly and biannual seminars, in which each of us PhD students

would conduct a 20-minute presentation on the status of our project, publication plans, methods and data, followed by short sections of plenary discussion. This way of structuring the meetings made our PhD projects appear as isolated and contained mono-disciplinary endeavours based on specific methods, forms of data, questions, and epistemologies. The consequent division of the project into delineated sub-projects materialised at one of the initial meetings in a PowerPoint slide, which showed our PhD projects as separate bubbles. The bubbles concretised how the GO-ACTIWE project was not structured as an interdisciplinary project in the sense that we had to share outcomes or become involved in each other's projects. Each of our projects instead constituted a closed bubble that had little to do with the other bubbles, but touched upon the overall interest of exercise in everyday life.
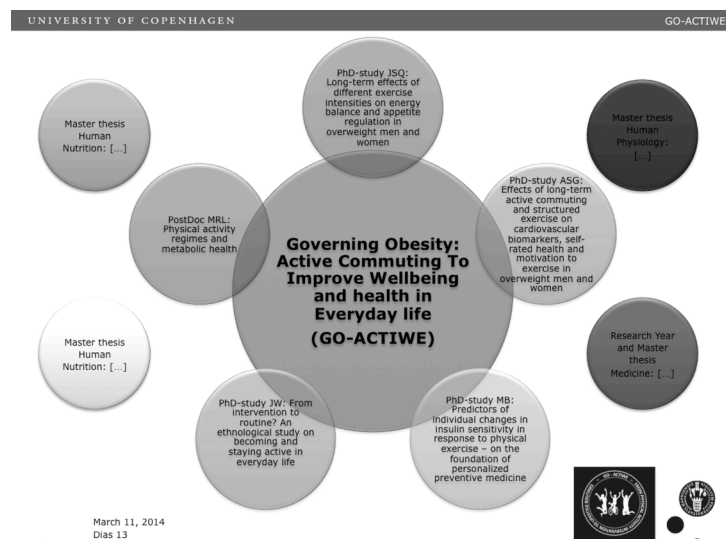
Figure 12: PowerPoint slide from early meeting showing the five core projects in the form of bubbles, surrounded by Master theses-bubbles. Screenshot by author.

While these presentation sessions served as opportunities to obtain insights in each of our bubbles, they would also reinforce the membrane of each bubble, as it were. The general articulation of the trial research as comprising a biomedical and humanistic part (and later on a technological part)[51] in practice meant little disciplinary interaction and a sense of reluctance in terms of engaging with each other's projects. These discursive divisions, which all of us reproduced, rather constituted us, the members, as representatives or indexes for our discipline and a particular set of methods. At the table in Faculty Club, I was consequently an "ethnologist with an ethnological PhD project" that built upon ethnographic fieldwork and a representative of the humanistic part of the project.

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[51] Halfway through the trial, another sub-project was added that focused on a sample of the participants that were given cell phones, which tracked their movement patterns. See Rosenkilde et al. (2017) for full protocol description and details concerning the various projects that were connected to the trial. This dissertation does not focus on the participants that were included in this sub-project.

As such, the interdisciplinarity of the project was based on peaceful coexistence, in which we would attend to our own interests under the ostensible umbrella of GO-ACTIWE, rather than epistemic collaboration. While one might say that these boundaries could stand in the way of interdisciplinary engagements because they reinforced disciplinary peculiarity, they also constituted key practices in rehearsing the overall alliance between ethnology and biomedicine, which was regularly highlighted as the distinct feature of the project. For special occasions (like annual SAB meetings and public events), we would reiterate the interdisciplinary narrative that underscored the relevance of engaging the two disciplines. On several occasions, I gave presentations with my project colleagues, during which the standard narrative would be that GO-ACTIWE was an interdisciplinary project that examined both the "metabolic" and "cultural dimensions" of exercising in everyday life. Yet, we would not make any genuine attempts to integrate the perspectives any further or develop another, and perhaps more fitting, narrative regarding the project.

In part, the different nature of our research projects limited the possibility of talking about the project in alternative ways. While the researchers' projects were driven by fixed hypotheses, my project was structured as an exploratory study with a much more fluid research question. This meant, among other things, that the researchers were only able to present the trial in a broad outline in presentations. Consequently, I often struggled with adjusting the overall project narrative, which seemed to have been fixed along with the researchers' hypotheses, to my concrete research project and progress. When the other researchers presented me or referred to my project, I often sensed that I had to live up to implicit expectations that I would provide clear insights about the everyday lives of the participants as well as routinisation and barriers in everyday life. Although I had the experience that I shared my interests with my project partners, the idea of the participants' everyday life as an ethnological research domain "out there" seemed adamant. As Fitzgerald et al. (2014) have highlighted in their work on interdisciplinary research between health science and social science, "on-going re-alignments of 'health' and 'the social' [...] generate complex (and not always comfortable) spaces of collaboration and hybridity".[52] What sometimes made the interdisciplinary collaborations of the GO-ACTIWE project uncomfortable for me was the difficulty of conveying the point that what I considered as "everyday life" or "the social" did not constitute a sphere "out there", but a distributed set of practices, which included all of us and our various engagements in the everyday life of trialling.

The particular ways in which the trial situations shaped my engagement with the participants becomes clearer in the section below, in which I discuss my fieldwork among them in more detail.

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[52] Quote from online article at somatosphere.net, "The collaborative turn: interdisciplinarity across the human sciences". See bibliography.

Roadwork: Exploring the Everyday Life of Trial Participation

In the section above, I have outlined my involvement in some of the day-to-day trial practices that took place at the Panum Institute and how they have shaped my project and my engagement with the trial. In particular, I noted how I was positioned as a "laboratory assistant" in test practices, an "ethnographer of science" in monitoring practices, a "qualitative researcher" in data collection practices, and an "ethnologist with an ethnological PhD project" in the project management practices. All these day-to-day trial practices in different ways related to and depended on another set of trial practices that took place elsewhere, namely the participants' exercise practices in their everyday lives, which was imagined as the site in which the trial had to take place for its results to be socially robust. As mentioned, my PhD project was imagined as the cultural analytical investigation of the determinants, potentials, and barriers regarding physical activity in everyday life. In concordance with this idea, and as I have already mentioned earlier, I initially worked from the idea that the participants' everyday lives was a more or less bounded, stable site "out there" that I could visit, hang out in, immerse myself into, and explore from within.

Early, however, I learned I would have to reconceptualise my idea of how I would engage with the participants' everyday lives as an ethnographic field. One reason was that trial participation turned out to be quite a mouthful for the participants and that it included a broad range of time-consuming activities, such as test days, home measurements, and, of course, exercise sessions. All of these activities made up more or less significant interventions, which required reorganisation of their ongoing daily activities. My investigation was thus one among many GO-ACTIWE-specific interventions into the participants' everyday lives that they had to deal with as a part of their trial participation. As John (a participant) noted when I met him at the Panum Institute after his last baseline test day:

> Me: What do you think will be the biggest barrier in regards to making exercise into a routine?
>
> John: These test days are the worst. You know, I have to take a day off from work and use one of my vacation days to come in here. That's a bit annoying. And then, there are some procedures where you think it would be possible to do them a little faster. But obviously, some things need to be done in certain ways.

The scope of trial participation as an issue was also evident when I called John some months later after he had not answered my mail. When I called, I got hold of his wife, whom I told about my plan to meet and interview John. She said he was out running errands and she proposed that we could do the interview over the telephone later. John suggested the same when he called back later, and explained that doing the interview over the telephone would be easier for him. At several other

occasions, I felt that the participants tried to manage my interests as one among several GO-ACTIWE specific practices. Many participants, for instance, proposed to combine the interviews with their scheduled laboratory visits, and in doing so planned interview appointments with the researchers instead of me. In addition, many participants proposed I come by their workplace or meet them on their way home for a short interview. I also got the feeling that one way of managing my interests was by ignoring my enquiries. Several times, participants did not reply to my emails, and when they did, we would often go back and forth to find a date. My relationships with the participants, in that sense, resembled those of the researchers, who also struggled to maintain contact with some of the participants.

From one perspective, these practical aspects of making an appointment are simple, trivial features of fieldwork. From another, the participants' negotiations of my enquiry point to particular features of the everyday life of trial participation. As anthropologists Paul Hammersley and Martyn Atkinson (1995) have argued, "The discovery of obstacles to access, and perhaps of effective means of overcoming them, itself provides insights into the social organisation of the setting" (p. 54). In particular, my obstacles concerning access to the participants suggest that trial participation was one among several everyday life routines that they had to align. They also suggest that I have studied a particular version of everyday life, which was brought about by the trial situation. The participants' everyday life, in other words, was not a ready-made site, or more or less stable structure like the Panum Institute, which I could visit at will. Instead, my fieldwork comprised encounters in and conversations about a GO-ACTIWE-specific everyday life, i.e., everyday practices to do with trial participation.

This means that I have not investigated the participants' motivations, life worlds, opinions, or needs and that I have not explored the intimate and affective routines that make up their everyday life in the vein of recent ethnological studies (Ehn & Löfgren, 2010; Löfgren, 2014).[53] With inspiration from ethnologists Damsholt and Petersen (2014), I have instead framed the everyday life of trial participation as practices configured through trialling as a particular form of problematisation. Consequently, when I write about the participants' everyday life in this dissertation, I make no claim of providing a panoptical view. The point is that the trial has articulated a specific everyday life for the participants, and that I have been able to study this 'specific life' (Berg & Akrich, 2004) under certain conditions.

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[53] While mapping the broader scholarship on the nature, character, and problem of everyday life is beyond the scope of this dissertation, one can divide the study of everyday life into two main directions. On the one hand, the phenomenological-inspired studies that examine everyday micro-practices, routines, and habits; on the other hand, the Marxist-inspired studies that show everyday life as an arena of power struggles, and politics (Sandberg, 2014). In this dissertation, however, I have not developed my interest in everyday life in relation to any of these approaches, and therefore I do not engage in the broad field of theoretical discussions about everyday life: what it is and how it should be studied.

Roadwork: Articulating the Work of Making Trialable Exercise Routines

In his work on the production and circulation of scientific facts, Latour (1983) has used a metaphor of infrastructure to describe the social and material work upon which the spatial distribution of science relies. As he put it, "Scientific facts are like trains, they do not work off their rails. You can extend the rails and connect them but you cannot drive a locomotive through a field" (p. 155). His point is that laboratories only become active in the world through the 'extension' of lab practices (p. 155). The world, in other words, must be transformed into a laboratory or rather the necessary conditions must be set-up for lab standards, facts, and practices to thrive. Inspired by Latour, I conceptualised my fieldwork among the participants as an exploration of 'roadwork', which in English both refers to "work done in building or repairing roads" and "athletic exercise".[54] With this concept, I tried to capture the work that the participants did to make room for the trial in their daily lives and the bodywork required by the protocol. Roadwork thus points to the trial-specific work of complying with the exercise protocols in the everyday lives outside the Panum Institute.

The notion of roadwork also maps onto my fieldwork among the participants, during which I spent time with the participants as they worked out on treadmills in gyms, ran the gravel paths in parks, or rode their cycles through the city, followed by interviews about the work involved in even getting to the treadmill, gravel path, or cycle-lane. As one participant in one of the leisure time exercise group described, "I can't get it done at work. I can't combine it with my transportation. It's a struggle just to find time to exercise." In particular, the routinisation of the exercise protocol appeared to depend just as much on motivation as on other people's flexibility as well as on other everyday life routines and their ability to be reconstructed. Through my fieldwork among the participants, I thus learned that trial participation both involved the physical work of exercising according to the protocol and the work of 'extending the laboratory' via trial-specific reconstruction of existing everyday life practices.

Talking about the Practicalities of Trial Participation

Throughout my fieldwork, I interviewed 30 participants.[55] In these interviews, my main interest was not to understand their life history or life-world as psychologist Steiner Kvale (1997) has described the purpose of the qualitative research interview (p. 19). Instead, I encouraged the participants to talk about their participation as "thick, fleshy, and warm", as Mol puts it (2002, p. 31). To foreground the practicalities of trial participation, I structured the interviews around trial-specific

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[54] Oxford Dictionary (1990).
[55] See Appendix A.

elements and inquired their significance for trial participation and the work of routinising the exercise protocols. More specifically, the interviews were semi-structured around the following main themes: *participation motivation, screening process, biomedical test and knowledge, exercise, heart rate monitor and exercise standards, everyday life organisation, embodiment, health practices, exercise experience* and *relationships with the trial staff*. As reflected in these themes, I wanted to probe the specificities of trial participation, rather than represent a particular participant perspective, categorise the participants' experiences and challenges with the exercise interventions, or identify barriers and potentials for exercise in their everyday life.

As empirical philosopher Jeanette Pols (2005) has argued, the notion of a patient or in this context, a participant perspective rests on the assumption that people actually have an individual, autonomous, and authentic perspective on the world that can be given voice through interviewing and represented faithfully in an account (p. 218). According to Pols, this idea is problematic because it ignores how perspectives or rather subject positions are performative effects of the interview situation. In this perspective, the participants' accounts of their trial participation were effects of a co-production, i.e., a result of interactions with others (me as an ethnologist) and a material world (p. 211).

Accordingly, I do not consider my interviews with the participants to reflect pure and distinct participant perspectives on the exercise interventions or to function as corridors into their everyday life worlds. In contrast, I take the interviews as attempts at co-producing a particular version of trial participation, which is grounded in my particular interests and processed through my analytical practices. Thus, when I present three participant accounts in Article 3, *Routines on Trial,* they are not to be understood as different participant perspectives on, or typical participant experiences of, trial participation and the exercise interventions.[56] Rather, they constitute three analytical accounts through which I try to articulate how the exercise interventions gave rise to trial-specific routinisation work with the aim of challenging the singular idea of exercise that the trial was designed to evaluate.

Fieldwork in Motion

As part of this strategy of articulating the exercise interventions in practice, I attended the exercise sessions of 14 participants, amounting to participation in 20 workouts.[57] In doing so, my specific goal was to explore the practical, material, and bodily dimensions of the everyday life routine that

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[56] This is also the reason why I, although having interviewed 30 participants (in total 45 interviews), have chosen to only transcribe and work with an extract of 15 participants in a focused manner.
[57] Practically, I met the participants in the gym or the place they wanted to do their exercise, after which I would interview them.

the trial promoted. Yet, while I took part in their exercise routines, these situations were not characterised by the sharedness that anthropologists Tim Ingold and Jo Lee (2006) have advocated in their article concerning "fieldwork on foot", in which they investigated the links between ethnography and pedestrian movement. One of their central points is that one cannot just walk into people's lives and expect to participate, but that ethnographic participation is grounded in a shared embodied experience. As they argued:

> To participate is not to walk in but to walk with - where "with" implies not a face-to-face confrontation, but heading the same way, sharing the same vistas, and perhaps retreating from the same threats behind. (Lee & Ingold, 2006, p. 67)

According to Lee and Ingold, fieldworking on foot implies that ethnographers "attune" to the movement of their informants to create a kind of phenomenological experience of being "grounded in shared circumstances" (p. 67). While this argument might make sense in studying links between ethnography and walking, trial-specific exercise constitutes a form of physical movement that links with ethnographic practice differently. In contrast to walking, trial-based exercise, as it was configured in the GO-ACTIWE trial, did not allow for mutual attunement and a shared phenomenological bodily experience, but in a practice, which enacted us as different bodies.

Bodily attunement was complicated by the fact that the participants had to wear a heart rate monitor and comply with exercise standards that were tailored to their specific body and determined by the trial protocol. This meant that they had to try to control their movement to a set of generic standards and not to our shared experience of moving together through a particular environment or in a particular social and material situation. When I participated in the gym, our challenge of attuning to each other was evident when the participant's heart rate would often rise above the prescribed standards because we talked. Even if we had worn the same gear, the exercise situations in the gym also enacted my body as different from theirs. This was evident when the participants commented on my capacity to talk and run at the same time without losing my breath or when the participants made remarks about my age. In addition, my mere participation made the exercise situations different from their usual trial-based workouts. For instance, my presence created a collective situation involving talk and social interaction, which differed from their usual individual exercise practices. Several participants mentioned that they usually did not workout with someone, rather they would normally listen to music or watch TV, and that they had chosen to workout somewhere else and at some other time because I had to attend. Furthermore, my motivation to engage in the practice of exercise was different from theirs. Paraphrasing Lee and Ingold, we were not heading in the same direction, sharing vistas or retreating from the same threads, since our embodied engagements in the workouts were not informed, structured or grounded in the same

project with the same milestones, goals, and trajectories (Lee & Ingold, 2006, p. 67). A related point is that I did not participate in or become part of "their" personal and naturalised practices, but rather participated in a practice that was framed by the trial and therefore unfamiliar or new to them.

The various differences that emerged from my engagements in their workout—through both interviewing and participating—were analytically instructive, because they created occasions for conversations. This was evident when I interviewed a participant by the name of Johanna, who offered to demonstrate what it entailed for her to exercise at moderate intensity:

> While we walk on the sidewalk on our way back from the interview in the park, Johanna asks if I want to see how high her heart rate is. She describes that on average her heart rate have to be somewhere between 110-125, and shows me the heart rate monitor on her wrist, which reveals the number 114 on the display before she exclaims, "Isn't it crazy?!! It's nothing! It's just ordinary walking! Sometimes, when I'm cycling, I'm like, "Arrrrrhhh… For God's sake, let me push through!" [Johanna exaggerates her voice of to stress her frustration of having to hold back.] I explain that I really thought that moderate-intensity exercise would be harder, involve more tempo and pace and that one would at least have to swing the arms like in jogging or brisk walking. She laughs and says, "Yes, sure, but this is how I have to exercise". She then explains that she usually tries to place herself a little high within the heart rate interval, which she has been given, when exercising in the gym. "Otherwise, people would fall with laughter, when they see me. It's exercising for grannies, no doubt!" She then explains how she sometimes just turns on the heart rate monitor if she's out walking with a friend to get it done, and how she can't exercise with her boyfriend, who's also in the trial, because they have to run at different speeds even though they have been randomised to the same group.
> (Field note from interview with Johanna)

The field note above shows how the exercise practice did not "belong" to Johanna or form a natural part of her everyday life. The exercise, in contrast, was a practice that affected everyday life in different ways by being different from it and different from what we both associated with exercise. In the field note, she recounts how exercising under the auspices of the trial caused her to be out of sync with her everyday life, which suggests how the exercise standards did not always translate smoothly between the Panum Institute and the participants' everyday life: between serving ideals of elegance and workability. For instance, she recounts how the standards restricted her on the cycle and how they caused her to feel silly in the gym. Other participants also reported how the exercise protocols in practice meant that they had to limit themselves in unnatural ways. Some described how they had to leave fitness teams in the fitness centre to avoid exceeding the exercise standards or had to cycle strange and illogical detours to meet the standards. As such, my interest in the exercise did not built upon a shared bodily experience. Instead, I explored exercise as a trial-specific practice that was configured through trial standards, trial researchers, and technologies and as an opportunity to learn about how ideals of scientific elegance and everyday workability were aligned in the participants' day-to-day exercise practices.

Snapshots of the Everyday Life of Trial Participation

To explore the participants' "roadwork", I also asked 10 participants to take pictures of their "everyday life with GO-ACTIWE". More specifically, I asked the participants to capture five to seven images that illustrated GO-ACTIWE in their everyday life and provide a comment to the pictures. As anthropologist Sarah Pink (2006) has explained, "When informants take photographs for us the images they produce do not hold intrinsic meanings that we as researchers can extract from them" (p. 91). Instead, the meanings of the pictures informants take must be explored through conversations, which add a layer of meaning. Pink, therefore, proposes that all such photo-exercises should be followed up with interviews. In my case, this happened the other way around. When I gave the participants the photo assignment at the end of the interviews, they would often say that they would not know what to document. This, however, would then cause us to discuss potential motives and recapitulate key points from our conversations, which added another layer of detail. In addition to pictures illustrating their actual exercise, the participants' images mainly documented situations or objects, whose significance we had already articulated through the interview, e.g., pictures of calendars, landscapes, exercise clothing, heart rate monitors, and data uploading. This suggests how the significance of "the everyday life with GO-ACTIWE" needed focused articulation through questions, photo assignments, and conversations to emerge as an object of research, i.e., how it had to be performed into being. In part, I take this to reflect how trial participation was simultaneously ordinary and extraordinary. As one participant explained, "Jonas, it's not like I think about the trial every day. I just do it."

On the other hand, I contend that the participants' difficulties of taking pictures of the everyday life of trialling with a picture also relate to the fact that the significance of trial participation for many participants constituted a sense of being monitored and cared for, which is hard to capture with a picture. The photo assignment was a reminder that trial participation not only consisted of photographable "fleshy, material" practices, but also of feelings of responsibility and accountability and that the sociality of the methods that they were subjected to was integral to the everyday life of trial participation.
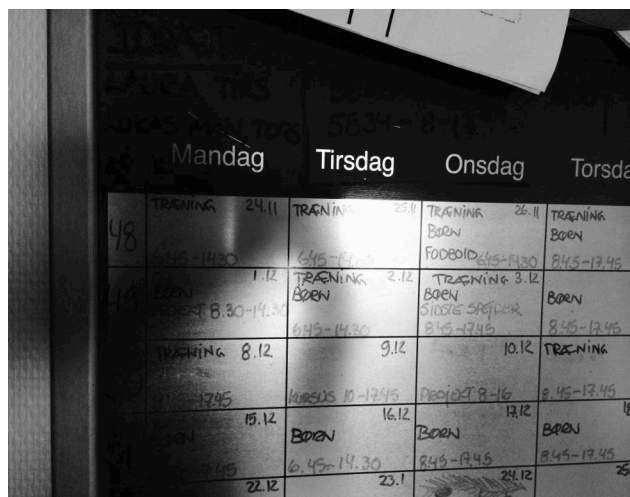
Figure 13: I have learned that I need to have to schedule my exercise. Therefore, the exercise is now in the calendar :-). Picture and caption by participant.

Self-Work: Engagement and Position

In my selection of interviewees, I aimed to include participants from all four intervention groups and to include participants in different life situations. In that connection, the researchers' detailed knowledge of the participants and their progress was a resource. Often they had suggestions for which of the participants I should approach. These were both participants they knew would attend my interviews and participants whom they thought would be relevant for my study. However, this selection procedure means that I have primarily spoken to a group of participants who, in the words of the researchers, were "very committed". From my interviews with the researchers and my fieldwork more generally, it was clear that there were also participants who took on their respective obligations more easily as well as for whom the exercise protocol was tough to follow. While talking to these participants would have been interesting, I had trouble getting in touch with the participants, whom the researchers considered "problematic", difficult", or "hard to get a hold on". The same applies for participants who chose to drop out. One consequence of primarily involving fully compliant participants, i.e., participants who were so compliant that they could also comply with my project, is that my sample does not reflect the diversity in the research population regarding their various degrees of compliance and ways of participating.

Aside from helping me select participants, the researchers also influenced the character of my relationships with them. During my fieldwork, the participants in some cases indicated that I was one of the researchers through formulations such as, "I know that you are watching..." and "When I come in to visit you guys at the Panum Institute ...". My position as a member of the GO-ACTIWE project meant that I could tap into the kind of intimacy and trust that was already established between the participants and the trial researchers. This was particularly clear in my conversations with the participants with whom I had a more regular contact. Often they readily revealed intimate

details about their daily lives, love life, and their perceptions of their bodies. Through these conversations, I learned how participation was bound in both practicalities and issues of a more intimate nature and how the researchers seemed to play important roles in regards to the latter.

In particular, I learned that my methods were some of many that the participants had to respond to as an integral element of their everyday trial participation and all of these interventions had effects beyond their data yield. This was evident when I asked Clara (a participant) about what she considered to "make up the intervention":

> You're a big part of it. If it were not for you, I would not have done it [begun to exercise]. The thing is that I have signed up for a project. Then obviously, there are the cycle rides, but then there is also all of these other things and questions. So when you ask me about something that I have not thought about myself, then I begin to think, "Oh well, this is also something that I contribute to", and then you start looking at things differently. (Clara, participant)

While the above suggests how interview questions constitute thought-provoking interventions that encourage new ways of relating to the trial and oneself, I also experienced the social effects of methods in connection with my photo assignment. A year after completing the intervention, John sent me an email with a picture showing him cross the finishing line after his second long distance race and a note on his completion time. Months after she dropped out, Mary, with whom I opened this dissertation, also sent me an SMS with an image of her out cycling and note saying, "Now, I cycle out of pleasure and not out of duty". Other participants also wrote emails to the trial after their completion with short stories of their continued exercise. Submitting oneself to the interests of the trial researchers by taking part in a correspondence, in other words, seemed to constitute a way to rehearse a particular version of oneself. I develop these observations in article 4, *Self-Care in Harness*, in which I argue that trial participation allowed the participants to arrange particular forms of self-care.

Although I engaged in the method sociality and the arrangements of self-care that trial participation made possible, I clearly played a different role than the researchers. Comparatively, my interactions with the participants were characterised by another focus, less frequency, and no mutual necessity. The trust and intimacy established between the researchers and the participants were inaccessible and built upon a different kind of connection and set of practices. Sophie (a participant) hinted at this when she described her relationship with her exercise supervisor in a comment about the anthropometric examinations, "Quickly, you know, it just gets very private and very personal. You know, when you stand there with nothing on but underwear, then you've just broken all boundaries." As Sophie's comment suggests, the researchers' biomedical methods were more intimate than mine were, and they, therefore, had a different engagement with the participants than I had. In the interview, Sophie tried to describe her relationship with the

researchers by comparing it with a doctor/patient relationship. However, she pointed out that a key difference was that the researchers, in contrast to a doctor, also revealed details about themselves, which was significant to her as she could relate to them "on a personal level". As she explained:

> The doctor knows everything about you and you know nothing about the doctor. In this case, however, I know, for example, that ASG hates to run, but that she still does it because she likes to be healthy and slim, and I know she loves to eat and that she gulps down all kinds of weird things, such as candy and burgers. But she's still thin as a rake. It's just that they all have personality. That makes it really nice to come in there at the Panum Institute. (Sophie, participant)

As the quote suggests, the relationship between the researchers and participants was characterised by intimacy, friendliness, and mutual exchange of personal information about everyday living. Instead of distanced doctors, the researchers were committed to and committed themselves to the sociality needed to make it work. Instead of a doctor/patient relationship, Sophie proposed having a "really good boss", who is both "personal" and able "to take the lead" was a more fitting comparison.

Despite the differences between the researchers' and my relationship with the participants, I learned about the complex patterns of sameness and difference that drove forward the realisation of the trial protocol from day-to-day. In many ways, I was able to relate to many of the participants' stories and experiences. As a common cultural frame of reference, I could relate to their challenges of balancing work/life, exercise motivation, growing up in Denmark, taking part in association activities, and attending the Danish school and education system. At the same time, we were clearly different from each other and there were several dimensions of their lives that I could not relate to directly as a young, slim man in his 20's without children. The point is that I looked like the three trial researchers, who were all slim, young, well-educated, and dedicated exercisers (whom at least initially did not have children or families to take care of). Through my engagements with the participants, I thus gained insight into the complex patterns of difference and sameness that would have to be brought to work and how we all (the researchers, participants, and myself) in various ways profited from and inhabited each other's projects.

Analytical Work: Re-performing the Trial
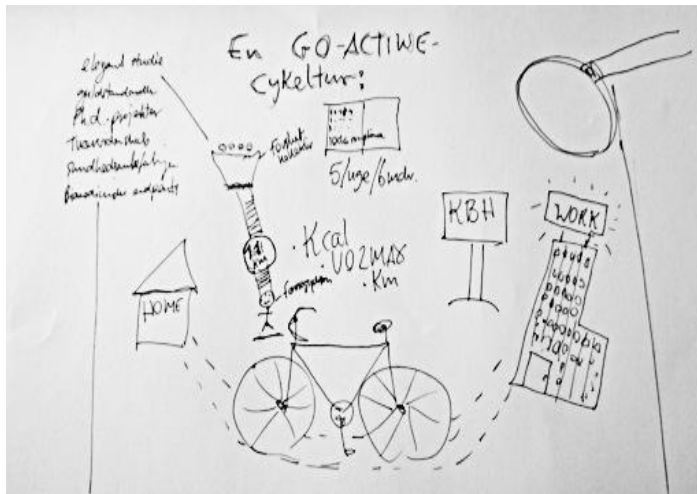
Figure 14: A GO-ACTIWE-specific cycle ride, re-performed in a sketch. Drawing by author.

As my fieldwork has not been characterised by prolonged and intensive stays "in the field", I have spent much time at my computer, on which I have tried to assemble, arrange, and re-perform the everyday life of trialling in between my engagements with the various practices of the trial. This work has been a rather messy process of developing field and head notes from scraps and from my cell phone, listening and transcribing interviews, text reading, talking to colleagues, articulating, rejecting and inventing ideas for analysis, scribbling down models of trial processes, and browsing through the trial archive, the emails, minutes and power-points that were being generated continuously. Instead of a linear process of data generation followed by analysis and writing, my project stems from an analytical process in which I have tried to perform an object of investigation into being and sharpen my research questions continuously (O'Dell & Willim, 2011).

The mundanity of what cultural analysts do at their desks—how they "do" cultural analysis—has recently received attention. One example is ethnologist Orvar Löfgren's (2014) unpacking of some the mundane routines of cultural research—writing, reading, and handling information— and their historical and material dimensions. His overall point was to highlight how changing theoretical paradigms and technologies shape research routines and how these have material effects on how cultural analysts construct research objects and analyse their materials (p. 84). Cultural researchers Celia Lury and Nina Wakeford (2012) have also highlighted the methods of social and cultural researchers and how certain 'devices' participate in the production of certain kinds of cultural analytical knowledge. In the anthology, the scholars highlight a variety of devices, ranging from material technologies, such as "tape recorders", to more conceptual devices, such as "configuration" and "experiment", and their various potentials for cultural analysis. Their overall project was to highlight how different devices were used with different effects in the study of "the happening of the

social", and how different devices offered different possibilities for exploring "the social world–its ongoingness, relationality, contingency and sensuousness" (Lury & Wakeford p. 2).

In this context, the important point that I take from these authors is that cultural analysts actively craft certain objects for analysis, and thus that cultural analysts not only perform their field, but also their objects of research in particular ways. The point is that I, like the researchers who worked with various laboratory tools, figures, and Excel tables, have used particular devices in my work of trying to write about the trial and its everyday life. Staying with the theme taken up in this chapter, in what follows I, therefore, sketch out some of the devices I have used in my unpacking of the everyday life of the trial, rather than provide technical details of methods of transcription and data coding.

A crucial analytical strategy has been to recruit the devices used by the researchers in my attempt to unpack the everyday life of trialling. In doing so, I focused on the various technologies, instruments, icons, and models that have made up the material, social, and technological fabric of the everyday life of trialling.[58] These include, for instance, the Excel tables that the researchers used to monitor the participants' compliance, the heart rate monitor that connected the participants and the researchers, the buckets and capsules that the researchers used to randomise the participants, and the flow charts and timelines that illustrated the design and structure of the trial. These devices have functioned as what ethnologists Orvar Löfgren and Billy Ehn (2006) have termed analytical 'kitchen entrances'. The idea of using the 'kitchen entrance' of culture means considering the seemingly insignificant minutiae of everyday life and how micro-processes and patterns of everyday life often index and involve larger cultural issues. Accordingly, these trial devices have allowed me to focus on the practical ways in which the trial was realised on a day-to-day basis, and the ways in which ideals of workability and elegance were made to work together and through each other in practice.

While all of the articles feature some of these devices in different ways, one example is the aforementioned Excel tables that the researchers used to organise the participants' exercise data and information regarding their trajectories in the trial. During my analytical work, I approached the "compliance table" as an ordering device that formed a nexus for knowing and intervening and as an entrance to explore the mundane practices of long-distance control and care and the orderings, categorisations, and inscriptions that connected the participants and researchers across distance. The notion of the table and its implied associations has also led me to consider what happened at other tables, such as meeting tables and how practices at these other tables related to the participants' compliance table. Appropriating the researchers' table for my analytical purposes, in

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[58] As may be apparent from this text, I have continuously attempted to include various trial-related materials, such as images and PowerPoint slides in an attempt to articulate the everyday life of trialling.

other words, allowed me to explore how control, collaboration, and intervention were 'done' in mundane trial practices.

My focus on the devices put to use in the everyday realisation of the trial has also meant that I have focused on the metaphors that the researchers and participants used. Following Marcus' (1995) suggestion to "follow the metaphor", I have tried to trace "the social correlates and groundings of association that are most clearly alive in language use and print or visual media" (p. 108). By taking up this strategy, my interest has been to explore the networks of meaning and significance they have carried and the practices they have designated and structured. As Mol (2014) has noted, "words participate in practices where they may refer to entities or activities, but they may also float around and be part of the action" (p. 95). For example, through the course of fieldwork, I have followed recurring phrases, such as "the greater whole", "meeting the participants at eye level", "being kicked up the ass", "being under surveillance", "making it work", and "the elegant study". I have used these phrases as analytical entrances to explore questions such as: What did the researchers do, when they met the participants "at eye level"? In what way was the trial a greater whole? What did the participants mean, when they said they enrolled to be "kicked up the ass"? What social relationships and distributions of power do this phrase encapsulate, what constitute their social manifestations and in particular how can such phrases be used as ways—kitchen entrances—to explore the everyday life of trialling? Appropriating the researchers and participants' material and semiotic devices has thus been a key strategy in staying with the everyday life of the trial and re-envisioning or re-articulating the social landscape of the trial throughout my engagement (Löfgren & Wilk, 2006; Marcus, 1995). Although the strategy described above has been central throughout the making of this dissertation, it is developed most fully in article four, *Self-Care in Harness.* In this article, I develop the notion of "harness" to analyse the kinds of relationship that the heart rate monitor, which had to be strapped around the waist, established between the researchers and the participants and explore the arrangements of care and control that the trial made available.

Regarding the question of language, the decision to write this dissertation in English has proved both a strenuous challenge and a fruitful analytical practice. Translations from my native tongue and the language spoken in the everyday life of the trial to English constituted a device in my analytical work. Specifically, it has compelled me to devote focused attention to how each language links certain phrases and words to certain webs of connotations and associations, and how each offers different analytical possibilities and limitations. To take the previous example, the word *table* in English refers to both furniture and a flat surface for display. Unlike the Danish word *tabel,* which refers to a system of ordering, the English word more readily invites one to connect practices of ordering with particular forms of social organisations, and more specifically, to link the compliance tables to tables in the lunchroom, Faculty Club, or my own desk, and to query how each table orders

the trial differently. In my attempt to translate the researchers' and participants' statements appropriately, I have also used dictionaries extensively, which in many cases added other layers to my analysis by offering alternative ways to unpack and re-describe the everyday life of the trial. One example is the notion of 'roadwork' (see above), which allowed me to connect the constructive and embodied dimensions of making a trial-specific exercise routine, because the word evokes associations of physical exercise, infrastructure, construction work and also links with the notion of 'routine' (Ehn & Löfgren, 2010).

Thus, the necessity and practice of continuous translation, along with the material and semiotic devices used by the trial actors, have functioned as devices for exotifying the everyday life of trialling and thereby to render it engaging and compelling as an object of ethnological investigation.

Conclusion

In this chapter, I have provided a detailed account of how I have studied the everyday life of trialling based on an understanding of stories concerning technoscience projects as performative (Law, 2002) and fieldwork as performance (Coleman & Collins, 2006). Throughout the chapter, I showed how I have been involved in different trial practices and how my project and my interests have taken shape through these engagements. The overall purpose of the chapter was to show how studying the everyday life of trialling implies taking part in the practices that the protocol prescribes and give rise to, i.e., to participate in the performance (or enactment) of the trial. The methodological approach sketched out implies a focus on methods as not only data generating devices, but also devices for generating 'the social' and a commitment to engage with the day-to-day social and material practices of realising the trial protocol.

However, a possible drawback of this approach to studying a trial is that it does not contemplate the wider societal context of trialling, e.g., the political economy surrounding particular forms of evidence and the ways in which RCT-based research form part of a wider system of modes of biopolitical control, identity, sociality, and governance. Yet, as Niewöhner et al. (2011) have argued in their study of cardiovascular disease and obesity prevention in Germany, "Situated ethnographic analyses emphasize the multiplicity of everyday practices, that is, they bring to the fore that which needs to be cut off in analyses of governmentality in order to be able to produce a coherent narrative" (p. 742). Their point is that analysing projects of disease prevention and health promotion through lenses of governmentality and other theoretical frameworks that attempt to provide broader explanations tend to lose sight of the heterogeneity and complexity of the situated ways in which contemporary health promotion works. Analysing RCTs as homogenous and homogenising

machines of power/knowledge, in other words, elides the situated socialities and mundane work practices that are involved in making a trial work at all.

With this chapter, I have emphasised the multiple practices involved in making the GO-ACTIWE trial work and thereby performed the everyday life of trialling as a field, in which biopolitical ambitions of 'Governing Obesity' and promoting healthy lifestyles are brought to live through mundane trial practices that concerns the completion of a protocol. By problematising the everyday life of trialling as an object of ethnological research, I have thus attempted to problematise trial research from within a particular trial.

In Part II, I leave my fieldwork endeavours to focus briefly on the process of writing this dissertation, my analytical choices, and issues of critique, before I present the four articles that constitute my core analytical contribution.

PART II

Trial Work: Ethnological Stories that Intervene

Ethnologists Tom O'Dell and Robert Willim have proposed to approach ethnography as a 'compositional practice' of drawing various heterogeneous bits and pieces together (O'Dell & Willim, 2011). Using the notion of composition as a metaphor, they argued that ethnographies are 'compositions' of different elements but also 'compromises' in relation to the specific networks of actors, interests and stakeholders, which have structured the ethnographic research process. As they put it, "The compositional arrangements developing out of these fieldwork contexts are immediately related to the specific assignments or commissions in which they are conducted" (p. 36). Their point is that one must acknowledge how ethnographic processes and products are shaped, structured, and bound in specific project engagements and that this influences what is included in the composition. One obvious condition, which has shaped my ethnographic compositions, is the PhD dissertation genre and more specifically the form of a paper-style dissertation, which means that this dissertation undeniably contains redundancies and that neither the chapters nor the articles address my project partners directly.

Figure 15: Cutting and pasting the trial together at my desk. Photo by author.

Additionally, my position as a member of the GO-ACTIWE project has influenced the composition of the articles. As I illustrated with bubbles in chapter 2, the project was not structured as an interdisciplinary collaboration focusing on data exchange and joint analysis. Instead, each PhD project constituted a more or less closed epistemic vacuum. However, as I suggested through the description of my fieldwork, the project bubbles burst, as it were, through social interactions in the everyday life of trialling; a set of practices that were not framed by organisational hierarchies or individual project frameworks. These interactions raise questions about how my project relates to

the other bubbles in the project and the project more broadly. In other words, what is the politics of my compositions and how do they relate to the researchers' work? An anecdote from my engagements with the researchers might provide some of the answer.

> "One person's error variance is another person's occupation"
> (Cronbach LJ. The two disciplines of scientific psychology. Am Psychol, 1957; 12:671–84.)
> The quote deals with two schools in psychology, but I think that it can also be applied to biomedicine versus ethnology in general ☺
> (Email from MB)

I received the above email from MB, after he had overheard an engaged discussion between one of the other trial researchers and me about what an intervention is. The quote, as I read it, describes how one researcher's margin of error is the interests of another. When the email popped up on my computer, I went to his office to talk to him about it. I immediately began to explain that I did not want to undermine what they were doing, but that I was simply trying to understand the logic of the RCT. Unmarked by the situation, he replied that he did not at all take my interest as a problem, but simply that the quote said something about our disciplinary differences.

I have since thought about the situation, my reaction, his answer, and what the quote says about my relations with the trial researchers. One possible analysis is that my apology was an attempt to ensure that they did not see me as a distant critic, who simply wanted to undermine their biomedical practice. His response, however, indicates that he did not perceive my investigation as such. That the researchers did not consider my project as undermining was also clear in other conversations, which over time were characterised by engaged discussions about the basic principles of the RCT. The quote and the situation, in other words, points out that we, despite our disciplinary differences and different engagements with the trial, related in ongoing discussion and that we were engaged in a relation of proximity, rather than distance. In fact, the quote suggests that I was critically interested in issues that the researchers found critical too, i.e. those issues that they would try to handle to make an elegant trial. Importantly, however, we were interested in these issues for different reasons.

Thus, the above anecdote highlights how I have tried to engage with the researchers' interests, but also how doing so has troubled me. My feeling of discomfort may be due to the dual role, or rather multiple roles, I came to assume throughout my engagement in the GO-ACTIWE project. On the one hand, I have been co-responsible for the project, both as an employee, as a colleague in a team of researchers, and as an actor in the design of the trial and the research (See chapter 1 and 2). On the other hand, I have been critically interested in the implications of the trial design; its built-in assumptions, normativities, and way of working. In addition, my continuous movement between different positions in the everyday life practices of the trial, has meant that I have engaged in the

project in several roles, from several positions, which might not always have been clear to me, nor my interlocutors. I contend, however, that a sense of collaborative discomfort and dizziness from moving about are inevitable consequences of trying to engage in what Birkbak et al. (2015) drawing on Latour has termed critical proximity. In their article, Birkbak et al. take as their starting point that cultural research increasingly happens in close collaboration with a variety of stakeholders and that this creates new forms of proximity that broaches questions about how to be critical. One of their points is that cultural analysts should try to care for the issues and critiques already embedded in the organisations, projects, and everyday lives that they engage in and that articulating these is a way to exercise critical proximity (Birkbak et al., 2015).

Throughout my project, I have sought to exercise critical proximity in relation to the issues that preoccupied the participants and the researchers and to take their work seriously. Thus, the following set of articles is my attempt to "offer commentary on the everyday" as science and technology scholars Helen Verran and Britt Ross Winthereik (2012) have put it (p. 39). Overall, my ethnological comments concern the everyday life of realising the trial protocol and how the researchers and participants tried to make it work. As Winthereik and Verran have argued (2012), one can see an ethnographic story as a guide to somewhere or something more complex:

> Ethnographic stories re-present, just like the list of contents at the front of a book, or the alphabetic index at its end; they are inherently performative, offering some sort of a guide to somewhere or something else that is infinitely more complex. Indexicality depends on positing a somewhere or something else that is real in a different manner [...]. In being indexically implicated in a here-now, an ethnographic story can be described as a generalisation. As a unified text, a narrative, it exemplifies and enacts a particular time and place (condensing it as a here-now). As indexes they foreground, background, and render some things out of the frame. (p. 40)

In the above, Winthereik and Verran describes an ethnographic story as an index in a book or a table of contents to highlight how ethnographic stories constitute orderings of the world, rather than realistic 1:1 representations. In this view, ethnographic stories are inherently partial patterns of absence and presence. Accordingly, the compositions of the four articles leave out many possible issues and practices. As such, an ethnographic story about a trial shares with a biomedical report that it is necessarily a reduction. As stories about trials 'index' what happened during the trial in one way or another way, one may ask: What are the four articles, which follows this chapter, guides to? What realities do they index?

The overall theme of the following four articles is what I have chosen to call 'trial work'. With this concept, I try to capture four different but related work practices that participated in completing the trial protocol. While the concept of trial work is a broad term, it emphasises protocol compliance as a

practical accomplishment to do with effectuating something specific to the trial every day throughout the trial period, e.g., exercise data, weight loss, good experiences, care, emails, routines, research subjects. The focus on trial work also allows one to understand the specific conditions for, assumptions, and collaborative practices involved in making a trial socially effective and robust enough to withstand the tests that being conducted beyond the laboratory inevitably imply.

As mentioned, the four articles focus on recruitment work, monitoring work, routinisation work and self-work. The decision to write about these workings instead of laboratory work, management work, data collection work, care work, data processing work, bodywork, health work, and whatever else it took to complete the trial protocol relates to three main reasons. First, my fieldwork in different ways suggested that these practices were crucial for protocol compliance. Second, these workings all relate to my (as well as my project colleagues and the participants') general interest in ideals of elegance and workability and how they are and can be made to work together in practice. Third, a focus on these work practices has allowed me to explore how a trial is made socially effective, and how everyday life is problematised in RCT-based health intervention research.

In engaging with trial work, I have made the participants and the four trial researchers into the main characters in the articles and their joint work of following the protocol into the central drama. One consequence of these decisions is that I have elided my own engagement in the trial to assume the position as an author and to treat the materials as a cultural analyst. This means that I have downplayed my own practical involvement in the trial to instead emphasise the researchers and the participants and their various ways of making the protocol work.

The following four articles thus in various ways articulate the work involved in achieving compliance with the exercise protocols through a cultural analytical work. The first article describes the work of recruiting a participant that can balance research requirements and lifestyle desires. The second article examines how the researchers work to monitor the participants at a distance. The third article unfolds three participants' work to make exercise protocol into an exercise routine in their everyday lives and the various frictions that arise in the process. The fourth article unpacks how trial participation becomes meaningful as a way to work on one self.

Like the accounts in chapter 1 and 2, each article indexes a specific version of the everyday life of trialling, and as such constitutes a problematisation of RCT-based research in everyday life.

Recruitment Tests

Participant Recruitment in an Exercise Intervention Trial in Denmark[59]

Jonas Winther, Line Hillersdal & Astrid Pernille Jespersen

Abstract

Today's public health activities rely on successful recruitment of particular groups of people to change their lifestyles according to specific trial research protocols. Health intervention research projects thus face the same challenge as many practical public health programs; namely, to recruit certain groups of people to change their 'behaviours', lifestyles or practices. In this article, we use participant recruitment to a university-based exercise research trial in Denmark as a lens to explore the complexities at play in the establishment of a relationship between a health intervention project and its target population. In so doing, we approach the notion of the "research subject", integral to trial research, as an outcome of the specific research and recruitment practices of a trial, rather than a universal rights-guaranteed or biological actor. Through close empirical descriptions, we unpack the situations making up the recruitment scheme as a series of 'tests' of the particular set of participant-trial relationships that makes up the trial subject needed for the trial. We thus take each step in the recruitment scheme to constitute a situation in which the trial and a participant's mutual relationship is at stake and probed through different methods, interventions, discourses and research practices. By unpacking each situation, we show how the trial subject is constituted through multiple relations to the trial, which in the same process emerges as a complex research practice that requires specific subjectivities to work. We argue that to acknowledge the various relations between trials and their target subjects and the various ways these relations need to be continually re-negotiated will lead to a better understanding of the social effectiveness of public health intervention trials and how such interventions come to work.

Keywords: *recruitment, trial participation, test, randomised controlled trial, health promotion*

Introduction

Concerns about obesity, physical inactivity, and cardiovascular diseases have spurred a wealth of activities that seek to promote healthy lifestyles. Health promotion campaigns and prevention strategies have therefore become a significant meeting point for public health agendas and trial-based health intervention research (Campbell et al., 2000; Craig et al., 2008; Bell, 2016). This coupling of health promotion and public health research means that a large part of contemporary public health activities relies on trial projects succeeding in recruiting particular groups of people, not only to donate tissue and sensitive information but also to change their ways of living according to specific trial protocols. Health intervention research projects thus face the same challenge as many practical public health programs; namely, to recruit participants to change their 'behaviours', lifestyles or practices. As Blue et al. (2016) have argued, recruitment constitutes a crucial dimension in projects that aim to change people's health-related practices. Criticising the reliance on psychological models of behaviour within public health, they stress that an understanding of why people engage (or not) in certain health-related activities cannot be understood through ideas about people's decisions being driven by motivations or desires alone. In particular, they suggest that increased awareness about the social dimensions and complexities of why and how certain health practices succeed or fail in "recruiting carriers" (Blue et al, 2016, p. 43) constitute a critical agenda to be taken up in public health.

In this article, we use participant recruitment to a university-based exercise research trial in Denmark as a lens to explore the complexities at play in the establishment of a relationship between a health intervention project and its target population. In so doing, we unpack participant recruitment as a particular challenge in conducting health intervention trials and the social and material practices through which individual interests and biomedical research are generated, aligned, balanced, and coordinated in practice. In particular, we ask: What practices made up the recruitment scheme and how did these practices constitute the participants as what we call trial subjects? By addressing this question, we aim to introduce the issue of recruitment into the discussion on the 'social effectiveness' of health intervention projects initiated by Hulvej Rod et al. (2014). With this concept, these authors aim to shift the attention from focusing solely on measuring the health effects of particular health interventions to consider the workings involved in their social functioning. As they argue, understanding how certain intervention projects "create, maintain, transform (or perhaps suspend) social relations" (p. 306) is crucial for understanding how health intervention projects work, rather than simply asking whether certain interventions work in improving certain health parameters.

Taking up this agenda, we work from Pool and Montgomery's argument that research populations do not pre-exist their engagements with a trial, but that they are 'enacted in concert' with the constituent research practices of the trial in question (2017, p. 10). In developing this argument, they take issue with the established notion of 'trial community' within public health research, which conveys the assumption that research populations constitute ready-made and stable social formations. Conversely, they argue for the need to acknowledge the transient character of what they term "experimental publics" and how such publics are constituted into being through the particular research practices, recruitment techniques, and procedures of a trial. They thus point to the social and material infrastructures of trial participation and the situated co-constitution of trials and their subjects.

Building on this approach, we work from the assumption that subjects, bodies, and publics are 'enacted' into being in 'sociomaterial practices' (Mol, 2002) and that their particular "form constitute an outcome of the network of relations in which they are located" (Moser & Law, 2003, p. 493). In this perspective, a research participant or a trial subject is not reducible to individual traits, authentic experiences, motivations, or a set of biological characteristics, but rather must be seen as constituted into being through interactions in social and material situations (Pols, 2005, p. 215).

Working from this perspective, we analyse each step in the recruitment scheme as a complex situation in which forging relations between participants and researchers, lifestyle change ambitions, research requirements, inclusion criteria, bodies, test procedures, care, and obligations are at stake. To stress the precariousness and the inherent uncertainty of participant recruitment, we approach each of these situations as a 'test' of particular participant-trial relationships (Berg & Akrich, 2004; Mol, 2011). With the notion of test, we aim to emphasise how participants in a health intervention project are not given, but rather a potential outcome of work to do with forging various social, material, and bodily relations. Also, the notion of test allows us to emphasise how both health intervention projects and the participants they seek to recruit are constituted into being and together through such complex tests. As Latour has put it, "It is through trials [or tests] that actors are defined" (1999, p. 311). In this light, a "trial subject" but also a "researcher", and more generally "a health intervention project" is defined through the tests that their mutual relationships undergo. By approaching each recruitment situation as a test, we aim to show how the trial subject is constituted through multiple relations to the trial project, which in the same process emerges as a manifold research enterprise that needs to establish certain relations with its participants to work. We argue that acknowledging the various relations between trials and their target subjects and the ways these relations need to be continually re-negotiated and re-articulated can lead to a better understanding of the social effectiveness of public health intervention trials.

The Trial: Recruitment Work

In the remainder of this article, we draw from our engagement in an interdisciplinary research project on physical activity as obesity prevention and health promotion at the University of Copenhagen, Denmark. The project involved biomedical and cultural researchers, whose research projects were structured around a randomised controlled trial designed to evaluate the health effects of three workable and time-reasonable ways of complying with the current health recommendation that encourages adults to exercise 30 minutes per day. The trial involved 130 healthy, physically inactive, and moderately overweight women and men aged 20-45 years, who were randomised into four six-month intervention groups: 1. moderate-intensity leisure time exercise, 2. high-intensity leisure time exercise, 3. active commuting by cycle, and 4. a control group, in which the participants did not receive an exercise intervention, until afterwards. Each exercise intervention prescribed five weekly exercise sessions, which the participants had to perform according to a standardised exercise protocol in their everyday lives. The trial was run by a group of biomedical researchers, who handled exercise supervision, recruitment, and data collection in the project laboratories on selected health parameters at three points during the intervention (See Rosenkilde et al., 2017 for full protocol description). Overall, the basic premise for the completion of the trial protocol was that it could serve both scientifically valid biomedical research aims and support a meaningful lifestyle transformation.

Our involvement in the project comprised a study of the implementation of the trial protocol (JW), a study of the collaborative processes in the project (LH) and management and coordination of the research activities in the project (APJ). Overall, our contribution to the project concerned focusing on the cultural, social, and collaborative aspects of trial implementation and lifestyle change and exercise routinisation through systematic collection of qualitative data, workshops with intervention staff, and ethnographic fieldwork among participants and researchers.

During these engagements, we took part in the ongoing discussions about the progress of the trial, during which the issue of participant recruitment presented itself as both a time-consuming task and an ongoing source of concern for the biomedical researchers. The concern in part related to the challenges of meeting the estimated number of subjects needed to meet the statistical power calculations within the timeframe of the trial. In the everyday work of trial management, this concern materialised in the researchers' painstaking counting of "contacts" with potential research participants, creations of recruitment prognosis diagrams, and anxious comments about "not achieving 'n'", "needing subjects" and their general challenges of retaining participants throughout both the recruitment scheme and the intervention period. That the researchers were in contact with 1574 people during the three-year recruitment period and that only 90 completed the intervention

period reflects not only the large exclusion rate in trial research but also the challenges of recruiting and retaining participants.

While participants had to meet a set of biomedical inclusion criteria, we learned that they also had to pass a set of more informal criteria, which related to their day-to-day participation. During the trial, the participants not only had to complete the exercise interventions, but they also had to take part in time-consuming home-based research activities and intensive laboratory tests; requiring in total around 70 hours of their time, split up in 15-20 visits to the project facilities. Due to the extent and scope of the trial, the researchers were concerned about enrolling participants that would be compliant, persistent, and committed to all parts of their participation. In the discussions about the trial progress, the relations between the trial and the participants were, therefore, key issues. Among the questions we discussed included; how to "sell the trial" to prospective participants, how to ensure the wellbeing of the participants, how to ensure their compliance, how to motivate the participants during the trial, and how to minimise the burden of research activities without compromising the scientific quality of the trial. Although many aspects of the trial design were not up for discussion, these questions reflect an interest in developing the relations between participants and the trial design and staff to improve the workability of the trial. During the trial, these discussions led to a series of adjustments. For instance, the length of the trial was reduced from 12 to 6 months to make the trial more appealing to prospective participants and to enable a longer recruitment phase within the designated project timeline. Moreover, the test program was slimmed and reorganised to minimise the burden on the participants' daily lives. Besides these structural changes, a key issue concerned the researchers' work of ensuring that the participants assumed collective responsibility, as one of the trial researchers alludes to in the following remark:

One can hope that the fact that they feel some responsibility will help them to keep going for half a year. Because if they only see it from their own point of view, in relation to what they'll get out of it, then it is easy to imagine that if we can't deliver what they expect, they might drop out... I don't know...if they haven't lost weight after three months or achieved whatever they expected when they started out. That's why I think it is important for them to get a sense of belonging to something bigger. And, that is my hope; that they get something out of it, but that they also take responsibility for the trial as a whole.

In the quote, one of the researchers suggests that the participants' motivations and expectation for lifestyle change constitute a weak foundation for completing the trial, since weight loss or body composition changes were not guaranteed results. Rather than being the core motivation, he

suggests that individual lifestyle change projects should be part of a broader commitment to the trial. In particular, he talks about "taking responsibility", "belonging" to a collective, and about not only "seeing" the world from one's own perspective, and thus articulates how participants had to be responsible, collectively self-aware, and emotionally engaged in the trial "as a whole". By referring to the trial as a "whole" and "something bigger", he suggests that how trial participation entailed an engagement that exceeded individual benefits and that the completion of the trial protocol essentially relied on the researchers succeeding in enrolling and positioning the participants in what has been called a 'sociomaterial collective' (Moreira, 2004; Jespersen et al., 2014). His cautious "hopefulness" about enrolling subjects that can balance their attachments in the various practices of the trial, however, suggests how this subject was not given in advance or an automatic effect of deciding to enrol.

In what follows, we analyse the participants' relations to the "trial as a whole" as a potential outcome of the various test situations that made up the recruitment scheme. In the analysis, we follow the five steps in the recruitment scheme, which begin with the participants' first encounter with an advertisement inviting people to sign up for the trial; to an information meeting briefing potential participants about the trial; onto a screening examination, and baseline laboratory tests; and finally to the randomisation procedure, through which the participants were allocated to the particular interventions. In so doing, our general aim is to show what the relationships and practices making up "the trial as a whole" might be and thus what hybrid network of relations that constitute a research participant.

A Note on Methods

In the article, we draw from JW's doctoral fieldwork in connection with the trial between March 2014 and May 2016, which comprised participant observation during examinations, laboratory tests, exercise sessions, and the day-to-day management of the trial at the project facilities as well as interviews with trial staff and 30 participants. As a distinct focal point in his fieldwork, JW conducted participant observation, took pictures, and produced field notes during the activities of the recruitment scheme as part of his PhD about the everyday life of a health intervention and the co-production of lifestyle change and lifestyle change research. Aiming to understand the social workings of lifestyle change initiation and participation recruitment as a social practice, we reviewed, analysed, and discussed this material in combination with the recruitment protocol, and minutes and notes from meetings among the trial researchers. Further, we draw on interviews conducted with all of the participants during the pre-randomisation phase about their everyday life organisation, participation rationales, and expectations.

In analysing and discussing this material, we mapped the different recruitment situations by focusing on the protocol, which prescribed the formal elements of the recruitment process, e.g. informed consent and inclusion criteria, the researchers' on-site care work and the participants' reflections on their enrolment in the trial and experiences of the tests. Our basic analytical strategy was to consider the recruitment scheme as a "script" that both crystallised specific roles and practices and generated practices and gestures beyond the script (Timmermans & Berg, 1997). This analytical strategy enabled us to articulate how the recruitment scheme constituted both the formal process of exclusion and inclusion and the situational process of mutual acquaintance. In addition, it enabled us to consider how the recruitment scheme involved a set of situations, in which different relations between participants, researchers, technologies, procedures, logic and discourses had to be forged, which required both researchers and participants to assume new relations to each other. These observations have led us to consider participant recruitment as a process, through which the strength of the 'trial collective' was tested.

The advertisement

> We are looking for healthy men and women for an exercise project with exercise supervision and free membership in Fitness World [A Public Gym in Denmark]. Do you want to become more physically active and receive exercise guidance for 6 months?
> (Excerpt from recruitment advertisement)

The wording above was the headline of the trial advertisement, which appeared on public notice boards, in free newspapers, and on a Danish website, where research projects are advertised. This advertisement was the key component in establishing initial contact between the trial and a potential participant, who would be interested in both research and exercise. In the advertisement, this dual agenda was evident in that it highlighted the trial as an "exercise project" and an opportunity to receive exercise supervision, free membership to a fitness centre, and detailed individual health information, and at the same time described it as a "research project", and emphasised randomisation, a control group, inclusion criteria, and remuneration.

The advertisement thus constituted a complex, exclusive and trial-specific invitation that addressed a very particular participant. Apart from having a particular "research body" (Jespersen, 2011), who met the various inclusion criteria, participants also had to be prepared to take on any of the four interventions and accept the trial-specific requirements of trial participation. Moreover, they had to acknowledge the possibility of ending up in the control group, which would not include exercise intervention or supervision until after six months. Simultaneously, volunteers also had to

be motivated to change their lifestyle, capable of following a six-month exercise program comprising five workout sessions per week and be interested in receiving physiological information about their body and health status. The advertisement thus invited volunteers to see themselves as both participants in a scientific experiment and as individuals who both needed and wanted to change their lifestyle through a rigorous exercise regimen.

Although the advertisement clearly presented the trial as a research endeavour through a university logo, and its listing of research-specific features, many participants described how they saw the advertisement as an invitation to engage in an individual lifestyle change project with weight loss, lifestyle change, and exercise routinisation as the central goals. In doing so, they simultaneously subscribed to the research aspects such as the need for monitoring and control as facilitators in their lifestyle change and the control group as an unavoidable risk. This is evident in the account of Christian,[60] a participant in his 40s, whose reflections of his encounter with the advertisement illustrate how the trial lends itself to particular forms of health-related and individual commitments and how a particular discourse of healthy living, slimness, and self-care mediated the initial contact between the trial and people.

In the interview, he explained that he had been physically active in his younger days, but that he had stopped at 25 to focus on his education and career and he had only exercised periodically since then. Christian saw the advertisement in a newspaper, while eating cake at work and it had appealed to him immediately: "When I saw the ad, I said to myself: 'Okay, that one right there is calling out to me, saying 'the time is now, buddy!'". He had been thinking about taking up exercise for a while, but he had always found some excuses not to do it, even though he knew that his current lifestyle was not healthy:

> I'm not blind! It's evident that I have started to take up more space in the landscape, and I'm bigger than I should be! And then came this project! It just spoke to me that day in the right way. I thought; it's me! This can be the famous kick up the backside to get started. (Christian, trial participant)

In the interview, he also described how he expected to be "guided into a good exercise routine", "to lose weight", and to get a "reminding kick", when he began to "slack off". Encountering the advertisement thus seemed to have prompted Christian to think about his ability to motivate himself, his body size, his unrealised plans to take up more exercise, and his hazardous course in life through a "health imperative" (Lupton, 1995) and social norms which assign attaining a healthy and slim body as central goals. His account also shows how the advertisement gave rise to expectations it

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[60] All the names used in this article are pseudonyms.

did not articulate, such as weight loss and strict monitoring and how such expectations constituted a key component in the participants' initial attachments to the trial.

Although all participants related to the trial through established discourses of healthy living, each responded to the trial in a way that was mediated by their particular life histories, exercise experiences, life situations, and individual interests. For some participants, the trial was foremost an opportunity to become more active; for others, participation was both an opportunity to contribute to research and become more physically active. Others stressed that trial participation was a good way to commit to others and that it would give them new insights into their health status.

While the advertisement constituted a key component in attracting people's attention and in creating individual expectations in ways that would make them contact the project, the researchers would simultaneously face the challenges of managing and adjusting these various commitments to the specifics of the trial. Their first challenge, however, concerned keeping in touch with people. The transient nature of people's initial connections to the trial is manifest in the recruitment statistics, which show that 382 of the 1546 people, who contacted the trial, withdrew their participation without further explanation.

The advertisement thus tested whether the basic premise of reconciling lifestyle change research and lifestyle change practice would be considered meaningful and workable for people.

The Information Meeting

The original research protocol prescribed that the researchers had to assess whether to invite people to a screening examination by reviewing the inclusion criteria over the telephone. However, poor attendance at the screening proved to be a recurring problem halfway through the recruitment period. This is evident in the fact that 126 of the 374 people invited for a screening examination did not attend. Another problem was that many of those who showed had not read the information material that had been submitted to them by email. As a way to deal with these issues, an information meeting was introduced as an additional step in the recruitment scheme. The meeting was an attempt to balance the participants' relations to the trial by underlining that trial participation comprised commitments and obligations that extended beyond individual lifestyle change projects through a detailed presentation of the trial design and its requirements. The purpose of the meetings was also to give the participants an opportunity to meet the researchers, see the facilities of the project, and meet other people who also considered participating, and thereby "give them a sense of community", as one researcher described. Postponing the meetings until at least seven people had confirmed their attendance was a part of this strategy of staging a social collective.

The ambition of inscribing the attendees' individual commitments into a larger project organisation materialised in the social and material set-up of the meeting. Upon their arrival, the attendees were seated around a table, facing one of the senior researchers, who would introduce the scientific background, design, requirements, and societal benefits of the trial through a 30-minute PowerPoint presentation. The social structure manifested in the set-up resonated in the presentation, in which the attendees were positioned as part of a project group, who had to conform to the overall design and organisational structure of the trial. Describing the details of the exercise interventions, a senior researcher communicated this condition in the following way at one meeting:

> You will also get exercise monitors. Those are both for your sake so that you can see how much you're exercising, but they are also for our sake, because you must remember to upload exercise data to us, so we can document that you are exercising the way we want you to.

As the researcher points out, the exercise offered in the advertisement is a standardised activity that would happen on the terms of the trial and under the surveillance and control of the researchers. The meeting and the presentation thus encouraged the participants to see themselves and their exercise projects within a hierarchical and already structured social organisation, comprising particular social relations, norms, and obligations.
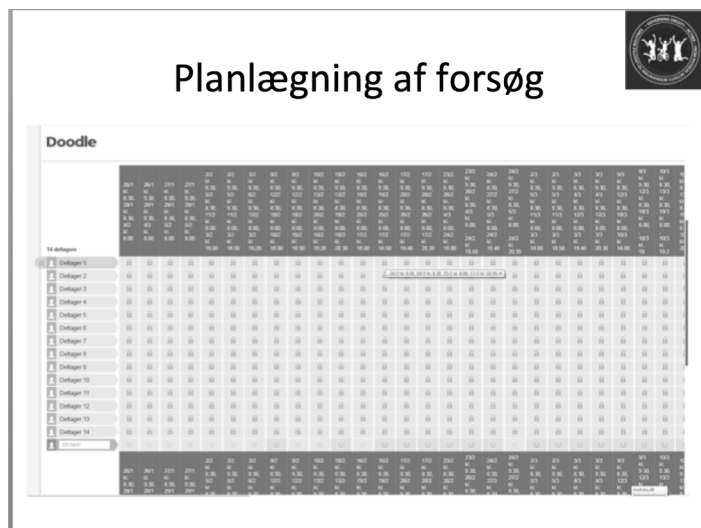
Figure 1: Slide, titled *Planning Tests* from PowerPoint presentation at the information meeting showing the test schedule.

One particular slide, titled "Planning tests" in a tangible way visualised "the trial as a whole", as "something bigger", and the positions of the participants within it, in the form of a Doodle calendar

made up of hundreds of time slots. At one meeting, a senior researcher pointed to the slide and explained:

> The logistics have to fit into our calendar – that is the calendar of the trial – and it also has to fit in with your calendar. We are very flexible, but we will be terribly disappointed if people don't tell us they are not coming. Usually, five people are ready and waiting with blood testing phials and all that, and it's a real shame if people don't show up. So, we are very flexible, but we want people to keep their appointments.

In the quote, the researcher invites the participants to imagine themselves in relation to a particular collective, comprising both laboratory equipment and a group of researchers, who have prepared for and expected their arrival. In doing so, the researcher highlights punctuality, dependability, and conscientiousness of obligations and responsibilities as core values in what the researchers looked for in a research participant. The appeal to the integrity of the attendees and their sense of collective responsibility echoed when the researchers encouraged the attendees to consider trial participation as an opportunity to become altruistic citizens by emphasising the societal value of the trial as basic research into exercise and physical activity as disease prevention.

Through these social manoeuvres at the information meetings, the participants were positioned as responsible subjects of a specific research trial, which could serve both their individual interests and the interest of society. At the same time, the meetings constituted a test of the attendees' attachments to the trial, as they were prompted to adjust their ideas about taking part in the project to a new set of terms and norms. At the meetings, the outcome of this test appeared, as attendees who could not relate and commit to the trial as it was presented 'voted with their feet' (Epstein 2008, p. 806) and quietly left the meeting after the presentation without signing up for further enrolment or explaining why. The act of signing up for a screening examination and booking a slot in the calendar of the trial, conversely, momentarily constituted the trial and the participants as a trial community, comprising a research population and a group of researchers.

The Screening Examination

Within a week, those who signed up for a screening were invited to a two-hour screening examination, which took place in a small test room. The screening comprised a scheduled series of procedures, which tested whether the attendees fitted the inclusion criteria. The first element was a conversation about the scope of trial participation that took as its starting point a picture of a timeline showing the various activities that participants had to take part in during the 6-month intervention. The purpose of the conversation was to test whether the attendee understood the scope of participation and whether participation would be workable upon further consideration. The

second element was the procedure of informed consent, in which the researchers would read aloud the research subject's rights and give the attendee an opportunity to fill out and sign the consent form, which confirmed the attendee as a trial subject with certain rights and the trial as a state authorised and ethically regulated research project.

A signature would simultaneously allow the researchers to proceed with the screening examinations, which from there focused directly on the participants' health status through a meticulous probing of whether the attendee met the formal inclusion criteria. The third element, the uptake of medical history, comprised 30 questions, which covered themes such as family disease history, mental illness, physical conditions, such as a tendency to swollen legs, and women had to provide details about their menstrual cycle, which could influence some of the biomedical measurements. The fourth element, the anthropometrical measurements, implied that the participants undressed, had their weight and height measured and their body composition scanned.

Since the researchers were aware that the actual examination could be uncomfortable, addressing the participants as subjects alongside the invasive objectification of their bodies through the examinations was an integral part of the clinical situation. They, therefore, tried to ensure that the participants did not feel like "instruments" and "to take the clinical nature out of the examinations". Hence, addressing them as people in specific life situations was a key strategy in cultivating the intersubjective relations to the participants, which would be necessary for the researcher's future compliance work. In practice, these strategies materialised in the researchers' attempts to include the bits of information that did not fit within the boxes of the formal questionnaires, and by engaging their sense of humour and personalities as active components in the examinations, as can be seen in the following field note, in which one of the researchers takes the blood pressure of a young man (Rasmus):

> As the body scanner's arm passes Rasmus' head and stops, ASG [researcher] grabs a blood pressure monitor and puts it on his left arm, while she simultaneously starts a conversation about his military background, which he had talked about in relation to his medical history. She recounts that she has been to one of the barracks that he visited while he was in the military. They exchange anecdotes about an obstacle course that ASG says she used to play on as a child. Then she switches the blood pressure monitor on and says it will take a while before she jumps back into the conversation. When the monitor stops, she says with her tongue in cheek that he has a "blood pressure like a young girl", while she writes the numbers in the journal. We laugh at her comment, and he says that on a previous occasion when he had his blood pressure taken, the doctor had thought something was wrong because it was so low, but that there is nothing wrong. ASG recounts that blood is her research interest and confirms that his blood pressure is low, especially in light of his "height and size", but emphasises that it is not dangerous and comments that it is much lower than hers. She says in jest, it is probably because she is not a particularly balanced and relaxed person and bursts out in a laugh. We all laugh. (Field note from screening)

While ticking off the boxes in the questionnaire potentially links Rasmus to the trial as an eligible body in an objective manner, the conversations spurred by the questionnaire links him to the researcher on a personal level in gestures of acquaintance. In the fieldnote, Rasmus' time in the military and a particular "obstacle course" emerges as shared points of reference, which links them together as two people with overlapping life histories. A similar connection happens, when the researcher in her routine reading and medical evaluation of Rasmus' blood pressure, without compromising her professionalism, makes a joke about the difference in their respective blood pressures. Making the clinical examinations into "positive experiences" implied nurturing meaningful relationships between the trial subjects and the researchers, alongside the required objectification of the participants' bodies in relation to the inclusion criteria.

Although the researchers did not reveal the results of the examinations to the participants during the actual procedure, the objectification of the participants' bodies constituted a crucial element in making them understand themselves as trial subjects. Commenting on the screening procedure, Mary, a participant in her 40s, explained how the series of examinations and tests had caused her to rethink her health status and self-image:

> I actually went to the screening, thinking I would be rejected. But then it turned out that the good news was that I could be part of the project. The bad news was that I was in such bad shape and so overweight that I qualified for the project. It was a bit like, Oh okay! Wake up call! [...] So, I then belong to the group of people who belong to such a project. You know, the group that you have to intervene upon because they are too unhealthy because they are at risk of dying prematurely, because they risk getting cardiovascular disease, and because they risk getting diabetes. I had not seen myself in that category... I started to think of this on my way home from the screening. (Mary, trial participant)

In the quote, Mary describes how being recognised as a suitable research subject at the screening had made her consider own health in a new light, which creates a sense of ambivalence about her participation. Mary's remark also suggests how the screening constituted a situation in which particular technologies, procedures, categorisations, could potentially interfere with the participants' self-understanding and how being enrolled in the trial as a participant, also meant being inscribed into a particular epidemiological category as a citizen at-risk of becoming sick. The built-in normativities of the trial standards and procedures, in other words, constituted potentially defining elements in the complex arrangement of entities put to test in the screening examination. More generally, the screening examination constituted a situation, in which concordance between bodies and inclusion criteria; researchers and participants, and risk categories and self-understanding were put on trial.

The Baseline Tests

Figure 2: A researcher has just performed a thigh biopsy on a participant. Photo by JW.

Based on the results of the screening, the research participants were scheduled to participate in three full test days in the project laboratory for the baseline assessment. On these test days, the participants had to put on hospital garments, lie in a hospital bed for four to six hours, and live up to their research obligations by taking part in a series of, sometimes, painful data collection procedures. In the laboratory, they had to provide blood, tissue and fat samples, fill in questionnaires, participate in interviews, undergo further body scans, and participate in fitness and dietary tests. As another configuration, the test days constituted the participants as more or less passive bodies in a sociomaterial laboratory collective, as can be seen in the following field note:

> The participant lies in a hospital bed wearing a white hospital t-shirt and shorts, and a heating pad on his arm. MB [researcher] has shaved off some hair from his thigh, cleaned the area and anaesthetised the skin covering the thigh muscle. The participant is silent. He looks focused into the roof. First MB cuts a little hole in the skin of the thigh with a scalpel after which he sticks the forceps into the hole. He asks a student to make a pressure with the syringe, which is connected to the forceps while he works the forceps into the muscle, just as another student grabs the participant's hand as he writhes in pain. A few moments later, MB gently pulls out the biopsy forceps, which contains a little piece of muscle, and gives it to a lab assistant who weighs it and places the sample into a freezer. We all cheer up the research participant, who laughs in pain. (Field note from test day)

The above excerpt shows how the body of a participant is 'opened up' for the constitution of a concrete 'collective' through the various materials, techniques, practices and gestures that go into retrieving information and samples from the participants (see also Cohn, 2016). In particular, it

shows how the participant is at once subjected to the sharp sting of the biopsy forceps and the supportive touch of the student's hand, and thus how gestures of care were key to ensure the successful enactment of the participants as laboratory bodies. However, the successful alignment of materials, bodies and procedures into a workable laboratory collective was not a given. In some cases, the researchers had to attempt to draw blood several times, just as some participants turned out to be afraid of needles or found the biopsy to be a too frightening, painful procedure. When the researchers felt that a particular procedure might turn into "a bad experience", they were careful not to carry it out:

> One of the things we usually say when a trial subject turns up in the lab is: "This is meant to be a good experience for you. So, if something is unpleasant or if you feel that we overstep your boundaries, you should tell us. Our primary goal is for you to leave here with a good feeling. For us, getting good results is second priority." We tell them this, when we begin the test day. We have to do so to ensure that they feel that what they get out of it measures up to what we put them through. This is also manifested in whether I take a muscle biopsy from them. Sometimes I even say: "Well, then we will not do it at all." (MB, trial researcher)

In the above MB talks about how the invasiveness of the procedures had to be measured against the benefits of participation. In doing so, he alludes to the inherent tension between the trial as a data generating research project and the trial as an exercise project and the concomitant tension between the participant as a 'laboratory body' and as a potential health subject. Trying to balance the experience of the laboratory and their research value through situated and embodied practices of ethics and care constituted a key strategy in maintaining the relations between the participants and the trial (See also Greenhough & Roe, 2011, p. 53).

Interviews with participants show how they also tried to coordinate their various relations to the trial. Annette, a participant in her mid-30s, for instance, explained how she "really felt like a guinea pig" at her first test day and that she was afraid of the biopsies: "I thought, hey, what's going on? It's as if they are preparing for an actual surgery!". Despite her trepidation about the tests, she did not consider not going through with the procedures. "It's just a part of it", she said and explained how she saw the various tests and measurements as a necessary element of her participation, which for her concerned lifestyle change: "Well, this is a kick start to the new me. It's the kick I need to move forward." Annette's reflections exemplify how many participants considered the test days and the obligation to make their bodies available for laboratory procedures as a necessary evil or a kind of 'obligatory passage point' (Callon, 1984) which they had to pass to potentially become a physically active person, promised by the trial in the advertisement. The realisation of the trial as a research project and the associated enactment of the participants as laboratory bodies and the trial as a data

generating laboratory collective thus relied on the participants and researchers keeping the relationship between the participants as exercise subjects and the trial as an exercise project meaningful and relevant throughout.

As another social and material situation, the test days in the laboratory tested whether the participants' bodies could be included in the laboratory and whether the participants would be able to reconcile being a laboratory body and potentially becoming a health subject. Additionally, the recruitment statistics show that 45 participants withdrew their consent before the test days and that eight participants opted out during the test days, which suggests how the test days not only constituted a situation in which the researchers tested the participants' bodies, but that they also made up situations in which the participants' commitment to the project was put to the test.

Randomisation

The last step in the recruitment scheme, the randomisation procedure, constituted another precarious situation, in which relations between the trial and the participants were tested through the disclosing of the participants' location into one of the four intervention groups. Although the randomisation was essential for the methodological validity of the trial, the procedure was also a source of uncertainty, because the outcome could jeopardise the relations that had been established between the participants and the project, in the case that a participant could not accept the outcome. As a way to handle the inevitable uncertainty of the randomisation procedures, they were carried out as old-fashioned lotteries, in which the participants drew a lot for themselves out of a bucket. The rationale was that the participants by taking part in their group placement would find it easier to accept the outcome. While the rudimentary lottery did not mitigate the ruthlessness of chance, the procedure made up yet another situation, in which the researchers and participants would meet face-to-face. This provided the researchers with an opportunity to influence the participants by reminding them of their relations to the trial, as can be seen in the following field note, which describes the randomisation of Karen, a young woman in her mid-20s:

> After we have sat down in a circle of three chairs in the office, JSQ [researcher] asks how it is going with her arm, upon which he had attempted to draw blood seven times during one of the test days. Karen responds by saying it is doing better and that her usual colour is returning, and smiles. Then JSQ asks about her motivation to take part. She wants to start exercising and get healthy. She says she really wants to be in the high-intensity group, as her heart rate increases easily. She also describes she was bullied as a child and that she associates her body with something negative, and that she, therefore, would really like to exercise. JSQ nods in an understanding manner before he explains about the trial: the randomisation, the different groups, the exercise guidance and the control group. She nods. She understands: "I just want to know which group I end up in". (Field note from randomisation)

The above shows how the researchers' questioning makes Karen re-articulate her various relations to the trial. In particular, the conversation articulates that she has taken part in laboratory procedures, which have caused a bruised arm; that she is eager to start exercising, that she has a strong intervention group preference, that she has personally invested in the trial, and that she understands the scientific principles of the trial. The disclosure thus constituted a crucial moment, in which the durability and flexibility of these relations were put to the test:

> JSQ holds out the yellow container with capsules, and they roll closer to each other on their office chairs. She digs around in the container and grabs a capsule. "I bet I've drawn the control group". She opens the capsule and reads the note out loud: 'Moderate woman'. JSQ and I react more than she does because she has drawn an activity group and did not draw the control group. We smile, congratulate her and repeat that it is "great". She is clearly disappointed. JSQ quickly tells her that there are also health effects associated with moderate-intensity and that for some people, it is better to be in the moderate-intensity group because it is easier after a period of physical inactivity and that there is a risk of burning out with five high-intensity exercise sessions per week. (Field note from randomisation)

As is apparent, the randomisation constitutes a precarious situation for both parties, both of whom have stakes in a satisfying, or at least acceptable, outcome. Since the disclosure in an instant would reveal if the participants' hopes would be fulfilled, it also constituted a critical moment for the researchers to engage actively in getting the participants to accept their group placement and assume the particular relation to the trial, which would drive the project forward for the next six months. In the above, both researchers try to counter the demoralising result of the lottery by encouraging Karen to accept her group placement through a kind of celebration and a professional approval of the benefits of moderate-intensity exercise. In some cases, particularly those in which the participants ended up in the control group, the randomisation outcome would cause people to break down, which points to the intensity of the situation and what was at stake for the participants. The situation also constitutes an example of how the built-in logics and procedures of the trial continuously challenged the constitution of the trial collective, whose maintenance, in part, depended on the researchers' abilities to handle the participants' emotional engagements and re-establish the social orders on-site.

Discussion

As a distinct form of research, RCT-based health intervention forms a nexus, in which research activities, intervention practices, and concrete lifestyle change projects must be aligned to enable the

production of evidence. As such, this form of research depends on solving the challenge of recruiting people to change their lifestyle that public health faces. Although RCT-based intervention research constitutes an intervention form that can hardly be generalised to practice, we contend that our analysis points to the complexity of recruitment in health intervention projects more generally by showing how recruiting people to change their lifestyle constitutes a fragile affair, challenged by many potentially unsuccessful tests.

At the same time, our study suggests that RCTs gain their 'social effectiveness' because of the multiple relations that are forged and which are tested in their constitution. In other words, the relations between the intervention project and the intervention subject are strengthened through tests. As Latour has described, "Strength does not come from concentration, purity and unity, but from dissemination, heterogeneity and the careful plaiting of weak ties" (Latour, 1996, p. 2). In this case, some of the 'heterogeneous strength' that Latour highlights can be said to relate to the mix of research and lifestyle change and the many "weak ties" that need to be forged for these two projects to work together. In particular, our analysis showed that the participants were not only recruited for a specific and circumscribed "health intervention", but rather to a complex and binding commitment to a project involving several responsibilities, tasks, and subjectivities. In the analysis, we highlighted how each of the recruitment situations tested a particular set of subject-trial-relations that implied the multiplication of the participants as 'health subjects', 'responsible members of a research project (and society)', 'individual research subjects in a health research project', 'members of an at-risk group', 'bodies in a laboratory', and 'subjects in a trial-specific intervention group'. Establishing, developing, and continuously recreating this social, bodily, and material order or "whole" was a prerequisite for the researcher to produce valid data and for the participants to change their lifestyle.

Considering this co-production of a health intervention and a target population, our analysis thus points to a disconnect between the rational, autonomous and, abstract (health) subjects addressed in many health recommendations and public health projects (Mol, 2008; Halkier & Jensen, 2011), and the research-specific subjects that are recruited and adapted to the research endeavours that underpins this public health project. A possible implication of our analyses is that responsibility for lifestyle change and healthy living can hardly be placed on the individual, but rather on the social and material relationships that drive processes of lifestyle change (Jespersen et al., 2014). In particular, our analysis draws attention to the social and material infrastructures that make up the recruitment schemes that drive lifestyle change processes and more general health participation. Articulating the multiple relations between health intervention projects and their target subjects and the work of maintaining these relationships is thus a crucial step in grasping how health

intervention projects become socially (in)effective, and, in particular, how people's everyday lives inevitably will test both intervention projects, lifestyle change projects, and their complex relations.

Proper Vision

Compliance Work at a Distance in a Randomised Controlled Trial in Denmark[61]

Jonas Winther

Abstract

Today, the ambition to control and observe all aspects of a biomedical experiment has been honed in the methodology of the randomised controlled trial (RCT). However, the increased focus on conducting trials in the "real world", rather than in the laboratory, to produce more societally relevant forms of evidence creates a challenging situation, in which trial researchers must find ways to monitor, oversee, and control their trials in contexts that do not provide the same regulatory possibilities as a laboratory. This article explores how a group of researchers in an exercise trial in Denmark tried to ensure participant compliance with the protocol at a distance. Focusing on their day-to-day work, the article shows how data tables, in combination with heart rate monitors, telephones, email correspondence, and exercise guidance, formed an "apparatus of visual production" that allowed the researchers to see, know, and engage with the participants and their compliance at a distance in various ways. The article describes the RCT, not as a powerful governmental socio-technical apparatus, but as a fragile, situated, and fundamentally challenged control set-up. When conducted in people's ongoing everyday lives, trial control depends on researchers' challenging work to create what can be understood as a panoptic effect; a differentiated and differentiating gaze.

Keywords: *control, compliance, randomised controlled trial, public health intervention research*

Introduction

"Of course, it would be much easier if we could just lock up the participants in the laboratory". The head researcher of an exercise trial in Denmark spoke these words in frustration over a group of participants' failure to comply with protocol. The fundamental challenge that the researchers faced was that the participants had to follow a standardised exercise protocol to the letter in their everyday lives, which was far outside the researchers' field of vision and control. That the researcher, even in jest, suggested incarceration as a solution to the problem of participant compliance is not surprising, considering that prisons have historically been a preferred site for conducting experiments on humans (Foucault, [1977], 1995; Hornblum, 1997; Walby & Cooper, 2014, p. 120). The apparent advantage of using prisons as laboratories was that they provided researchers with environments that could be controlled and manipulated according to specific interests, as well as readily available, cheap, and confined groups of people with a uniform and controllable lifestyle, who were often stratified according to race and class (Petryna, 2009, p. 61-66). For similar reasons, Michel Foucault highlighted the prison as a laboratory in his book, *Discipline and Punish* (Foucault, [1977], 1995). In the book, he focused specifically on 18th-century philosopher Jeremy Bentham's concept of the "Panopticon", a prison building with a tower in the middle from which all inmates could be observed without seeing the observer. The goal was to present an analysis of the emergence of a new political anatomy in which objectification and discipline of the individual through surveillance replaced the physical torture and punishment of the Middle Ages. By highlighting the potential for systematic mapping, classification, and observation, Foucault described the panopticon as "a machine to carry out experiments, to alter behaviour, to train or correct individuals, to experiment with medicines and monitor their effects" (Foucault, [1977], 1995, p. 203). Pointing to a connection between vision and control, Foucault thus emphasised how the panopticon—the all-seeing eye—enabled both objective observation and powerful intervention.

Today, the ambition to control, manage, and observe all aspects of an experiment has been honed in the methodology of the randomised controlled trial (RCT), which comprises a scientific method based on a range of principles, procedures, and mechanisms designed to regulate vision and make things visible in particular ways. For example, the aim of blinding and randomisation procedures is to eliminate both researchers' and participants' subjective opinions and thereby their ability to skew an experiment in a particular direction. Other ways of regulating vision comprise strict requirements of documentation and monitoring of trial procedures, including the actions of participants and researchers, to facilitate "internal control" and create the possibility of "external" inspection, review, and oversight. In light of these features, the RCT can be said to constitute a scientific procedure that aspires to an ideal of panopticism through the creation of complete experimental overview and

control. Indeed, in one textbook on clinical trials, the first principle of good clinical practices (GCP) is that "…you must maintain control of the study at all times" (Chin and Lee, [1996] 2008, p. 249).

However, new ideas from the field of public health research challenge this ambition of control and overview when conducting RCTs. Within this field, researchers now focus on addressing the complexity of various health interventions by conducting trials in the "real world", rather than in the laboratory, with the aim of producing more societally relevant forms of evidence for public health policy (Campbell et al., 2000; Craig et al., 2008). Yet, despite these ideas, the RCT still ranks as the "gold standard" method to produce evidence about what works. This means, among other things, that the requirement for researchers to be in control of the experiment "at all times" still applies as an experimental ideal. This creates a challenging and paradoxical situation, in which trial researchers must find ways to monitor, oversee, and control their trials in contexts that do not provide the same regulatory possibilities as a laboratory.

The researchers discussed in the introduction of this article found themselves in such a situation in their attempt to conduct a controlled exercise trial in the everyday lives of a group of Danish citizens. To be specific, the challenge of exerting panoptic control over the progress of the trial and ensuring participants' compliance was materialised in their confinement in a small office in a concrete university building and in their modest collection of monitoring tools, which comprised heart rate monitors, data tables, telephones, and computers. In this article, I thus focus on the classic problem of long-distance control (Law, 1984), or governance at a distance (Rose & Miller 1992), and how the researchers', against the odds, achieved what I term a "panoptic effect" to ensure participant compliance and control the trial.

In addressing this question, I add to recent ethnographic studies on how trials are performed and controlled "in the wild". For instance, anthropologist Charlotte Brives (2016) has shown how researchers in an HIV prevention program in Burkina Faso evaluated the efficacy of a pill and attempted to standardise participants' behaviours, their interactions with the study and its elements, and their home environments through specific trial procedures. Pointing to the scope of standardisation, Brives suggested an understanding of pills, not as distinct units, but as "biomedical packages" that comprise the relational requirements of their efficacy (Brives, 2016, p. 22). The powerful effects of the requirements of standardisation led Brives to describe the RCT as a "tool for governmentality". Another example is Bijker et al.'s (2016) study of a controlled malaria infection trial in the Netherlands, in which the authors argued that experimental control depended on different forms of trust—trust in persons, trust in machines, and trust in institutions—and that trust and control "work in tandem" by constituting each other mutually. This mechanism, they argued, enabled researchers to gain control over the progress of the trial (Bijker et al., 2016, p. 26).

What characterises both studies is a focus on the social, technological, and material practices through which trials extend across spaces beyond the confines of the laboratory. Following classic tenets within the field of science and technology studies, they showed how trial researchers build robust and effective social and material networks to gain control over their experiments and to produce certain kinds of knowledge. In doing so, both studies portray the RCT as a resourceful, effective, and standardising experimental apparatus, whose effects and control go far beyond the relationships and entities within the focus of the experiment. Adding to this literature, this article makes two contributions. First, the article offers detailed insight into the mundane practices and technologies through which trial researchers attempt to monitor the compliance of participants. Second, it brings to light some of the challenges of conducting health intervention trials in people's everyday lives by unpacking how logics of control and standardisation fall short in contexts that do not operate according to the presumptions of the protocol and by highlighting researchers' work of to mitigate these shortcomings. On a general level, the article describes the RCT, not as a powerful governmental socio-technical apparatus, but as a fragile, situated, and fundamentally challenged control set-up in its encounter with people's ongoing, everyday lives, whose ability to control depends on the difficult and committed work of researchers to create what I term a *panoptic effect*.

The article continues as follows. First, I provide a brief description of the trial and my fieldwork in the researchers' office, from where they attempted to monitor the participants' compliance with the protocol. Next, I draw from Bruno Latour's concept of the "oligopticon" and Donna Haraway's ideas about "apparatuses of visual production" to unpack the researchers' monitoring set-up. Third, I provide an empirical analysis of the researchers' work to monitor the participants and ensure their compliance at a distance, after which I discuss the main findings.

A Trial of Healthy Routines in Everyday Life

In the article, I draw from my engagement in an interdisciplinary research project on physical activity as obesity prevention and health promotion at the University of Copenhagen, Denmark. The project involved biomedical and cultural researchers, whose research projects were structured around a randomised controlled trial designed to evaluate the health effects of three workable and time-reasonable ways of complying with the current health recommendation that encourages adults to exercise 30 minutes per day, with the aim of informing future public health recommendations. To this end, the trial involved 130 healthy, inactive, and moderately overweight men and women from the greater Copenhagen area in Denmark, who were randomised to a control group or one of three exercise interventions: 1. active commuting by cycle, 2. moderate-intensity exercise, 3. high-intensity exercise. Each exercise intervention prescribed five exercise sessions per week for six months. Along with extensive biomedical tests at the beginning of the trial and after three and six

months, the scientific hypotheses of the trial required the participants to be fully compliant and follow the exercise protocol to the letter for the entire period by expending exactly 320 (women) or 420 (men) calories at a set heart rate level during each exercise session (see Rosenkilde et al. 2017 for full trial protocol).

While the aim of full participant compliance is usually pursued only in strict, controlled laboratory trials, the stated rationale in this trial was that the city of Copenhagen would serve as the "perfect model" for a trial of active commuting and leisure-time exercise, due to its cycle-friendly infrastructure and abundance of public gyms. To further support the completion of the trial, the project provided cycles, gym memberships, and personal exercise guidance. The researchers also provided the participants with heart rate monitors so they could monitor themselves according to protocol and, importantly, report data to researchers by uploading it to an online profile. Thus, the basic idea was that the research team's central position at a university in the centre of cycle-friendly Copenhagen, with easy access to gyms and recreational areas, in conjunction with the use of heart rate monitors as a monitoring technology, would provide optimal conditions to test and evaluate the exact health effects of different forms of exercise. Despite these measures, controlling the progress of the trial and ensuring participant compliance from the Panum Institute was a challenge.

Between March 2014 and May 2016, I followed the four trial researchers at work to ensure that participants complied with the exercise protocol as part of my doctorial fieldwork concerning the practical implementation of an RCT protocol. Following Bruno Latour's methodological tenet of "following researchers in action" (1987), I took part in and observed the daily running and management of the trial. This included helping during biomedical testing in the laboratory, participating in recruitment and enrolment activities, and supporting the researchers with various clerical tasks involved in the daily practice of running the trial. Over a six-month period, I took part in and followed the researchers' work in the office. In so doing, I participated in daily discussions about the progress of the trial and assisted with various management tasks such as answering project-related email and documenting the exercise data received from participants. During the fieldwork, I learned that the participants' everyday lives, over which the researchers and participants had little control, variously challenged the goal of laboratory-like compliance upon which the trial design was built. Although the exercise protocol was developed to ensure workability, the researchers and participants had to work together to implement it. This meant that the researchers, who were responsible for an exercise group each, had to work continuously to maintain contact with the participants and help them routinise the exercise protocol, while simultaneously controlling and ensuring perfect compliance. In the following, I discuss further how they managed to achieve this at a distance.

The View from the Office

Figure 1: Two researchers monitoring participants' compliance.

During the course of the intervention, the four researchers [ASG, MB, JSQ, MRL] spent a significant amount of time on their computers in a small office furnished with four desks. Each desk was equipped with a mobile phone and a computer with access to the data archive and tables, as well as an email account used for the project. In many ways, the researchers' office was more reminiscent of Mrs. Baysal's office, which Bruno Latour and Emilie Hermant described in their book, Paris: Invisible City (2006), than of the architecture of the panopticon, analysed by Foucault. Mrs. Baysal's office is one of several examples of what Latour and Hermant called an oligopticon. In the book, they authors described how Mrs. Baysal plans and coordinates lectures at a university from her office even though she cannot see the students, lecturers, or lecture rooms. However, she is able to create an overview, plan, and coordinate lectures because the university's lecture rooms, lecturers, and students are transformed into "inscriptions", which she can organise and order into notice boards and schedules. In this way, she can "see" the university, lecturers, and students "synoptically", as Latour and Hermant put it. However, she can only control it to the extent that the various inscriptions match each other. In other words, without room numbers and overviews, teaching schedules, lists of lecturers' names, and so on, planning the lectures would be an impossible feat for Mrs Baysal. In fact, a prerequisite for Mrs. Baysal to do her job is that she cannot and does not attempt to see everything, but that she only sees that which she needs to see and that she sees this well. If she were to try to gain a complete overview, her own perspective would limit her. Thus, the overview that Mrs. Baysal has and creates in the office is a particular type of overview: it is partial, limited, and situated. Unlike the panopticon, which ideally sees everything, the oligopticon "sees very little very

well". As Latour put it: "From oligoptica, sturdy but extremely narrow views of the (connected) whole are made possible—as long as connections hold" (Latour, 2005, p. 181).

With the concept of the oligopticon, Latour and Hermant thus described a different form of surveillance than the panopticism of Foucault. They focused on surveillance as a sociomaterial and socio-technical accomplishment, which, in Mrs. Baysal's case, relies, among other things, on her ability to make different elements work together. In the oligopticon, the overview is incomplete and made up of extremely specific and local linkages and in need of continuous tinkering. For this reason, an oligopticon is also fragile, because, as Latour puts it: "the tiniest bug can blind oligoptica" (Latour, 2005, p. 181).

Latour and Hermants' work on the oligopticon and the socio-technical complexity of vision, resonates with Donna Haraway's work and her insistence that vision is situated in a particular apparatus. In her seminal essay, *Situated Knowledges* (1988), she argued that all vision is always situated "somewhere-in-particular" (Haraway, 1988, p. 590), in a particular body, or in what she termed a particular "apparatus of visual production" (Haraway, 1988, p. 589), whose physical and social position delimits what can be seen and made intelligible. The knowing subject, as Haraway posited, is constituted by constructed bodies that perceive, interpret, and value the world from their particular and partial perspectives. In making this argument, she rejected the possibility of positioning oneself "outside" the world and looking at phenomena in a detached, neutral, and objective manner. While this move is physically impossible, she argued that the rhetorical exercise of detaching oneself from the world—the God trick—is also politically dubious. Elsewhere, she has discussed the notion of the "modest witness" as an embodiment of this God's eye vision from nowhere. According to Haraway, the modest witness is the purportedly "neutral observer", who, free of bias and self-interest and without intervening, confirms that an experiment or scientific observation about nature is in fact true. In Haraway's words:

> He [the modest witness] bears witness: he is objective; he guarantees the clarity and purity of objects. His subjectivity is his objectivity. His narratives have a magical power—they lose all trace of their history as stories, as the result of partisan projects, as contestable representations, or as constructed documents in their potent capacity to define the facts (Haraway, 1997, p. 24).

While trial researchers may strive to erase positionality and subjectivity (Adams, 2013) when writing their final report, their vision and ability to control and monitor the progress of a trial is deeply situated in their bodies, knowledge, positions, set-up, and tools; their "apparatus of visual production". Like Mrs. Baysal's set-up, the researchers' set-up were mundane and simple, comprising a telephone, a computer with access to an email account, heart rate monitors, and what they termed "compliance tables". Equipped with these technologies, the researchers' main interest during the

trial was to make visible the participant and their compliance in the office to enhance the possibility of controlling the progress of the trial and achieving laboratory-like control in their everyday lives.

The compliance tables constituted the central element of the set-up by allowing the researchers to gather and arrange the various information they regularly received from participants to create an overview through analysis and ordering, thereby providing a basis for knowledge and intervention. As Foucault noted, the table constitutes a technology that, by providing a plane, "enables thought to operate upon the entities of our world, to put them in order, to divide them into classes, to group them according to names that designate their similarities and their differences" (Foucault, 1966, 2002, p. *xix*). By making it possible to gather and compare heterogeneous elements on one plane and thereby create a space for observation and analysis, the table establishes both "new forms of visibility" and new relationships between the seen and the seer (Law, 2002, p. 18-20).

In the following, I analyse the kinds of visibility, intervention, and relationships with the participants that the researchers' office set-up allowed. My main argument is that the researchers' "apparatus of visual production", rather than being an all-seeing eye and normalising panopticon, was a fragile system working through a panel of ways to make visible and intervene in the participants and their compliance, possibly creating a panoptic effect.

Counting Heartbeats and Calories

> A prerequisite for making any statements about the effect of a biomedical intervention, in this case an exercise intervention, is that the subjects actually go through the intervention in the way described in the protocol. Exercise compliance is a "hardcore" numerical measure of how good a subject is at following the exercise regime in regard to energy expenditure and intensity.
> (MB, researcher).

As one of the researchers in the trial, MB62, described, a critical goal during the intervention to make causal conclusions about the health effect of exercise in everyday life was that the participants followed the exercise protocols to the letter and that the researchers received data to prove that this was indeed the case. Therefore, the participants' "compliance tables" were on permanent display on the researchers' computer screens during the intervention phase. Built in Excel, the table comprised two main sections: one dedicated to the exercise data and the other to notes from telephone conversations and email correspondence as well as information about the participants' progress.

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62 All the names used in this article are acronyms.
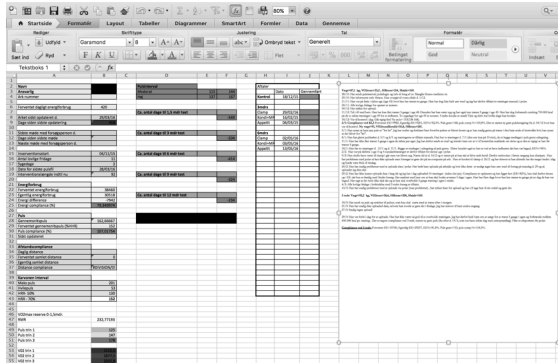
Figure 2: the numerical section to the left, the notes section to the right. Screenshot by author.

The numerical section was linked to the heart rate monitors, which cut directly through everyday life into the participants' physiology (i.e., their heartbeat and energy consumption). As an "inscription device" (Latour, 1999), the heart rate monitor "translated" the participants' exercise sessions into numbers included in the rigid matrix of the tables displaying compliance average in a colour scale ranging from red to yellow to green. Through this procedure, what might have been a ride with a headwind on a cycle with flat tyres in rush-hour traffic became visible as two percentage figures, one showing average energy compliance and one indicating average heart rate compliance. This process of isolation and translation enabled the researchers to keep meticulous accounts of the participants' progress and exercise compliance, both of which were represented in the tables as acronyms and numbers, and thereby to standardise the exercise intervention. Thus, as a crucial ordering device in their set-up, the tables and heart rate monitors configured participants as enumerable physiological systems and researchers as a sort of accountants of heartbeats and calories.

The heart rate monitors and the tables also allowed the researchers to intervene by micromanaging participants' compliance, by instructing them to increase or decrease their energy consumption or pulse level or to add or skip exercise sessions and thereby keep the numbers in the green zone at 100%. In that sense, the heart rate monitors functioned both as a "deep vision" into the participants' bodies and as a technology for their detailed management. At the same time, the researchers' pedantic monitoring was a component of care. Many participants enrolled in the trial because of the requirement of control and the possibility of being monitored and continuously checked by the researchers in accordance with a set of rigid exercise standards. As an additional feature of the set-up, the heart rate monitors enabled the organisation of a division of the labour, structured around the participants' exercise compliance and the researchers' control-based care. In practice, the researchers maintained this relationship by sending emails to the participants in response to their uploaded data. Their flexible and irregular working hours as PhD students meant that they did not send emails to the participants at scheduled times, but rather on an ad hoc basis at varying times, including on weekends, evenings, and public holidays. A consequence of the irregularity and

unpredictability of their responses was a sort of "panoptic effect". As one researcher described: "Thus, it creates the illusion that we are there whenever needed".

However, the complex system of accountability, control, and care that the table and the heart rate monitors enabled was prone to breakdowns. Several of what Latour called "bugs", (i.e., faults or glitches in the system), prevented the researchers from seeing the correct data in the tables. Participants sometimes left their heart rate monitor at home by accident, forgot to stop the monitor when they had finished their exercise, or failed to follow the protocol during their exercise sessions. In some cases, the heart rate monitors broke or were not programmed correctly. Furthermore, participants sometimes failed to exercise for a variety of reasons, including injury, accident, illness, lack of motivation, or changes to their life situation that made exercise according to the protocol difficult. While all of these contingencies influenced the possibility of getting "good-looking numbers", the heart rate monitors could not make these circumstances visible, since the ability to see "very little, very well" depended on the discrimination of such conditions. The notes section of the table was thus crucial:

> I could just settle with this area (points at the column with numbers). Then I would have data showing how compliant the participants are in terms of the energy and pulse. I could just report these figures and then show their effect on a wide range of parameters. But this (pointing to the column with notes) is a tool that enables us to understand what's going on over here (pointing back at the numbers). In other words, it lets us understand why this, as an example, is only 90%, when it was supposed to be 100 %. If it's 90 % over here, then I am not happy. Therefore, I need this column (pointing at the column with notes) to understand, why it is only 90. (JSQ, researcher)

In the above, the researcher alludes to the difference between what Latour has called "ready-made science" (i.e., hardcore facts) and science-in-action (i.e., the social and material work of producing hardcore facts) (Latour, 1987). Although the researchers were ultimately interested only in the hardcore numerical data assembled in the numbers section, they needed the notes section to intervene in their genesis and standardisation. In practice, the notes section allowed the researchers to create an overview of the latest events and engage with the participants' non-compliance by calling or emailing to solve the problem (e.g., to find out why the numerical section was showing 90% and not 100%).

21	**Energiforbrug**	
22	Forventet energiforbrug	41460
23	Egentlig energiforbrug	33865
24	Energi difference	-7595
25	Energi compliance (%)	81,681138
26		
27	**Puls**	
28	Gennemsnitspuls	161,45455
29	Forventet gennemsnitspuls (%HHR)	152
30	Puls compliance (%)	106,2201
31	Sidst opdateret	

Figure 3: Screenshot of compliance table. An orange number on the bottom line of one participant's compliance table. Screenshot by author.

Everyday Life Coaching and Tinkering with the Mechanisms of Everyday Life

In addition to continuously updating the tables with exercise data, the researchers' spent much of their time trying to maintain contact with participants via email or telephone. In doing so, the researchers attempted to "keep the participants going" through motivational talks and emails and, in case of poor compliance, gain insight into why the exercise data were lacking or did not "look good" and what could be done to improve compliance. Unlike the heart rate monitors and tables, which configured the participants as isolated bodies, the telephone conversations and email correspondence configured the participants as individual people with everyday lives and exercise challenges:

> We correspond with the participants on the telephone or through email, and we actually do it in a very straightforward way, or how do you say it… it is very…well, it depends on what person we are dealing with. Actually, they are not at all similar. You know, according to the protocol, we just have to get some data out of them, but ultimately, we really get to know these people. For example, then one participant cycles into a street light, then somebody falls into a hole in the ground, then someone is about to become a father, then someone got a new job, and then someone lost their job. All sorts of things might make it hard for them to exercise. Accordingly, we obtain all kinds of odd information about their everyday lives. Things you didn't really expect. (ASG, researcher)

As described above, the telephone conversations and email correspondence enabled the researchers to contextualise the participants' exercise in relation to significant life events, injuries, and accidents, as well as more intimate circumstances in their family and private lives. These communications thus made it clear how what one researcher described as the "chaos of everyday life" constantly tested the participants' compliance with the exercise protocol and by consequence the researchers' chances of controlling the progress of the trial. The particularity of the communications and the way in which the participants made themselves visible to the researchers is apparent in the following email that a participant sent to MB, who forwarded the email to me during the intervention period with the headline, "News from the front line":

[...] Today, my motivation was virtually non-existent. I came home this morning and had to pump up my tire since I still can't find the hole after several attempts. It was blowing a gale outside (or perhaps just a stiff wind). After around 2 km, I could feel that there was not much air left (in me or the tire). Because harvested fields were my only shelter, I battled on with my semi-flat tire and realised that it was time to check the heart rate monitor. So, I did, and nothing happened! [It was broken] F***! And it was at this point that I thought that this type of exercise is simply NOT my cup of tea. [...] (Excerpt of an email from participant Karin[63])

While emails such as the above provided the researchers with insights into things beyond both their and the participants' influence and how people's everyday lives rarely provided optimum conditions for lab-like control, the communications simultaneously created a space for interventions to improve compliance. However, unlike what other exercise supervisors might do, the researchers' exercise supervision did not include adapting the protocol according to the barriers and potential in the participants' daily lives. Rather, the goal was to adapt the participants' everyday lives to enable them to burn 320 or 420 calories five times per week for six months. In the following, MB describes an example of how he had to "tinker with the mechanisms of their everyday life" to find "solutions" that were appropriate to both him and the participant:

For example, I had one [participant] who lives in Copenhagen but works in Hillerød [50 kilometres north of Copenhagen]. We planned that he would cycle some of the way. So, he took the train to a station near Hillerød, got off, and cycled the rest of the way. But then he sent an mail where he said that he couldn't do that. The train tickets were too expensive! Then I needed to find out what he could do instead. You would probably expect that he could figure that out himself, but his economic situation simply did not allow him to do it. It turned out that he usually commutes by car, so we planned that he could park his car a couple of kilometres from work and then cycle the rest of the way. However, this is not something they think about themselves. I have to tell them! (MB, researcher)

Finding "solutions" involved identifying the various elements of everyday life that could be relevant in diagnosing and resolving "compliance problems" and on this basis, testing different solutions for mutual workability. As apparent in the above quote, the solutions were not the most obvious or solutions that would naturally occur to participants. Reflecting on his work, the same researcher described how these situations turned him into a particular kind of researcher: "I become like an everyday life coach to them". The everyday life he had to coach the participants to lead was a trial-specific everyday life, in which the participants would comply with the protocol in a way that was workable for them and rigid enough to provide the researchers with "good data". This tinkering work included, for example, drawing bicycle routes for the participants and inventing exercise routines

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[63] All names are pseudonyms.

that approximated the protocol if full compliance was not possible. In addition to attempting to make more profound organisational changes in participants' everyday lives, tinkering also concerned fixing cycles (e.g., adjusting handlebars and saddles), making special arrangement regarding vacations, and providing participants with stretching exercises.

While crucial to the researchers' control, the possibility of 'everyday life coaching at a distance' was not given. One problem was that the participants were not "equally good at keeping in touch" or as detailed in their descriptions as Karin. Further, the researchers' relationships with the participants differed significantly. Some participants preferred to have a lot of contact with the researchers, while others were more reserved. The latter group of participants was frustrating for the researcher, especially in cases of low compliance, since their reservation would severely reduce their ability to influence the numbers. "If I haven't heard from one of the participants in 10 days I will panic", one researcher explained.

For the researchers, a critical achievement was thus to develop and maintain relationships with the participants, which per se did not concern data generation or heart rate monitoring.

Looking Behind the Numbers and Meeting at Eye Level

To understand the compliance tables, one had to know about "all those complex things, with family constellations and work life", JSQ explained. He also described that one had to know when and how to contact the participants and how to handle the actual conversation or correspondence. For this reason, JSQ was not keen about students or colleagues taking over "his" group of participants. He only allowed this if they would be able to follow the participants all the way through the intervention period. Otherwise, the compliance work would "slip", he reasoned. As the researches explained, much of what the researchers knew about the participants was something they had "in mind", not something they wrote down in the table. The researchers' embodied knowledge about the participants and their life situation, everyday life organisation, and personalities constituted a crucial element of the ability to link together the heterogeneous bits of information contained in the table.

The importance of having things "in mind" and that operating the table required a particular researcher became clear to me during fieldwork. Despite JSQ's general reluctance to let anyone besides him attend to his group, he asked me to update the compliance tables of his group of participants because he was busy with laboratory work. Embarking on the task, I tried my best to follow his instructions. First, I collected data on average heart rate and energy expenditure from the online profiles. Then, I typed the data into the tables, which calculated how compliant the participants were. In the process, I was struck by the fact that I knew nothing about the participants, who figured in the form of unintelligible acronyms, numbers, and esoteric notes about what seemed

like random events. All I could do, I figured, was to make sure that I put the exercise numbers in the right slots in the table.

One participant, with the acronym BJRA, was among those who had uploaded data. When I entered her data, her compliance rate was within the frame of acceptable compliance, 95%-105%. Afterwards, I wrote a note to JSQ, listing the numbers and a brief comment: "BRJA - looks good. Compliance d. 07/15/2015: Energy: 99,2 and, Heart rate: 100,4." When I arrived at the office the next day, JSQ told me that he had "made a blunder", because he had not gone through the numbers in the compliance tables and had not taken the time to review BRJA's situation in detail. As he described, he had simply looked at my note and emailed BRJA to tell her that he had received the data and give her some supportive comments, as he would always do. He showed me this email and the email he received from the participant in response:

> Hi Birgitte,
> I hope everything is all right? It seems as if it's going smoothly as always.
> Best regards JSQ
> (JSQ's email)

> Are you kidding me, JSQ - or have you not looked properly?
> Or, if you by "as always" mean half bad, then yes!
> My exercise is not stable at the moment! It's not on purpose - I'm really struggling! But it's difficult to find time to exercise. I'll try to make an effort, and try to improve : -) But other than that, I'm fine.
> I also hope that you are doing well, and that both the wedding and the holiday was a success?
> :-) Best regards, Birgitte
>
> (BRJA's response)

Worried that I had made a mistake, I told JSQ that I had tried to follow his instructions very carefully and otherwise knew nothing about Birgitte. Later that day, JSQ told me that he had double-checked my calculations and found out that I had, in fact, not made any keying mistakes. Birgitte's compliance was as I had calculated: *Energy: 99,2 and Heart Rate: 100,4*. JSQ then showed me his email response to Birgitte:

> Hey Birgitte,
> Yes, thank you! Wedding and holiday were absolutely fantastic!
> No, my intention was definitely not to kid with you. The dear ethnologist Jonas looked at your exercise (since I have a number of tests) and reported that your exercise looked good! Obviously, I won't entrust anyone else to do the job anymore. Generally, I think you've have done a great job! I'm sorry to hear that you find it hard to find the time. I hope you can and, of course, I'll do my best to make sure to keep track of your exercise.
> Good exercise! Best regards JSQ

Considering the above incident, one could say that I became something akin to a "modest witness". Without revealing my face or position, I was a cold, distanced, and detached observer, who simply registered Birgitte's exercise as numbers representing energy expenditure and heart beats. In the process, BRJA was as invisible to me as Birgitte, just as I was invisible to her as Jonas, the ethnologist. As shown, Birgitte took this to be problematic; as did JSQ and the other researchers, who would often remind themselves how maintaining relationships with the participants was critical.

The problem was evident in her at once suspicious and wondered comment, "Are you kidding me, JSQ? - or have you not looked properly?". The problem, it seems, was JSQ's comment, "It seems like your exercising is running smoothly as always". The comment may have been appropriate in relation to how Birgitte or rather BJRØ appeared in the table. Regardless, the comment was at odds with how Birgitte seemed to see her situation. Our division of labour, where I calculated BRJA's compliance and JSQ contacted Birgitte had disrupted JSQ's usual process of moving his eyes from the numbers section to the notes section to make an appropriate comment.

That Birgit noticed this glitch points out how the participants also monitored the researchers' and their compliance with the relationships that formed over the course of the trial and its various activities. One can interpret Birgitte's description of how she was "really struggling" as her way of showing JSQ where she was and that she preferred JSQ to relate to her as more than a physiological system, an object of observation, or someone who needs exercise guidance, but rather as an individual person, someone-in-particular, in a particular life situation. In this light, Birgitte's email was an invitation to JSQ to engage in a particular way of seeing and relating to her. By questioning JSQ about his holiday and wedding, she invited him to make himself visible as an individual person, rather than as a researcher or an exercise supervisor. In his response to Birgitte, JSQ clearly tried to re-position himself in relation to Birgitte by explaining what had occurred, revealing details about the work in the office, and talking about aspects of his own life situation, thereby matching Birgitte's account of her situation. He also expressed understanding of her situation and promised to focus his vision on her (i.e., keep track of her exercise) and to stabilise his visibility for her (i.e., not delegate the job).

The correspondence between Birgitte and JSQ exemplifies how the researchers' principle of "meeting the participants at eye level" involved an obligation to comply with the particular intersubjective relationships that formed between the parties and flexibly respond, adjust, and re-position to the participants' particular addresses and enquiries. For the researchers, maintaining and cultivating these relationships throughout the intervention period by continuously attuning and adjusting their ways of relating to the participants was crucial:

> With some of the participants I call them and say: Hey, what's up?". "Is it you again?", he then says. You know, in jest… Then I say, "Why the hell did you not do what I told you to do?" Of course, I say it in a way that he knows I'm not angry with him, but that I'm joking… "Ahh, I knew you would call", he then says. You know, it's about meeting these people at eye level, and it's clear that I do not talk with the participants in the same way. That's obvious. With some participants, I know that you can't be too pushy because they might be a bit intimidated. Then I try to be more neutral and professional, you know… (ASG, trial researcher)

Similar relationships of cordiality were apparent throughout my fieldwork. During my time in the office, I would often overhear the researchers talking to participants over the phone in evidently amicable ways. When participants came by the office to get their heart rate monitors checked or attended test days in the laboratory, the researchers would always show a genuine interest in the participants and their lives, make jokes with them and engage in informal chat. In my interviews with the participants, they also stressed the atmosphere at the office and the courteousness, friendliness, and personalities of the researchers as crucial for their participation.

Importantly, as ASG also pointed out in the quote, the principle of meeting the participants at eye level also implied a commitment to "look back" (Haraway, 2007) at them in the way they wanted to be seen. This implied that the researchers assumed a string of different roles in their relationships with the participants. Rather than pointing to a fixed social relationship, the principle of meeting people at eye level points to a sensibility to relate to, meet, approach, monitor, and care on the terms of the individual participant, and a responsibility to particularise their ways of seeing and knowing, (i.e. their apparatus of visual production) to each participant. "It's about trying to see the person behind the numbers," as ASG, one of the researchers, put it, while instructing a group of students.

Spelling out the Rules and Strategic Blindness

The above case of Birgitte suggests how the researchers' control of the trial relied on the participants respecting the rules and standards of the trial by making themselves visible within the framework of the trial. If Birgitte, for example, did not use the heart rate monitor, refused to respond to JSQ's emails, or failed to upload data, she would have been invisible to the researchers and, as such, outside their control or care: "If they don't want to cooperate with us, for example, if they don't show up in the lab for tests or upload data and such things, then we can't really measure anything with the interventions" (ASG, researcher). In other words, the researchers needed the participants to position themselves within their "field of vision" and by doing so, take an active part in the maintenance of the trial and its controlled completion.

However, during the course of the trial, the participants made themselves visible in a variety of ways, and not all in the same way as Birgitte or Karin. Other participants appeared in the table as "strange numbers" due to poor compliance. Some would call attention to themselves through

invisibility (e.g., by not uploading data, answering emails, or picking up the phone). Participants would also make themselves visible by directly challenging the rules of the trial within the researchers' field of vision.

Accordingly, the researchers often had to make themselves and the trial visible in certain ways. As ASG explained in the following quote, this implies a kind of dual role for the researchers: "I'm not above them just because I'm sitting here [at the university]. I need to meet them at eye level, and I need to say, "How do we get this to function?". But, of course, sometimes one has to spell out the rules in a clear way." With this remark, ASG highlights a distinction between working as an exercise supervisor, who aims to ensure compliance through care and collaboration, and working as a trial researcher, who aims to ensure proper completion of the trial according to protocol.

When the researchers met around the table in the third-floor lunchroom at weekly meetings to review participants' compliance, they assumed positions as trial researchers for whom the scientific validity of the trial was the most important. The trial researchers' relocation from the data tables in the office computers to the physical table in the lunchroom, in other words, implied a shift in perspective and a different way of seeing, evaluating, and discussing the progress of the trial and participants' compliance.

How this worked became clear to me after sitting in for one of the researchers who was on vacation during one week of my fieldwork. At the subsequent meeting, I reviewed the participants' compliance numbers in plenary. In addition to reviewing the numbers, I also brought the case of a participant (FARI) who had emailed that he was preparing for an exercise event, arranged by his workplace, and thus that he had not been complying with the protocol. In the following excerpt, I presented the discussion that the case sparked:

> Me: Then there's FARI... He wrote an email in which he said that he had uploaded some irregular exercise sessions... You know, exercise sessions where he hasn't complied with the standards. It's because he's planning to run a team-building race, arranged by his work place. So he's both going to participate in it and prepare for it. He said he has prepared for the race by trying to run 5 km as fast as he can.
> ASG: But he can't do that as long as he is part of this. He's going to be too high in the numbers. So, that's how it is! The end!
> MB: So you'll tell him that, ASG?
> ASG: Sure...
> MB: Great, ASG.
> ASG: Well it's perfectly clear! We need to put it to him in that way! If he is on board with the trial, then he's got to keep himself within the framework of the trial. The fact that it's going to affect the race, that's just how it is. He can't do both!
> MB: Well, he can participate in the race, if he likes, but he can't prepare for it systematically like that.
> Me: But it seems like he's got a certain attitude about it. In the email, he said that in reality, he could just exercise the way he wants and that he was actually doing us "a favour", as he put it, by telling us.

MB: Yes, he's doing us a favour by participating. But he can't participate if he doesn't do us a favour, you might say. That is, if he doesn't do it properly.
EKKI: But, he can just cheat anyway…
ASG: Well, we can't force him to follow the protocol. I just have to tell him that he's not complying.
JSQ: One can always hope that it will appeal to his conscience.
ASG: Well, all I can do is to look at the exercise data…I can't do more than that. However, he must know that he can't prepare systematically for the race and then still stay within the framework of the project. Both the exercise intensity and energy expenditure will be too high.

Unlike the situation with Birgitte, in which JSQ tried to meet Birgitte "at eye level", the researchers clearly did not have them same intentions with FARI. As the excerpt shows, my presentation of the case set off a prompt and collective rejection of FARI's plan to prepare for the exercise event at his work, a plan the researchers took to be irreconcilable with the trial protocol. At the lunch table, the researchers' view of the research project emerged, which had regard only for participants who willingly and "properly" tried their best to stay within the framework of the trial.

The case, however, also exposed the frailty of the framework and how the researchers' possibilities of controlling the progress of the trial ultimately relied on them achieving a "panoptic effect" that would cause the participants to self-regulate through feelings of guilt and responsibility and make the participants "see" themselves and their exercise as research subjects and not, for instance, as employees in a workplace or as committed exercisers. The case thus highlights how the researchers' control and overview of the trial was both fragile and continuously challenged by competing activities and other forms of participation in the participants' everyday lives.

The FARI situation also showed that the researchers were able to deal with resistance, non-docility, or even their own productive effects only through exclusion, reprimand, or disregard. The paradox is that the trial researchers took FARI to be "non-compliant", despite his compliance with the overall vision of making people more physically active and despite his compliance to the relationship of accountability built between him and the researchers, which caused him to notify them about his plans. The trial researchers' disapproval of FARI's plan, in other words, highlights how the trial design was essentially built upon a logic of evaluation, in which the participants constituted enumerable bodies and standardised research materials, rather than subjects subjected to a variety of productive interventions.

Additionally, the above case suggests how the researchers, to maintain (the fiction of) control, relied on a form of "strategic blindness" towards that which could comprise validity of the trial, such as participants exercising too much, changing their diet, or engaging in other forms of divergence. The paradox is that the "panoptic" insights made possible through researchers' various engagements with participants potentially compromised the validity of the exercise data assembled in the numerical section of the tables.

Conclusion

The randomised controlled trial is routinely highlighted as the best way to produce objective evidence on matters of health and illness. The purpose of procedures such as blinding, randomisation, and extensive control of experimental parameters is to remove bias and allow researchers to observe the effect of a controlled intervention objectively. Focusing on an exercise trial in Denmark, I have explored what this ambition of objective observation of a controlled intervention involves in practice. Focusing on how the researchers dealt with the issue of controlling the participants' compliance at a distance, I analysed how data tables, in combination with heart rate monitors, telephones, email programmes, and exercise guidance, formed an "apparatus of visual production". This apparatus allowed the researchers to see, know, and engage with the participants at a distance in various ways. In particular, I showed how this apparatus allowed them to engage with the participants as enumerable physiological systems, which could be micromanaged; as subjects enmeshed in everyday lives which could tinkered with; as people who needed to be met with kindness and respect; and as research participants in a research project who could be disciplined, excluded, or ignored.

Overall, the researchers' chances of controlling the progress of the trial and the participants' compliance were grounded in their ability to work their "apparatuses of visual production" flexibly and engage in ways of seeing and knowing that had concrete effects on the participants and their compliance. Indeed, a critical achievement for the researchers was that all ways of seeing and relating was constitutive of their objects and subjects of observation. What I have called a "panoptic effect was a hard-won outcome of this differentiated and differentiating gaze. In other words, the researchers would enhance their chances of achieving laboratory-like compliance in "the chaos of everyday life" by subjecting the participants and their everyday lives to a differentiated gaze that established various kinds of relations between them; all of which with different regulatory potentials.

However, at the same time, the analysis pointed out how controlling the progress of the trial was an inherently fragile undertaking, requiring ongoing tinkering, calibration, and engagement. In contrast to recent scholarship on controlling RCTs 'in the wild' (Callon & Rabeharisoa, 2003)[64], I have thus not portrayed the RCT as a powerful and standardising "tool of governmentality" (Brives, 2016, p. 6) or a resourceful and extensive "socio-technical machinery" (Bijker et al., 2016, p. 10). Rather, I have presented the RCT as a fragile "apparatus of visual production", whose ability to control relied on the researchers' engaged work of adjusting their apparatuses to each participant

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[64] That is, the circulation and conduct of scientific methodologies in "real-world" contexts, outside the confines of the laboratory or academy.

and their ability to position themselves in relation to the participants and their compliance in various ways (e.g., as accountants, as everyday life coaches, as peers, and as trial researchers).

Considering the tinkering, care, conviviality, negotiation, and the associated multiple subjectivities that go into achieving standardisation is a way to articulate the internal workings of "hardcore facts" and their collaborative genesis. A look into the mundane practices of producing data, in this case compliance data, also provides a view into the complex, but seemingly mundane linkages between knowing and intervening, seeing, and controlling, through which public health intervention research work. Focusing on the day-to-day practices involved in achieving compliance may be a way to open up alternative interpretative frameworks and logics of evaluation that consider the social complexity of conducting health interventions. For the trial researchers, the heart rate monitor constituted the privileged technology of knowing because it, in a seemingly objective manner, enabled them to observe the participants' physiological processes, decoupled from their everyday lives, as well as from the researchers' day-to-day work of monitoring and influencing the participants. Considering the analysis presented in the article, however, the heart rate monitor did not perform the job alone. Rather, the objective measure of the heart rate monitor was fundamentally dependent on other and equally interventionist ways of seeing.

As an implication, one can approach the green, yellow, or red numbers in the data tables in two ways: either as objective measures of physical exercise, as isolated data, or as markers of a more or less effective apparatus of visual production. The former way decouples the researchers from the participants and allows one to turn a blind eye to significant parts of what happened during the trial (i.e., the social, material, and collaborative genesis of the data). The latter acknowledges the deep relationalities of knowledge production and the intricate relations between subjects and objects of knowledge, which allows one to consider and discuss the productive, powerful, and potentially enlightening possibilities of different ways of seeing.

Routines on Trial

The Roadwork of Expanding the Lab into Everyday Life[65]

Jonas Winther

Abstract

Within the practice of public health intervention research, everyday life has become the number one context in which to conduct randomised controlled trials (RCTs) of the health effects of lifestyle practices and routines. Although the appropriateness of conducting RCTs in contexts beyond the laboratory is a debated issue within public health research, few studies have examined how trial participants deal with the ways in which their everyday lives become sites for biomedical experimentation. This article aims to fill this gap through a detailed analysis of the work that participants in an exercise trial in Denmark do to comply with RCT protocols in their everyday lives. The article draws on fieldwork among the participants and develops the notion of "roadwork" to explore their work of constructing and complying with a research routine and the frictions that arise between the protocols' norms and the situated everyday life conditions for change. Based on the analysis, the article argues for the need to explore the everyday lives that health intervention trials presume and produce in practice.

Keywords: *health intervention trials, routinisation, everyday life, roadwork*

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Introduction

Within the practice of public health intervention research, everyday life has become the number one context in which to conduct randomised controlled trials (RCTs) of the health effects of different lifestyle practices and routines. The overarching ambition is to produce health interventions and evidence that can be translated into what both policymakers and health professionals call the "real world". In that connection, a key issue is to develop intervention designs that are robust enough to be mobilised in everyday contexts and rigid enough to meet the needs of biomedical research standards and requirements. This ambition has led scholars both within and beyond the field of public health intervention research to question the methods, models, and assumptions associated with the RCT.[66]

Although heavily debated within public health research, little ethnographic knowledge exists about how the gold standard of biomedical experimentation, the RCT, turns what people do in their everyday life into trialable entities, and with that, how trial participants make RCT protocols into everyday life routines and handle the social consequences of particular ideas about intervening in everyday life? In this article, I argue that ethnology can contribute to health intervention research by exploring how everyday life is problematised and configured in trial research and by articulating how interventions into the body are always also intervention into everyday life.

Addressing these questions, I draw from my engagement as an ethnologist in an interdisciplinary health research project in Denmark that was structured around a trial designed to test the health effects of three six-month exercise interventions in the everyday lives of a group of Danish citizens. Drawing on fieldwork among participants, I present three accounts that articulate the work involved in making a trial protocol into an everyday life routine and the various kinds of frictions that emerge in the process.

The Trial: Expanding the Lab into Everyday Life and Exercise as a Pill

The trial in question was motivated by widespread public health concerns about physical inactivity and reports showing that around 47% of the adult population in Denmark is now overweight (National Health Profile, 2010). To inform future recommendations and campaigns on physical activity, the trial was designed to evaluate the health effects of three workable and time-effective ways of following the current recommendation on physical activity, which encourages adults to

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[66] While some scholars call for pragmatic and adaptive trial designs (Tarquinio et al., 2015; Treweek & Zwarenstein, 2009) and more detailed ways of reporting and evaluating behavioural trials (Michie et al., 2011), other scholars problematise how understandings of context (Shoveller et al., 2015; Wells et al., 2012; Brives et al., 2016), health behaviour (Blue et al., 2016; Cohn, 2014) and complexity (Cohn et al., 2013) are integrated into trial designs.

exercise for 30 minutes per day in everyday life. The trial involved 130 healthy, physically inactive, and moderately overweight women and men aged 20-45 years, who were randomised into four six-month intervention groups: 1. moderate-intensity leisure time exercise, 2. high-intensity leisure time exercise, 3. active commuting by cycle, and 4. a control group, in which the participants did not receive an exercise intervention, until afterwards. Each exercise intervention prescribed five weekly exercise sessions, which the participants had to perform according to a standardised exercise protocol in their everyday lives (See Rosenkilde et al., 2017 for full protocol description). Overall, the basic premise for the completion of the trial protocol was that it could serve both scientifically valid biomedical research aims and support a meaningful lifestyle transformation.

As one of several research endeavours coupled to the trial, my project built on an ethnological study of the practical completion of the trial protocol with a particular focus on the social processes and work involved in performing an RCT in people's everyday life. During the course of my fieldwork among the participants and trial researchers, I learned that the trial design and the protocol carried a range of assumptions about everyday life and what it means to exercise that variously shaped how the participants routinised the interventions in noticeable ways. Although highly motivated to participate and take up more exercise, many participants struggled with the protocol and its requirements. To begin with, I, therefore, draw on an interview with one of the main architects of the trial to unpack some of the features of the design and the protocol.

One of the significant characteristics of this intervention project was the attempt to complete a controlled trial in the context of the participants' everyday life and by doing so to meet both criteria for methodological rigour and for social relevance in one trial. Key to achieving this balance was the idea of "expanding the laboratory", as one of the main architects behind the trial design put it:

> We know that we create an everyday life for the participants in the trial, but we want the everyday life that we create to simulate the everyday life that might actually exist, instead of just asking them to either walk or run on the treadmills in the lab in this or that way. In most cases, we can recreate an effect in the lab, but can we recreate this effect by expanding the lab a little? You know, expanding the lab, so that we are testing a behaviour that people actually do.

The basic idea, as he explained, behind the trial was to test in a rigorous manner the health effects of physical exercise as people do it in the context of everyday life, rather than in the laboratory, and by doing so to be able to produce biomedical evidence relevant for public health practice. Yet, one of the challenges in doing so is that the process of trialling will inevitably come to influence and shape the participants' everyday lives in a number of ways beyond the interventions in question. Yet, while he acknowledged that the process of trialling will influence people's lives, the goal was to minimise

these effects by "expanding the laboratory" to encompass the participants' everyday lives, and by trialling interventions that resemble "behaviours that people actually do".

In connection with the idea of expanding the lab, the city of Copenhagen played a major role due to its many recreational areas, its concentration of fitness centres, and its cycle-friendly infrastructure. By providing an existing framework, the city was a "perfect model", as the chief investigator put it, since it would allow for the expansion of the laboratory by providing the participants with free memberships to the largest chain of fitness centres, cycles, exercise protocols, exercise supervisors, and heart rate monitors. With regard to the "behaviours that people actually do", the basic starting point was that people exercise in different "domains of everyday life", particularly in the leisure time and in the transportation domain.

Aside from these assumptions and considerations, the trial design and the protocol did not exhibit other considerations about "the existing everyday life" as the context for the trial, physical exercise as the intervention, or exercise routinisation as a process. To some extent, this reflects how issues of "context" and "health behaviour" remain underdeveloped themes in trial-based health research (Bell, 2016; Brives et al., 2016; McLaren et al., 2007; Shoveller et al., 2015). However, the minimal considerations about the practical implementation of the trial also reflect the positivist assumptions that underpin trial research, which posits that context constitutes a "stable container for activity" (Brives et al., 2016) that can be described, represented, and delineated – if necessary – and accordingly that context and activity can be separated (Dourish, 2004, p. 5). In this case, this basic assumption was formalised in the trial protocol, which built upon an idea of the transportation and leisure time domain as stable timeslots in everyday life, within which certain exercise activities could take place and be measured.

The way in which trial methodology configures health interventions, such as exercise regimens, as context-independent and bounded activities was also obvious in the randomisation procedure, which allocated the participants in the different groups. The procedure took place as an old-school drawing of lots, whereby the researchers asked the participants to pick a capsule from a bucket, to open it, and to read aloud a small piece of paper that would reveal which of the four intervention protocols they would have to follow for the next six months. This simple ritual "enacted" (Mol, 2002) exercise as a kind of pill to be "swallowed" by an individual, according to a certain schedule, while at the same time rendering insignificant the participants' preferences with regard to which intervention would fit their everyday lives better. In practice, the randomisation meant that the participants' life situations, occupational status, existing habits and routines, or family structures were not considered as significant dimensions of everyday life or what people actually do. Thus, the randomisation ritual clearly expresses how this particular trial was designed to locate the effects of

the exercise interventions inside the participants' bodies (Bell, 2012; Mol & Law, 2004), rather than in their everyday lives.

Figure 1: The two buckets with capsules used to randomise the participants. Photo by author.

A prerequisite for evaluating health behaviours as pill-like entities is detailed quantification, because it allows for strict monitoring, control, and evaluation. As Mike Michaels and Marsha Rosengarten (2013) have pointed out, the RCT methodology demands trialists to make interventions into "quantitative objects" by defining them in relation to pre-existing and externally validated criteria, categories and standards of, for instance, statistical assessment and measurement (p. 73). As is apparent, the intervention formulations were prepared to enable the researchers to quantitatively read and monitor the participants' compliance through the heart rate monitors that the participants had to wear during each workout:

> Leisure time physical activity (50%VO2max), 5 days/week/6 months [...]. The average energy expenditure per day is 320 kcal for woman and 420 kcal for men. [...].
> (Excerpt from protocol)

Although the trial researchers' projects only required "hardcore numerical compliance data", as one researcher put it, they worked extremely hard to help the participants to routinise the protocols. Much of their work related to the fact that taking up exercise for many participants was "a hard pill to swallow" (Thing, 2009) and that "expanding the lab" in many cases entailed a sometimes difficult work of following a generic protocol that only rarely fit the particularities of their everyday lives. In fact, my fieldwork among the participants suggests that the real intervention often seemed to be the fact that the assumptions about everyday life implied by the exercise protocol did not easily map onto the particular everyday lives of the participants. Consequently, some participants had to try to adapt and re-work their everyday lives to adjust to the protocol. Also, the implicit norms on how to

move and exercise interfered with the participants' expectations and concrete practices. This was partly due to the trial's adherence to quantification and measurement, which came to define the pace and manner in which participants could move their bodies in ways that in some cases proved problematic. The protocols of the trial, in other words, did not translate smoothly from across laboratory and everyday life. Rather than a smooth process of scaling the laboratory, the actual process of 'expanding the lab' required participants to engage in what I propose to conceptualise as roadwork.

Roadwork: Making an Exercise Protocol into an Everyday Life Routine

In his work on the production and circulation of scientific facts, science philosopher Bruno Latour (1983) has used the infrastructural metaphor of railways to describe the social and material work upon which the spatial distribution of science relies. As he put it: "Scientific facts are like trains, they do not work off their rails. You can extend the rails and connect them but you cannot drive a locomotive through a field" (p. 155). According to Latour, laboratories and their facts only become active in the world through the "extension" of lab practices (p. 155), i.e. through the transformation of the world beyond the laboratory. Inspired by Latour, I propose the notion of "roadwork" to highlight the work entailed in expanding the lab into everyday life in relation to projects that promote new bodily routines and the transformative processes that such projects imply. In English, the word "roadwork" both refers to "work done in building or repairing roads" and "athletic exercise" and thus aptly points to both the infrastructural work of paving the ground for a new routine and the bodily work of practicing this new routine.

In addition, the notions of infrastructure and construction implied in roadwork resonate with recent work on everyday life routines within ethnology. In their book, *The Secret World of Doing Nothing* (2010), ethnologists Billy Ehn and Orvar Löfgren have pointed out that the word "routine" etymologically means "small path". Accordingly, they suggested that cultural analysts consider everyday routines as "cultural paths" and explore how routines are made, unmade, and remade through continuous practice, use, and maintenance (p. 81). In this perspective, everyday life makes up a networked and interconnected social field of multiple, intersecting routines that must undergo transformation to make room for new ones. Ethnologists Tine Damsholt and Astrid Pernille Jespersen have similarly proposed to consider everyday life as practiced and performed (2014). According to these authors, everyday life comprises material practices that are practiced every day through various, and sometimes conflicting, problematisations and norms of "the good life". In this perspective, the notion of expanding the laboratory directs the attention towards the empirical

tinkering work that the participants did to re-construct their existing routines to make room for new ones and the concomitant work of aligning different practices and their different norms.

To highlight how the exercise protocols conflicted with the participants existing everyday lives, anthropologist Anna Tsing's notion of friction constitutes an apt metaphor (2005). For Tsing, friction concerns the "grip of encounter", and the motions and effects produced, when "universals", such as forms of truth, science, or capital (or in this case RCT-based exercise protocols) encounter place and particularity (p. 5). "A wheel turns because of its encounter with the surface of the road," she writes, before she stresses the importance of grip, contact and encounter, "spinning in the air it goes nowhere" (p. 5). Something similar applies to a trial and the interventions it seeks to roll out in people's lives. As with wheels, health interventions only get to work, if they 'grip' their target subjects and their everyday lives. Importantly, the trajectories and paths created by such encounters across difference can be "enabling, excluding, and particularising", as Tsing notes (p. 6). The notion of friction thus points to how routinising practices in concordance with protocols that contain certain norms about everyday life and how one should move one's body do not happen without contact. Contact and friction is both a precondition and a potential problem in constructing and performing new routines in everyday life. Drawing from these theoretical perspectives, I thus use "roadwork" to highlight the mundane practices of working (out) through the frictions generated in the process of expanding the lab.

In what follows, I focus on the roadwork of three participants in the trial whom I have given the names Mary, Sophie, and John. In so doing, I draw on ethnographic material comprising interviews, observations from participation in their exercise sessions, and photographic material from an assignment in which I asked them to document their daily lives during the intervention period. During my fieldwork, my central aim was to articulate the practicalities of trial participation and how the norms and standards of the protocol about exercise and everyday life related to the participants' bodies, expectations, and existing everyday life routines. Therefore, I do not focus on these three participants because they were typical or representative of the research population but because their accounts are useful for highlighting the significance of roadwork and the frictions that can occur in trialling health routines in people's everyday lives.

Sophie's Roadwork: Making Time and Moving Forward on a Treadmill

Time and Tactics

In the temporal model upon which the trial protocol built, time is a resource that individuals can choose to use in ways that are more energy-efficient. This was what Sophie, a woman in her mid-20s, thought when she enrolled in the trial. Facing a less busy semester at the university, she thought she

would finally have time to exercise. Exercising in the leisure time domain five times per week for six months, however, turned out to be more difficult than she expected. One challenge was that she had little control over her time. To get to the gym, she had to "plan it out", as she explained during one of our conversations, before she described how her week was filled up with various activities:

> For example, on Friday I have an appointment with an old friend I haven't seen in a long time. So, I already know I won't get to work out on Friday, and I have to do it at some other time, and I also have a lot of girlfriends coming over to hang out on Saturday. So, I have two things there, but I also have two shifts at another job this week. Plus, I have to work on Sunday at another job, and I have homework for Friday and an assignment for next Tuesday, and then my mum suddenly decided to visit too, and then I find myself thinking, "Oh! There are too many things." So, exercise simply becomes one of many things.

Unlike the protocol, which configured everyday life as a set of fixed time domains, Sophie's everyday life comprised multiple temporalities. During the trial, these temporalities materialised in work schedules, assignments, exams and appointments, which she could not control, but only try to organise. For Sophie, taking up exercise in the leisure time domain thus implied trying to "squeeze" another "thing" into her already busy schedule, which was not organised according to the same grid as the protocol and wherein many other activities and obligations were already competing for a spot. Trying to produce more time for exercising by managing her life more efficiently was a daily task, not a simple act of earmarking 30 minutes of a pre-existing time reservoir.

For Sophie, following the protocol required that she organised her schedule so that she could leave school early to go the gym before it closed and that she had to walk around with her workout bag and wear sports clothing "at all times" to be ready to "squeeze in" a workout on the go. It also implied using the weekend as what she called a "buffer" whenever she failed to do her exercise during the week, even though she wanted to keep the weekend "exercise-free" to spend time with her boyfriend, whom she had little time to spend time with during the week. For Sophie, exercise compliance not only took time, it also introduced new temporalities and rhythms that punctuated her everyday life in ways that created frictions between different "goods"; e.g., frictions between homework and bodywork, "chilling out on the couch after a long day of work" and "getting to gym before closing hours", working out or working jobs, hanging out with friends or working out alone.

Due to the shifting and fluid boundaries between home, work, and leisure time activities in Sophie's life, the rigid time structure of the protocol caused new logistical challenges and new frictions on a week to week basis, which made it difficult for Sophie "to make space for the exercise", as she put it. One of the key issues was that the protocol did not allow for variation, "Normally, when you have these swings, it is normal if you haven't seen your friends in two months. They know and

they understand that you're busy at the university. But the trial just demands that you to go to the gym at all times."

During one of our conversations, she described how she tried to "fit in" the exercise sessions even though she was extremely busy at the university. As she recounted, she knew she would have long days at the university, since she was finishing an exam project, leaving her with little time to exercise. In particular, Sophie found it impossible to catch the last evening train home from the university and then rush to the gym to get the exercise done before it closed. As a situated translation of the protocol, she decided to burn off the prescribed number of calories by cycling to and from the university instead, "You know, I thought there's no difference between cycling around a lake and cycling to the university." While the cycling worked well for Sophie, only a few days passed before her exercise supervisor discovered Sophie's creative solution to her time problem by looking at the GPS data that followed her exercise data. Her exercise supervisor then told Sophie that she could not "change intervention group" and that she should keep her exercise to the leisure time domain, even though it did not exist at that moment in Sophie's life.

This incident highlights a central paradox in the design of the trial. While the ambition was to test the health effects of workable exercise routines in everyday life, or "behaviours that people actually do", the notion of protocol compliance worked against this ambition by rebuffing the participants' creative tactics of translating the protocol according to the ever-shifting organisations of their everyday lives; that is "what people actually do". While Sophie's solution was not an act of resistance but rather a genuine attempt to make the protocol work in her particular situation, such tactics would categorically register as non-compliance. Thus, for Sophie part of her trial-specific roadwork entailed maintaining the abstract concept of time domains inscribed into the exercise protocol while leading a life that was organised and being organised in a different way by developing tactics to make room for the protocol through changes, not in the protocol, but in her existing practices and routines.

Figure 2: "At the moment, I'm often walking around in my exercise clothes. This is my 'I'm going to the mall outfit'." Caption and photo by Sophie.

Tempo and Trajectory

For the researchers to analyse exercise as a controlled dosage of energy expenditure, the participants had to perform each workout in the same way. The heart rate monitors and the protocol were key technologies in achieving this standardisation because they allowed the researchers to monitor the participants and the participants to monitor themselves. However, the standards of the protocol also framed the actual exercise practice in a particular way. For instance, Sophie considered the exercise intensity to be "too low", which made the workout sessions "boring" and "lengthy". She also talked about how the exercise standards limited what she could do in the gym, about how particular types of music would cause her heart rate to rise above the benchmark and about having to exercise at a pace where she was "not even sweating".

During fieldwork, I experienced this restricted room for manoeuvring when we discovered that our conversation during a workout had caused her to exceed the allowed ranges that were defined by the protocol, causing her to register as non-compliant. To stay within the heart rate interval and not get bored, Sophie told me she had discovered that she could place her smartphone on the front of the treadmill and watch a TV series on Netflix while doing her 45 minutes of exercising. Thus, part of Sophie's roadwork implied making her heart beat in concordance with the monotonous rhythm dictated by the trial, thereby trying to induce the correct and controlled laboratory body into being in the lively spaces of a public gym.

While the standards restricted Sophie's movement, they also played a key role in moving her. During our conversations, she repeatedly talked about her exercise data and how it motivated her to

track her workouts, because of the quantification of exercise and its implied norm of precision fed into her intellectual interests as a student engineer. Sophie also mentioned the implied norm of accountability and how "living up to their [the trial researchers'] expectations" was key to her compliance with the protocol. She described, for instance, how she would always inform her exercise supervisor whenever she did not meet the standards accurately. Hence, keeping track of her energy expenditure by looking at the heart rate monitor during her workouts and "admiring" the data overviews at home on the computer constituted key elements in her exercise routine. The data were especially important, since they made up concrete proof she was, in fact, moving: "Now that I can't see it on the body, I can at least see it in the numbers."
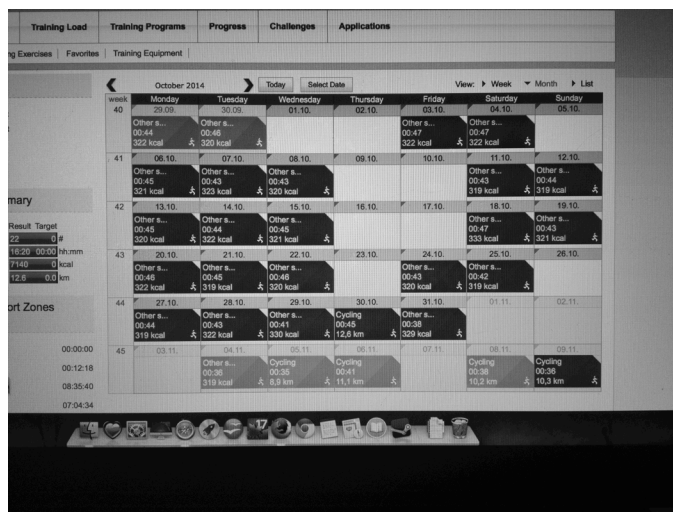
Figure 3: "Admiring all my exercise data." Photo and caption by Sophie.

Her boyfriend's sudden decision to take up exercise to prepare for an obstacle race with his friends, however, challenged the ability of the numbers to keep her motivated. In so doing, he completely changed his lifestyle; he began to lift weights, take long runs, and change his diet. Unlike Sophie's exercise routine, her boyfriend's was result generating, unrestricted, and serving an end that was directly related to himself. While they supported each other, Sophie admitted that seeing his body change, while her own body did not, annoyed her:

> It bothers me I'm not allowed to work out at full throttle until my legs wear out. It's extremely annoying you can't just push through! And, you know, it's extra annoying when you look at your boyfriend, and he gets in shape and loses weight, and you still stand there and think: "Nothing Happens!"

The boyfriend's paths to a new lifestyle and body intersected with Sophie's trial-based path, articulating a friction between her desire to realise a "body project" (Shilling, 2012) and the reality of

her servicing a research project in which working out "at full throttle" was not an option. Sophie's case thus points to the normative capacities of speed and, in particular, how exercise intensities do not always translate well from a lab to a public gym, from one body to another, or from a research project to a self-care project. Instead, whether a particular tempo is good or bad "materialize[s] as relational effects in local situations", as cultural geographer Sebastian Abrahamsson has put it (2014, p. 303). The stationary nature of the treadmill that Sophie was assigned to thus materialised how the trial built on a principle of repetition and standardisation, rather than progression and transformation, and how roadwork, for Sophie, implied learning to move forward on a treadmill.

Mary's Roadwork: From Meaningfulness to Absurdity

Reconstructing Collective Routines to Transport the Trial

As many participants, Mary, a woman in her 40s, had an idea about which intervention would be more workable, and the active commuting intervention was not her first choice. One noticeable problem was that the protocol prescribed a total commuting distance of "9-15 km for women", while Mary had a total commuting distance of 100 km. A related challenge was that Mary lives in the countryside, outside the perimeters of the "perfect model" of Copenhagen. Instead of good infrastructure, snow removal, road lighting, and repair shops, the environment in which she would have to realise the protocol comprised of muddy and unlit roads. Moreover, she had plans of quitting her steady job to start up as a freelance consultant within a couple of months. While both Mary and the researchers knew of these somewhat predictable and obvious problems before the randomisation procedure, the researchers were convinced and had assured Mary they would find a solution if she ended up in that group. However, the confidence waned when Mary found out that she had to commute five times per week for six months and the problems became real.

A significant problem was that Mary's existing transportation practice as a married mother with three children was not the individual and isolated activity that the protocol assumed. Instead, her transportation practice linked several trajectories, actors, and activities into a daily routine of distributing and gathering the household. For instance, she explained that she usually woke the children up, that they had breakfast together as a family, that she dropped off and picked up the children and that she would usually take care of the grocery shopping. Therefore, replacing the car that enabled this collective morning routine and these activities with the cycle was not an easy task. Instead, it demanded that her existing routines underwent comprehensive reconstruction. After negotiating with her husband about re-organising the morning routine and family transportation and working out a route that fit the protocol with her supervisor, a solution formed:

> Before, I took the car every day. But then we arranged that my husband could have the car on most days, which meant that he also had to deliver and pick up the kids. But then I could cycle to the nearest train station. Doing this made my workday almost two hours longer, because I had to take different trains to get to work. I also had to get out of bed very early, before the kids, and then get on out there on the bike, and then I had to ride home again later, regardless of how tired I was.

As sociologists Stefan Timmermans and Marc Berg (1997) have argued in their work on medical protocols, standardisation in practice depends on the transformation and incorporation of existing routines and the strategic enrolment of relevant allies (p. 274). For Mary, her husband turned out to be a key ally, since his willingness and ability to take over her roles in managing the care and transportation of their children, and in so doing "transform" his own commuting practice, enabled and allowed her to assume individuality and incorporate cycling into her life. Mary's compliance with the idea of transportation as an individual and isolated activity thus depended on her enrolment in a robust and flexible social collective from which she could extract herself. Her compliance also relied on her "incorporating" another form of transportation and taking on the attendant identity of a train passenger, and with that entering a world of public transportation schedules. For Mary, making active commuting happen thus included roadwork that both influenced and relied on her family collective.

Despite its elaborate construction, Mary appreciated her new commuting route. A key reason was that she could "connect" the commute to her "existing routine" of going to work five times per week, while complying with the protocol. Another reason was that she rediscovered her joy of cycling:

> Getting out the door and cycling to the station was super meaningful. When I'm on the cycle on those trips that I would otherwise never take – with the sunset and the sea view – it's fantastic. It's a gift! Obviously, it's the physical dimension, but it is also the psychological. I'm alert, my cheeks are blushing, my pulse is pounding, and I'm fresh!

Aside from the embodied experience of moving through the scenery, she also highlighted how the cycle ride home in the afternoon was vitalising after a long workday and a tedious train journey, and how her husband had begun to comment on her blushing cheeks and energised appearance when she came home. Yet, while the routine was meaningful, Mary considered the heart rate monitor and the rigid exercise standards to be a significant drawback:

> As soon as I put on the heart rate monitor, I invite MB [her exercise supervisor] into my life; maybe also other people. [...] So, he has been on the back of the cycle! And, for example, if I take a very short trip I wonder if MB will now ask about it. Then, I remind myself that I have to tell him I was running late and that I stopped at another train station, and not the one we had planned. And then I have to remember to take a long trip on my way home, so that when they check the numbers, they will see that I actually cycled the number of kilometres I had to, even though I only drove 2 km in the morning. So, there is this voice all the time, and it has been much more pronounced than I thought.

Inspired by anthropologist Tim Ingold's work on movement (2006), one could say that the trial protocol endorsed commuting as "transportation", whereas Mary preferred commuting as "wayfaring" too (pp. 75–77). According to Ingold, wayfaring is a "way of being" and engaging with the environment; actively, physically and perceptually. When moving, "the wayfarer" is always somewhere particular on the way to somewhere else. In wayfaring, the journey, not the destination is the essential. In contrast, transport is a destination-oriented form of travel whose only purpose is to relocate people and their goods from place to place as fast and with as little mutability as possible. In transportation from one location to another, the traveller is "nowhere at all" (Ingold, 2007, p. 84)

However, the significant aspect of the version of transportation inscribed into the protocol was that the destinations to which it referred were generic rather than specific, that the distances it prescribed between these destinations were rooted in mathematical calculations rather than site-specific surveys in people's everyday lives and that the researchers monitored the participants' compliance. This meant that Mary not only had to worry about getting to work on time and in a meaningful way, but that she also had to ensure that this happened according to the protocol, which did not take in account her particular environment or the fact that commuting could be about other things than transportation.

For Mary, the heart rate monitor meant that her exercise supervisor was on board on her daily commute as what one could call an "implicit partner" (Otto, 2016) or passenger that she had to transport according to the generic itinerary laid out in the protocol. Mary's "inner dialogue" with her exercise supervisor can be understood as an attempt to justify that moving along paths somewhere in particular inevitably implies the occasional bump on the road, delay, and shortcut, and that transportation, as Ingold points out, is never perfect, "There is always some friction in the system" (Ingold, 2007, pp. 101–102). For Mary, the "system" comprised both the transportation routines of her family, the trial and its requirements, her exercise supervisor, the environment and the public transportation system. Some of the friction in the system related to the fact that Mary's transportation domain, while making up a space of individual pleasure, also belonged to the trial.

Figure 4: "Better than the highway!". Caption and photo by Mary.

From Routine to Problem

Despite Mary's engaged roadwork, active commuting never became a routine. A key reason was that the organisation of her everyday life changed radically when she quit her steady job to start as a freelance consultant. From having a more or less solid everyday routine, active commuting turned into a logistical problem that Mary had to solve every day:

> It's different, where I have to be now. But I always have to think about the cycle. How do I get it in here? Before, I just went out the door, but now, I'm driving around. Sometimes, I mount the cycle to the car. Other times, I take the train with the cycle.

Instead of a two-destination shuttle, Mary's new work situation entailed multiple destinations. It also entailed a different organisation of her time that revolved around assignments rather than weekdays, the basic time unit of the protocol, and that Mary no longer had a stable set of routines upon which she could construct a daily commute. Therefore, sometimes getting the opportunity to

cycle was difficult, inconvenient, and at odds with other important routines, such as picking up her children, tucking them in at night, and doing administrative work at home.

The new situation meant that Mary had to spend more energy translating the generic protocol into the shifting particularities of her life. To meet the demands of the protocol, she sometimes had to cycle in the forest nearby, which meant that cycling shifted from being a form of transport to a recreational sport, which she did not like. Sometimes, she also had to take "boring routes" rather than obvious and scenic ones. Making active commuting happen also included the "homework" of metering routes, bringing along extra clothes depending on her assignment, and coordinating with her husband, who began noticing that Mary's commute was no longer confined to the transportation domain but had transgressed into the home.

For Mary, the commute and its associated homework became a "stress factor" and a source of a bad conscience. This played out by her "running around stressing" and worrying about "lagging behind", "not getting data", "ruining the project" and by her feeling like "a bad research subject who doesn't follow the protocol and who wastes the researchers' time". That her commuting practice was also research practice created a moral pressure that caused her to feel obliged to exercise, even though it made little sense: "It's not for the sake of the actual journey I do it. It's because it has to be a certain number of kilometres, and the problem is that it has to be every day, and not just whenever it makes sense."

During one of our conversations, Mary highlighted one day in which "it really crashed" despite her dedicated attempt to "make it work". As she recounted, the incident started with something as simple as a flat tire on a Monday morning. The problem was that there are no repair shops where she lives and that her husband, who had been kind to patch it before, was out on a business trip: "You know, I used to patch my own tubes before I got married to my husband. But then something happens with the distribution of roles, so I haven't patched a tube for 20 years." Embarking on the task, she found out that the tube was irreparable and that she would have to buy a new one. Fixing the cycle then took a few more days, during which her "guilty conscience" about not producing exercise data grew bigger. Another problem was that her husband was not at home to assist in the morning routines when the cycle was finally ready for the road, which meant that she had to deviate from the established morning ritual of eating breakfast together with her children:

> I'd even planned that the big kids had to walk to school so I could cycle to the train station. I also had to deliver my youngest girl in the day care centre so early that she had to eat her breakfast there. She had to eat her breakfast at the day care centre! And, I already felt guilty about this having way too much influence on our life.

Mary not only had to take apart and reassemble the cycle to be able to cycle again, she also had to dismantle the daily morning routine, causing her to compromise her ideals about what a good mother does. For Mary, roadwork involved performing precarious experiments with her existing routines and the collateral burden of dealing with their social and emotional consequences. As anthropologists Cherryl Mattingly, Lone Meinert and Lone Grøn (2011) have pointed out, everyday routines, such as making food and setting the table, might seem trivial and easily transformable to health experts and policymakers, but such practices often constitute significant and deeply ingrained practices of self-care and care for others (p. 370).

Symptomatic of the mismatch between the work of being able to cycle and the actual work of pedalling, she was not able to cycle that day. While laughing and shaking her head, clearly noting the irony of having put the world in motion without being able to move herself, Mary explained why:

> Apparently, I hadn't assembled the cycle correctly. Only the first gear worked. So, I got nowhere! I trampled and pedalled hard, but I got nowhere! You know, like when the chain has fallen off. At that moment, I was like, "I can't do this anymore!" I was about to cry! Why did I agree to be a part of this!?

In the trial, active commuting by cycle stood as the emblem of an active lifestyle, as the stand-alone and ready-made routine to "improve wellbeing and health in everyday life", as the name of the trial put it. For Mary, however, active commuting, as it was defined in the protocol, implied what John Law (1987) has termed an activity of 'heterogeneous engineering', i.e. a work of assembling a network of juxtaposed components (p. 113), which, however, did not always amount to a workable outcome. Instead of an easy fix, active commuting was a problematic assemblage of things, people, routines, norms, and concerns whose composition, alignment, and maintenance she had to work out every day. After a series of incidents in which her everyday life with the trial – like the cycle – did not add up in workable and meaningful ways, Mary decided to drop out. Having to "construct some kind of everyday life", as she put it, became too much after three months, "It became a joke! It went from being super meaningful to being a theatre of the absurd."

Figure 5: "Christmas Day in pouring rain!". Photo and caption by Mary.

John's Roadwork: Exercise Allowances

Good Conditions

In trial research, the participants' intervention preferences are not to be considered. Doing so would bias the trial in question and invalidate its results. However, most participants in this trial had a clear idea about which intervention would fit their lives better. For John, a man in his 30s, active commuting was a particularly bad fit:

> I would only take the cycle if the weather was good. You know, if it snows and things like that, then driving 11–17 km would be completely foolish! If I was to get out there and then drive off in the opposite direction of my work, and it's pissing it down with rain. Arrrhhh... I wouldn't do that more than a few times! For me to do that, the sun would have to shine and the birds would have to sing.

The main reason John could not see himself as an active commuter was that he has 400 meters to work; not a round trip of 11–17 kilometres as the protocol prescribed. With his sarcastic remark, John made the point that protocol compliance relies on intended users taking its instructions to be workable and meaningful in their given situation (Timmermans & Epstein, 2010, p. 79). This was the case for John, whose everyday life during the period of the trial met the implicit demands in the leisure time exercise protocol. Aside from his brief transportation time, John also had a fixed 6 a.m.–2 p.m. working schedule every weekday and a scenic park on his doorstep. In addition, his eldest son

had just left home to live by himself, and his wife and daughter would normally not return home until around 4 p.m., which left him with approximately two hours for himself every day of the week. Having just started his job, John was aware of his good fortune in the randomisation: "I'm quite lucky I have the job I have. When they [daughter and wife] come home, I have already done my exercise. So, they feel nothing. Instead of taking a nap, I just do the opposite."

In the temporal model of everyday life that underpinned the protocol, leisure time was defined in opposition to work time; or to what sociologist Barbara Adam (1995) has termed "commodified time" (p. 96). Within this clock-based and quantitative understanding of time, leisure time refers to those hours of the day that are not used for sleep, work, or transportation. In the words of Adam, leisure time, or free time, is "a produced time, time that has been wrested from employer's time, a not-work time that exists only in relation to the time of markets and employment" (Adam, 1995, p. 96). However, John's case suggests that "leisure time exercise", in practice, relied on a different set of temporalities; in particular, those of his family members. While John was free from work at 2 p.m., it was just as important that he was free from his family.

Etymologically, the word leisure (or the Latin word "licere") means "to be allowed"[67], which, in contrast to the narrower notion of "work-free time", suggests that a broader set of circumstances condition whether one can do certain things or not. In this perspective, leisure does not necessarily refer to a specific time when one does not work, but to the conditions that allow some practices, but not others, to happen. The point is that different practices require certain allowances. As it happened, John found himself in a situation in which the defining temporalities of his everyday life synchronised in a way that allowed him to assume individuality and time for himself to do the exercise without disturbing his family.

The Momentum of the Loop

Reviving the exact route he used to run in the park in the past, John was quickly satisfied with his new exercise routine, which he considered preparation for a cycling race he had signed up for before the trial. Unlike both Sophie and Mary, for whom the exercise monitors played a prominent role in different ways, both as a motivational factor and as a stress factor, John was not interested in the exercise monitor or the exercise data. The ideal conditions of his everyday life meant that the exercise data was also standardised, and hence not interesting to follow, as he explained. What mattered for John was that the heart rate monitor linked him to the researchers, to whom standardisation was crucial. "They must deal with the results themselves," he said, and elaborated:

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[67] *Oxford English dictionary, the definitive record of the English language.* (1990). S.l.: Oxford University Press.

"The thing is that you sit and look someone in the eye and say, "I will follow the rules", "I'll do this", "I'll send you some data!" So, when you commit to it, then you need to stick to it. That has been the kick in the backside."

Committing himself was an essential part of John's approach to exercising. Aside from committing himself to the researchers, John also committed himself to another cycle race with his new boss and signed up for a duathlon, which is an athletic event comprising 10 km of running followed by 60 km of cycling and ending with another 10 km of running. In connection with these plans, John bought an expensive cycle and new trainers and turned his basement into a gym with an exercise cycle and a treadmill to have an alternative in case of bad weather. These upgrades and commitments can be seen as a different kind of roadwork that has to do with materialising and elaborating the protocol into a fully-fledged practice with its own meaning and purpose.

Figure 6: "The view when 'Moderate' spinning is on the menu in the basement :-)." Photo and caption by John.

For John, the routine prescribed by the protocol was never meant to become an integrated daily activity. This was evident when I joined John on one of his daily runs around the park. Abruptly stopping at a point where we could see a large recreational area on the horizon, he pointed and explained that the duathlon would take place there and revealed that he "got carried away" one day on his new cycle and did a 40 km ride in the area. He could not help himself, as he explained. While the trial protocol interpreted the exercise routine as a circular series of repetitions and as an end in itself, John interpreted his run around the park as a run-up scheme through which he could gain momentum to realise projects beyond the trial. For John, following the protocol was a route towards a different kind of everyday life, in which he would realise himself through "crazy projects", as he put it, while talking about possible races and events to attend. Although the protocol mapped onto John's life without creating major frictions, following its loop nonetheless inspired the re-creation of his everyday life, which suggests how roadwork is generative and transformative and how constructing and following new routes in everyday life might give rise to new destinations and horizons.

Conclusion

By focusing on how three participants in an exercise trial in Denmark tried to make an exercise protocol into an everyday life routine, this article has shown how health intervention trials in people's everyday lives generate effects beyond the individual's biology and how testing the health effects of everyday life health routines gives rise to work that exceeds what is measured and included in the final biomedical assessments. Instead of analysing the participants' exercise practices as discrete and measurable entities, as pills, I highlighted how the participants participated in the expansion of the laboratory through what I have termed roadwork (i.e., the situated work involved in constructing and performing a new bodily routine according to a generic research protocol). In doing so, my overall aim was to highlight how the evaluation of exercise interventions as pill-like entities effectively brackets off the work involved in changing one's lifestyle and how health interventions carry norms that interfere with, clash, and rub against the particularities of people's everyday lives. As anthropologist Charlotte Brives (2016) put it: "No biological efficacy comes without concomitant social, psychological, and cultural changes" (p. 21).

The article thus raises questions about the very purpose of rolling out exercise or other lifestyle intervention trials in people's everyday lives: Do we roll out RCTs in people's lives just to give hard-core trial evidence of biological health effects an air of everydayness, or do we do it to learn about how certain health interventions actually work for and with people in their everyday lives? With this article, I have tried to show how ethnologists can help address the latter question through detailed accounts of how participants handle the norms that are built into trial designs and protocols and by doing so to articulate how health interventions presume and produce certain everyday lives. A key ethnological contribution to health intervention research projects that aim to change people's lifestyles, in other words, concerns assessing health interventions in terms of their social implications, potentials, and problems.

The point is that specific health interventions into people's lives give rise to situated and variable intervention-specific (road)work that implies the re-creation of everyday life. Rather than a stable background, everyday life emerges through the problematisations it undergoes and the work of dealing with the frictions that arise in the situated co-productions of everyday lives and health intervention projects. By foregrounding the complex entanglements and frictions that emerge in the process of trialling health lifestyles, ethnology can contribute to health intervention projects by showing how they favour certain everyday lives and not others. Taking up this agenda might create possibilities for health intervention research projects to take into account the inevitable productivity and variability of interventions into people's lives to promote health.

Self-Care in the Harness

Trialling Active Selves in Public Health Research in Denmark[68]

Jonas Winther

Abstract

This article explores how trial participants use research practices to care for themselves and engage with the imperative to live a physically active life. Drawing on fieldwork in a public health intervention trial in Denmark that tested the health effects of physical exercise as obesity prevention, the article uses the notion of 'harness' to articulate how trial participation allowed participants to lessen the weight of individual health responsibility through the establishment of complex organisations of constraint and enablement, care and control. The article argues for the need to uncover the self-care practices, which lie at heart of public health research, and points to a disconnect between collective ways of producing evidence for the promotion of healthy living and the conventional ways in which this same evidence is used to give weight to individual responsibilisation. By articulating how public health research interventions facilitate complex distributions of agency, one can unsettle the entrenched category of the individual in public health research and begin to imagine new ways to organise self-care.

Keywords: *self-care, health intervention trial, physical activity, public health, technology of the self*

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[68] In preperation for *Culture Unbound*

Introduction

> Why did you enrol in the trial?
> Well, I guess that's what it takes for me to get started. I have to be subjected to some special circumstances, where somebody will keep me on a tight rein, and where I have to live up to something. You know, not just to myself because, evidently, I'm not strong-willed enough to do it myself. So, if I'm a part of something, then maybe I'll be able to pull myself together and get it done. Because then it serves another purpose than simply my own... health. Don't get me wrong, but it's just much easier to just kick back in front of the TV with a bag of chips. Now, however, there's someone who relies on me.
> (Morten[69], participant in an exercise intervention trial in Denmark)

In the above excerpt, a man by the name of Morten describes why he enrolled in the public health research trial designed to test the health effects of exercise as obesity prevention. For Morten, enrolling meant seizing the opportunity to enter into a social arrangement, in which someone would commit him, even demand him, to exercise and take care of his health. In interviews, other participants also described their relation to the trial through metaphors showing that they were under the researchers' strict commands. In these figures of speech, the researchers and the trial, more broadly, figured as a driving force in what they variously framed as an individual lifestyle change project. The participants talked about how they had volunteered for the trial to get "kicked up the ass," "whipped," "taken by the scruff of the neck," "shook," "pushed," "forced", "kick-started", "watched", "held accountable," and "kept on a leash". Often, the participants mixed these vivid figures of speech with comments concerning the ways in which trial participation would provide them with the help, knowledge, and motivation they needed to change their lifestyles. These statements raise questions regarding the kind of health practices that public health intervention research relies on and makes possible. It should also entice us to investigate further the social relationships that drive forward the production of evidence to promote healthy lifestyles.

In this article, I draw from my engagement as an ethnologist in the above-mentioned trial project. More specifically, I focus on the 'special circumstances' of the trial by developing the notion of 'harness' to explore the forms of self-care that trial participation allowed participants to practice. In particular, the harness refers to the two-piece heart rate monitors that participants were required to strap around their waists and wrists before each workout session throughout the trial period, and, more generally, to the binding relationships that trial participation promised, implied, and enabled. The notions of constraint and enablement, connectivity across difference and collaborative work-partnerships implied by the material technology of the harness, broach questions such as: What and

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[69] All names are pseudonyms.

who did the trial tie together? What characterised this togetherness? What forms of self-care did trial participation enable?

In the article, I use the notion of harness to highlight the complex organisation of (self-)care, control, and knowledge that trial participation made possible, and to explore how the trial emerged as a multiple significant Other in the participants' attempts to work on themselves as health subjects. In the analyses that follow, I go beyond concerns about normalisation, power, and social control by investigating why and how a group of Danish citizens found it meaningful to subject themselves to the standardising and controlling practices of trial-based health research to change their lifestyles. By articulating the specificities of trial-based lifestyle change, I provide a basis for a discussion of the social processes that current public health research rely on to produce evidence for improving individual health.

The article proceeds as follows: first, I situate my inquiry in relation to current suggestions within critical public health research to go beyond analyses of power and instead explore the situated specificities of health-related self-care practices. Second, I describe the trial and develop the notion of the harness through Michel Foucault's concept of 'technologies of the self.' Third, I exemplify the kinds of self-care practices that trial participation allowed the participants to practise. Lastly, I discuss the apparent disconnect between the socially complex self-care practices that public health research relies on and the conventional ways in which public health research participates in informing interventions directed at the individual.

Beyond Unveiling Power and Celebrating Freedom

Over the years, social science scholars have used concepts such as "healthism" (Crawford, 1980) and "medicalisation" (Zola, 1972) to unveil the mechanisms of power and social control that underlie attempts to promote health and how public health endeavours construct and reinforce certain subjectivities and responsibilities. Through detailed studies, scholars have stressed how the individual within the regime of 'new public health' is 'morally obliged' to respond flexibly and rationally to calls for healthy living by making healthy choices and how this has become the hallmark of what it entails to be a 'good citizen' (Alftberg and Hansson, 2012; Bell, 2016; Rose, 2007; Lindsay, 2010; Mathar and Jansen, 2010; Petersen et al., 2010).

However, recently scholars have called for more nuanced critical engagements with contemporary health care that do not understand public health projects as pertaining to one singular regime of power, but that explore its diverse and differentiated effects (Heyes, 2006; Mattingly, 2013; Mol, 2008, 2013; Vogel, 2014; Vogel and Mol, 2014; Sharon, 2015; Will, 2017; Yates-Doerr, 2012). As Sharon (2015) argued, the social science critique of healthy citizen discourses as a method for social

control and normalisation tend to posit freedom from external relations and autonomy as ideals and in so doing, lose sight of people's creative engagements with health discourses, technologies, and practices. This form of critique, she argued, comes with the risk of "overlooking or dismissing alternative forms of reasoning, responsibility and moral conduct that may be at work in some forms of engagement with the techniques of healthy citizenship" (p. 6).

Sharon's argument is that unpacking people's creative everyday engagements with dominant techniques of healthy citizenship is a way to strengthen and care for people's situated ways of living with issues of health and illness, while keeping a critical eye to issues of normalisation. The general point is that modern-day public health and health care host practices, in which biopolitical projects and self-care practices entangle in situated ways which cannot be captured through notions of control and normalisation. Rather than unveiling the general mechanisms of power at work in contemporary health discourses, unpacking the specificities of people's health-related self-care is proposed as a way to understand how current public health works (Will, 2017).

Else Vogel and Annemarie Mol (2014) made a similar argument in their study of Dutch diet advising. In particular, they showed how a practice that looks like a disciplinary dieting program on the surface, actually promoted a form of self-care aimed at cultivating an ability to enjoy and appreciate what one eats rather than an ability to control oneself. They thus pointed to the subtle, but crucial difference between dieting practices built on the question, 'Am I being good?' and those that cultivate an ability to attend to the question, 'Is this [food] good for me?' The former question demands the individual to self-control, whereas the latter invites the individual to self-care. In light of this argument, they called for future studies to consider the specificities of self-care practices and their guiding techniques instead of approaching them as instantiations of a coherent and systematic neoliberal regime of discipline (Vogel & Mol, 2014). More generally, their project concerns articulating the complex ways in which citizens and patients engage in current health care and public health and uncovering the norms, the 'goods' and 'bads,' that operate within these practices. This strategy might offer new ways to understand how some health care practices become meaningful (or meaningless) to people.

In this article, I follow this agenda and focus on the situated ways in which biopolitical ambitions of public health promotion are brought to life through people's individual desires and practices of self-care in a public health intervention trial. In so doing, I add to the findings of Astrid Pernille Jespersen et al. (2014), who highlighted how care was a prerequisite for producing data in an exercise trial in Denmark, and how trial researchers went great lengths to help participants through the exercise regimens about which they sought to generate data and evidence. They further showed

how participants become enrolled in social and material collectives that drive their lifestyle change. From their analysis, they suggested:

> By broadening the focus of public health campaigns to consider the collective, we may situate these practices and the ability to maintain or change them not in the individual, but in the heterogeneous workings of the many actors that participate in the everyday practices of physical activity.
> (Jespersen et al., 2014, p. 656)

While they highlighted collectives as constituent configurations in processes of individual lifestyle change, they did not analyse how trial participants relate to and stage this 'careful collective,' i.e., how care and practices of control and monitoring become components in a self-care practice. Put differently, they did not articulate what kind of practices and operations that such trial-specific collectives allow and enable. In what follows, I engage with these questions and develop the notion of the harness to explore how participants engaged with the heterogeneous collective provided by the trial in question.

Self-Care in Harness of an Exercise Trial

The trial in focus formed the centrepiece of an interdisciplinary research project on physical activity as obesity prevention and health promotion at the University of Copenhagen, Denmark, which involved biomedical and cultural researchers, whose research projects were structured around the trial. Motivated by increased concerns about obesity and physical inactivity, the overall purpose of the trial was to test the health effects of three workable ways of complying with current health recommendations that encourage adults to be physically active for 30 minutes per day. The trial involved a group of inactive, overweight, and obese women and men aged between 20 and 45 years who were randomised into one of four groups: 1. high-intensity leisure exercise; 2. moderate-intensity leisure exercise; 3. active commuting to and from work by cycle; and 4. a control group in which participants did not receive an intervention and continued their current sedentary lifestyle (See Rosenkilde et al., 2017 for full protocol). Each exercise intervention lasted six months and comprised five weekly workouts during which the participants had to burn 320 (w) or 420 (m) calories per session and exercise in compliance with the designated exercise program. In addition, the participants were required to take part in rigorous biomedical testing on health parameters at the project laboratories before the randomisation and after three and six months.

   With the aim of ensuring full compliance with the exercise protocols throughout the intervention, the trial sought to include people who were motivated to change their lifestyle. The trial was therefore explicitly presented as an "exercise project" and an opportunity to become more physically

active, receive knowledge about the body, and receive personal exercise supervision. The trial, in other words, built upon the core assumption that it could provide the means for both biomedical health research and individual lifestyle change practice, (i.e., the trial could be mutual beneficial for researchers and participants).

As part of the team of researchers in the trial, I conducted fieldwork from March 2014 to May 2016 among both the participants and researchers as a part of an ethnographic project about the day-to-day practices involved in implementing an RCT-based health intervention.[70] In interviews and conversations with researchers and trial participants, I learned that the combination of research and lifestyle change constituted a vital feature for many participants, as exemplified by the opening quote, and that participants variously engaged the researchers, standards, forms of knowledge, and research practices in their attempts to change their lifestyle. Through our conversations, the trial emerged more as what Foucault terms a 'technology of the self' than as a technology for biomedical research. For Foucault, technologies of the self:

> ... permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality.
> (Foucault, 1997b, p. 225)

Unlike his work on technologies of dominance, power, and control that has informed many critiques of public health practice and research, Foucault's concept of technologies of the self focuses on the particular ways in which individuals work with their lives, behaviours, bodies, and relations to others to constitute themselves as free and ethical beings within a specific discursive regime. Foucault described such technologies, or 'arts of existence,' as reflexive and voluntary change-oriented practices through which individuals by setting for themselves "specific rules of conduct actively try to transform their singular being to make their lives an oeuvre that carries certain aesthetic values and meets certain stylistic criteria" (Foucault, 1985, p. 10-11).

According to Foucault, the practices of self-disciplining, self-deciphering, self-knowledge, as well as the goals, *the telos*, guiding these practices, are essential aspects of self-creation. Further, these practices often include someone else—an Other—on the horizon, one who is authorised to care, know, and control. Someone always answers the letter, listens to the confessions, shares the knowledge, guides, and coaches in accordance with particular regimes of value and techniques of

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[70] In that connection, I conducted interviews with the researchers as well as 30 of the 130 participants concerning their engagement and practices in the trial.

living. As such, self-care and practices of concerning "oneself with oneself" (Foucault, 1997a, p. 211) thus unfold through specific and tangible technologies that organise knowledge, logics, rules, and people in social, material, and bodily everyday practices. Since they are "ethnographically visible," one can analyse and articulate technologies of the self as multiple and specific instead of homogenising tools of power (Brodwin, 2017, p. 78).

The key technology in this trial was the heart rate monitor that the participants were required to wear during each of their five weekly exercise sessions during the six-month exercise interventions. This technology allowed the researchers, who were responsible for the day-to-day management of the trial to monitor the participants, and the participants to monitor themselves against the exercise protocols. In addition, two times per week, the participants had to upload exercise data for the researchers, who would then monitor, control, guide, and assist the participants in their subsequent workouts by examining their exercise data and communicating via phone calls and email. On a practical level, the participants had to develop a daily routine of strapping a sensor around their waist and a watch around their wrist before each workout session:

> I get up; I take a shower; I put on some clothes, and just before I put on a shirt; I strap on the monitor around my waist. It just has to be fastened there beneath the clothes before I put on the blouse. [...] And then, I leave a few minutes earlier than I usually do, because the monitor has to find the signal. It only takes a short while for it to connect.
> (Sally, participant)

In this article, I approach this trial-specific ritual as a practice in which participants put on the harness of the trial and connected themselves to a trial-specific arrangement of biomedical standards, researchers, and rules. The notion of the harness thus highlights both the intimate relationship that the realisation of the trial depended upon and the particular way that the self-care projects, which the trial allowed the participants to set up, were essentially related to a research practice that included control, monitoring, and standardisation as its key tenets. The notion of the harness highlights how trial participation involved a particular division of labour—a way of organising research and (self-)care—in which participants worked out under the supervision, care, and control of researchers, whose research projects in turn relied on the participants' completion of the trial with full compliance. Thus, while the harness might evoke images of power and subordination, and position the researchers as dominators, it points just as much to the researchers' dependency on the participants with whom they were individually linked. Rather than a means for normalising, the researchers, in practice, tried to tailor their exercise supervision, care, and control to each participant's personal requirements, preferences, and desires.

Figure 1: The heart rate monitor. Photo by author.

In addition, the notion of the harness captures the participants' desires to enter into a binding relationship with a particular Other and the paradoxical mixture of constraint and enablement at play in their visions and practices of self-care related to the trial. On the one hand, a harness is a restraining, controlling material device that establishes a relation and a distribution of power. On the other hand, it facilitates and enables, as it allows the performance of otherwise impossible actions. The harness therefore evokes manifold images of draught animals pulling coaches driven by a coachman's strategic provision of carrots, sticks, and motivational cheers, of safety equipment allowing rock climbers or construction workers to achieve challenging and otherwise impossible feats, or of parents restraining their children's movability to protect and connect in acts of care. These images all highlight a harness as a tangible technology that organises a social and material set-up that 'allows' certain selves, capacities, and agencies (Gomart, 2002). As Emilie Gomart has argued, elaborating on Foucault, agency does not emerge from the absence of constraint, but rather through more or less 'generous constraints' in the social and material set-ups that individuals "pass through" (2002, p. 522).

Adopting these orientations, I use the remainder of the article to explore the specific practices of self-care that the trial made available for its participants, how the trial allowed a particular distribution of agency, and how the trial in this connection emerged as a complex and multiple Other.

Getting Back in the Harness

When discussing their decision to take part in the trial, the participants drew upon public health discourse, referencing with ease official recommendations on healthy living and biomedical notions of risk, the body, and health. In doing so, they framed trial participation as a concrete way of dealing with their lifestyle, which they in different ways portrayed as derailed and problematic. Subscribing to the idea that a healthy lifestyle is an individual project, duty, and responsibility (Lindsay, 2010; Olsson, 2010), many participants framed trial participation as a way to get back in the harness, so to speak.

John, a participant in his 40's, talked about trial participation as a way to clean what he described as a "guilty consciousness" about not "running around constantly":

> Well, you already know that you should remember to exercise 30 minutes per day. So, then you start counting, "How much time have I spent exercising?" Maybe 30 minutes in a month! Then it becomes obvious that you need to do something, especially, if you want to live a little longer and have a good health.

For John, the official recommendations on physical activity worked as a norm against which he evaluated not only his recent activity level, but also his potential to live a long and healthy life. John also talked about wanting to "tick off exercise from the list" and eliminate physical inactivity as a risk factor, thereby evoking the concept of 'healthy living' as a set of duties or chores to be handled. Other participants similarly struggled to abide by certain health norms. Mona, a woman in her 30's, related her BMI to her integrity at work, where she was in charge of planning food for the elderly:

> Well, I just don't think it's good for someone who knows a lot about nutrition to be overweight. It's the trustworthiness! If you sit in front of a clinical dietician, they should be within BMI-normality. Otherwise, it's untrustworthy. So, I actually don't think I'm completely trustworthy.

Mona's comment shows how BMI functions more as a category through which people measure and judge how well they (and others) fit into society, rather than as a neutral fact about the relation between one's weight and height (Heyes, 2007, p. 68; Yates-Doerr, 2015, p. 151). In the context of the trial, BMI measurements and official health recommendations, in addition to notions of risk and lifestyle disease, worked as central categories through which participants attached themselves to the trial and made sense of their participation. In other words, the products and knowledge of public health research participated in the enactment and construction of the trial and its public relations.

Besides discussing health in biomedical terms and struggling to meet general imperatives of healthy living, the participants also described their participation as an opportunity to lose weight

and to realise certain aesthetic body norms. For Daniel, a man in his 30's, trial participation was a way to correct his appearance to fit a particular idea of how he should look and be: "Well, I want to go back to the person I was before, you know, to the way I looked before. After all, you have a certain idea of how you want to look, and at the moment, I just don't fit that picture." Though the trial was not presented as a weight-loss trial, many participants coupled exercise and physical activity with ideas about weight loss and a leaner body as an obvious and natural effect of taking up more exercise. Their ideas about exercise and activity came with a package of values that concerned not only appearance, but also ideas of vitality and ideals about exercise being a natural and central part of everyday life.

In that connection, many participants revealed how they had failed at taking up exercise many times in the past, and described how they would "get out of the rhythm," "fall off track," and "fall back." In their accounts, trial participation figured as one among many attempts to take up exercise, attempts that all appeared to be transitory practices, susceptible to the contingencies of everyday life. Although all participants accounted for their busy lives, describing how their careers, educations, family life, moving, volunteer work, hobbies etc. took up a lot of time, and although they often pointed to these life projects as the main reasons for their physical inactivity and overweight, they simultaneously problematised their own inability to "continue," "persist," and "keep the motivation." Here, the participants pointed to the requirement for discipline and the long duration of the trial as features that would allow them "to get kick-started" and to get exercise "worked into" everyday life, which would make it "stick a little better."

The examples above show how the trial and 'its public' (Montgomery & Pool, 2017) connected through the discourses and categories of public health that permeate both everyday life and certain groups of people's everyday engagements with their health and lifestyle. The examples also suggest how the trial primarily attracted what could be construed of as health-literate, resourceful, and capable citizens who saw a binding engagement in an exacting research project as an obvious way to work on themselves. Thus, I argue that identity and desires to self-transform, rather than supposed pure altruism, lie at the heart of this form of research. The general point is that many of the participants were already placed in the harness of public health and that the trial constituted a concrete way to take action and engage with ideals of healthy living.

Binding Oneself to a Collective and the Duty to Care for Others

Although participants readily delineated their participation motivation into motives such as "weight loss," "health check," "improved physical fitness," "exercise routinisation," and "contributing to science," they organised these motives around a more general principle of entering into a binding

relation with the trial and its researchers. In that connection, the participants pointed both to the institutional framework of the trial and to its authority as a state-sanctioned research project as features of the trial, which would prompt them to assume a certain moral character and disciplined behaviour.

Bettina, a participant in her mid-30's, saw trial participation as an opportunity to enter into a social arrangement in which she could distribute the task of having to motivate herself by mobilising her individual health work as a kind of collective project work:

> So, last summer, I reached a point where the children were all grown up, which meant I wasn't their servant anymore. I no longer had one child on the arm and another on the shoulder. So now, having a bit more space for myself allowed me to do things. I started cycling to work, but it quickly went haywire, and then I saw your ad in the newspaper and thought, "Hey, here there's someone I just have to commit myself to! There's someone, who will keep an eye on me!" I've already tried to get my husband to keep an eye on me, and I've even arranged weight-check meetings with my doctor. But it's just too easy to give up and to come up with some stupid excuse! But here it's not even for my own sake. It's a project! It's in the interest of world health! I had to put it way up there. I just had to contribute! So, I really didn't sign up for my own sake! Obviously, I did so with an ulterior motive. But I signed up so you could get some research subjects and some good results. I had to be part of it and you had to crack the whip, if I was about to give up.

For Bettina, trial participation was an opportunity to engage in a self-care practice after a life phase, in which her focus and care had been directed towards her children. Participating in the trial would attach her to a collective, whose expectations to her as a research subject would constitute her as a collectively-committed person. The important point here is that the trial was neither designed for her, centred around her, nor built on her motivation—factors that had all been pivotal but ineffective in her previous failed 'trials' of active living. Unlike prior arrangements with her husband and doctor, the trial constituted a project of wider societal significance and importance. Its necessity and authority was indisputably important for Bettina, who appreciated the disciplining and surveillance. Bettina's ulterior motive was that engaging with the trial would oblige her to behave as a responsible and altruistic citizen by exercising her body according to the protocol. Bettina thus saw an opportunity to harness her self-care project to a research project that served a greater cause—its significance would require her perseverance and legitimate the researchers' enforcement. In that sense, the trial allowed Bettina to organise her self-care as a duty to care for others, a particular group of researchers and a more general project of global health, thereby creating an inescapable double bond.

The self-evident authority of the trial also figured prominently when Daniel, a man also in his 30's, compared trial participation with hiring a personal fitness instructor in an attempt to describe why he chose to engage with a research project to take up more exercise:

> If I have a personal exercise supervisor in the gym, for example, I can just call and say, "Well, I can't make it in today," and then we'll have to reschedule, and then you can just continue to postpone it. But here there's an obligation in that there is actually somebody who depends on my exercise for the project to succeed. This means that I have a harder time backing out. It has something to do with the fact that they are an authority to me, and I generally accept authorities in the sense that if I'm asked to do something, I do it. If I can pick-and-choose myself, then usually nothing happens.

As Daniel reasoned, a personal fitness instructor constitutes a service that can be purchased and controlled, which means that it ultimately relies on his decision to use the service. With this comparison, Daniel could be said to problematise what Mol has termed 'the logic of choice,' which posits health as simply a matter of choosing certain lifestyle products (2008, p. 67). For Daniel, however, choosing to hire an exercise instructor does not necessarily lead him to exercise. Daniel is neither interested in making a choice nor a transaction; instead, he wants someone to choose for him and someone to demand, rather than to propose, his engagement. By problematising the idea that freedom and autonomy 'make things happen,' Daniel thus stressed the importance of being in continuous interaction with someone to whom he plays an important part. While Daniel stressed that he was in fact participating out of 'egotism,' trial participation was an opportunity to organise his self-care—his self-interest—as a 'duty' to care for someone else's project.

For both Daniel and Bettina, trial participation allowed for a distribution of agency and responsibility in which the trial researchers would dictate and demand, but also be in need of the their commitment in a non-negotiable and authoritative way. More generally, the attractiveness of the trial was that it allowed participants to organise their work on themselves as a care, commitment, and responsibility to complete a project that served someone and something else. In the harness of the trial, working out would be rooted in an imperative and in an obligation to follow protocol.

While participants highlighted the authority of the trial in mobilising their lifestyle change projects as an important feature, its authority functioned as a double-edged sword. Trial participation entailed an engagement with an actor who did not offer a service or a product, but an opportunity to commit and comply. On the one hand, the participants' authorisation of the trial, which formally materialised in a signature on the consent form, created a situation where they could potentially enter into a productive, engaging, and careful relation with a group of researchers, certain forms of

knowledge, and collaborative practices. On the other hand, their authorisation of the trial and its researchers meant that participants risked allowing the researchers to expect things that did not sit well with them, such as being randomised into a less desirable group or, worst-case scenario, into the control group, which did not involve any exercise intervention. For Mona, for instance, 'living as usual' in the control group caused her to feel excluded from the collective and from the partnerships, she had hoped to form:

> I was like, "Damn, this is a real bummer! I really wanted to contribute to this and to be part of it!" Here, you get the no recognition, no chance to show anything. Well, I know you get an honorarium at the end. But you don't get any opportunities to show anything or get support like, "Well done!" "Great job!" "That's smooth." or "Now we see improvements!" That was the drive I was looking for. That's what I expected! And six months is a long time when you're not part of the trial. You're just not that interesting to them. But then again, you've got to remember that you signed the papers and that you knew the risk of ending up in the control group.

For Mona, trial participation was primarily a chance to engage in a specific arrangement that could drive a process of lifestyle change. Having a clear vision of what she wanted from the trial and the particular ways in which it could serve her, she described how being in an exercise group would provide her with a chance to show herself, obtain recognition and support, and become the focus of interest. The fact that Mona was randomised to the control group, however, points out how the potential of trial participation as a technology of the self was grounded in a scientific principle, which did not treat participants as individual selves with particular desires and visions that had to be accommodated, but as isolated research materials. The randomisation procedure, in other words, required participants to be able to change their motivation and work on themselves as good citizens and research subjects, rather than health subjects. This shows how the particular selves that trial participation could allow were both grounded in the research-specific requirements and extended beyond certain health-specific subjectivities. Thus, trial participation as a technology of self did not entail assuming a stable and singular subjectivity, but instead offered several subjectivities that the participants had to coordinate and work on.

Working Out in Harness: Authorisation and Docility

When participants were placed in one of the three exercise groups, they were given a heart rate monitor, an exercise protocol, and appointed a researcher who would function as their exercise supervisor and monitor their exercise data by continuously keeping in touch via phone and email to ensure compliance. The researchers thus personified and personalised the significant Other to which many of the participants wanted to 'fasten' themselves in the day-to-day practices of trial

participation. The researchers' significance as the Other is evident in the following quote in which Niels, a participant in his 40's, considered the difference between being a member of a Facebook group of peers and being supervised by a trial researcher:

> How are you in contact with JSQ, [Niels's exercise supervisor]?
> Well, he writes me an email from time to time, saying, "It looks good," or "Keep it up." I usually don't answer... Or, rather, I do so by continuing my exercise. For me, it works well that way. You know, the thing is... groups on Facebook and stuff like that simply don't have the same effect. There has to be some sort of authority. But it's not like he's an authority like a decorated officer or anything like that. It's more like he's an authority of knowledge, in the sense that he knows what it takes and can say things like "You need to do this and that." And that has some influence because then you want to do it! Because he explains what we get out of it and he can describe the different benefits and effects of exercise. You can't use a Facebook group to do that, where everyone likes to be paced. There has to be someone, some kind of central actor, who says, "Now you have to do this and that" and "That is damn good!" and so on. So, you can't just substitute it with something else, when the trial is over.

Niels juxtaposed 'tutorship' and 'community' as two distinct ways of organising active living and discussed their potential to motivate him and pointed to authority as the crucial difference between these two organisational forms. Unlike being a member of a community of peers, being under the tutelage of someone implies entering a hierarchical structure, submitting oneself to a knowledgeable authority, and engaging in a learning process. As Vinciane Despret (2004) has argued, authority refers both to an attribute, something one has; i.e., a power or right to allow, and to a process, as authorisation. According to her, authorisation refers to a relationship in which one party allows another party to live up to a set of expectations by communicating faith and trust in that party's ability to act competently and in accordance with specific expectations. This process allows the second party to assume a new position as competent, as an authority, all the while reproducing the authority of the first party. As she put it: "to have the authority to authorize is to make the one who is authorized gain authority" (Despret, 2004, p. 132). For Niels, his exercise supervisor was not an authority that enforced compliance through fear, intimidation, or punishment like a 'decorated officer' might do. Rather, JSQ became an authority because he could offer Niels something that interested him, such as biomedical knowledge about exercise. Additionally, he gave Niels a chance to be someone he wanted to be, i.e., a physically active person and a good research subject, by approving and caring about his efforts.

At the same time, Niels authorised JSQ and his biomedical knowledge and ability to manage the protocol, by placing confidence and faith in their joint capacity to play a crucial role in his self-care practice. The correspondence that Niels mentioned in the quote, in which JSQ would write emails to check how Niels was getting on and where he would answer by working out according to the

protocol, embodies this process of mutual authorisation. In the harness of the trial, the responsibility to 'pace' did not belong to Niels alone. Instead, 'pacing' was a distributed and particularising practice in which the action went back and forth in a continuous process of call and response. This enacted Niels as an active self and a good research subject and JSQ as a good, knowing researcher.

JSQ's continuous monitoring and care of Niels' workouts was a crucial part of what made the actual practice of exercising engaging and motivating on a day-to-day basis, because it created impetus around meeting the standards of the protocol, as Niels explained:

> I'm still working on getting my exercise right. How is my mood? When did I eat? How much did I sleep? I can see that these things influence me. And, if I run up a hill, then the pulse increases naturally. So, as I run, I look at the heart rate monitor and try to adjust how far and in what pace I run. You know, my ambition is to hit 420 calories every time, and I have these 3 or 4 different routes, and when running I ask myself, "How does this particular route work?" So, I really try to say, "What does it take now to meet the protocol?" [...] For me, all of this is fun. After all, I am a mathematician by heart.

As Saba Mahmood (2001) has specified, docility is often associated with "abandonment of agency", although it literally means "the malleability required of someone to be instructed in a particular skill or knowledge—a meaning that carries less a sense of passivity and more that of struggle, effort, exertion, and achievement" (p. 210). Niels' description of his workout suggests how working out in harness with the trial required docility in the sense of effort and achievement, rather than loss of agency and, in particular, how the non-negotiable standards and rigidness of the trial protocol could constrain in a "generous" way that allowed for certain bodies and selves (Gomart, 2002). As Niels described, exercising with the heart rate monitor required a continuous, active, and focused work of aligning his body to the standards of the protocol, the environment, and to the ways other aspects of his life influenced his performance. For Niels, mastering the exercise protocol fostered a continuous care for, analysis of, and attention to himself as a physiological body, knowable through quantification and manageable through training. The specifics of Niels' exercise practice, however, also suggests that the trial appealed to certain pre-existing interests and preferences for standardisation, control, and training, and how the technologies of the trial had certain built-in normativities that circumscribed what participants could do, become, and how they could engage.[71]

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[71] My fieldwork suggests that not all participants considered these norms and practices appealing.

Becoming Someone Particular in Harness: Correspondence and Articulation

For many participants, protocol compliance constituted a challenge because the protocol did not always map smoothly onto the participants' lives. To find ways to fit the protocol into the participants' daily lives, the researchers and the participants had to be in regular contact to discuss ways of making protocol compliance happen. The intimate and individualising relationships emerging from these contacts meant that many participants felt obliged to report instances in which they missed workout sessions or did not meet the standards of the protocol. One example is Sally, a participant in her 40's in the active commuting group, who described an instance in which she notified her exercise supervisor about her non-compliance, when she had to deviate from protocol and the arrangement they had made:

> Last Thursday, unfortunately, I had to let down MB [her exercise supervisor]. I'm sorry, but I was late and I was well aware that I would arrive at work at least half an hour too late. Usually, I have to get off a few stations before and then ride the rest of the way to work. But right there, I had to put my work before my exercise, so I took the train all the way to work. Once there, I wrote to MB, "MB, I'm sorry, but I was late and I had to prioritise my job." And in the evening, when I was going home and the rain was pouring down, I cycled to the station because that was what I had to do! And I do it because he told me to do so. After all, he is the bike boss!

While the trial was designed to test easy and everyday workable ways of exercising, the quote above shows how the trial constructed a trial-specific and somewhat extraordinary active commuting practice. In the trial, active commuting in everyday life was also a research practice, which meant that the route was designed and monitored according to specific research criteria. For Sally, this meant that she had to combine cycling with public transportation and take a route, which had been carefully metered by her exercise supervisor to meet the protocols' standards. These research-specific features did not only objectify the participants' exercise as research objects, but they also made it into a moral activity that the participants could do in a right or wrong way. The trial thus promoted a practice in which the participants were regularly invited to relate to their own exercise practices through the protocol and the researchers' monitoring, and in which the exercise practice was continuously articulated as a theme of discussion and negotiation through ongoing correspondence and exchange of information about everyday life and exercise compliance.

The fact that much of the contact concerning the everyday hassles of cycling happened through email-based correspondence is suggestive in light of Foucault's work on technologies of the self. Foucault (1997a) described correspondence as a technology through which an individual constitutes herself in relation to herself through writing with another. As Foucault stated, "It is a matter of bringing into congruence the gaze of the other and that gaze which one aims at oneself when one

measures one's everyday actions according to the rules of a technique of living" (1997a, p. 216). The correspondence is a way of authorising the Other's gaze, perspective, and opinion and a way of allowing another party to look into and judge one's life and daily activities. In this context, one could say that trial participation allowed Sally to measure her daily commute, 'an everyday action', and hence herself as an active commuter through MB's gaze in the very act of writing to him about it. Through Sally's authorisation of MB as her "bike boss," as an authoritative Other, whose esteem and approval mattered to her, she was provided with an opportunity to "show herself" (Foucault, 1997, p. 216) in the way she wanted to see herself and be seen, i.e., compliant and doing activities she wanted to do, such as cycling. Sally's description of how MB was "sitting on the shoulder" every time she got on the cycle clearly suggests how the mere act of putting on the heart rate monitor, or getting in harness, would invite her to measure herself against the protocol; the particular 'rules of the technique of living' promoted in the trial.

In addition to the ongoing correspondence regarding exercise compliance and data exchange, the research-specific activities also played a role in the articulation of the participants as active selves. In this context, the interim laboratory tests at three and six months constituted an authoritative marker of change for many participants. At these points, the researchers would usually provide participants with some information about their progress and change:

> Well, today has been hugely positive, because today I was scanned and it turns out that I've actually lost 1 kg of fat, since the last time. On the other hand, I've put on 1 kg of muscles. So in total, I've lost about 3 kg of weight. It's obviously not that much, but then again it's quite a great deal. It's self-confidence, right there! Totally!

For participants, trial participation implied being inscribed into a program of biomedical articulation as bodies in transformation and into a plot of self-realisation through knowledge of the body. In addition to individual body measurements, individually adjusted exercise supervision, and correspondence, trial participation also enrolled participants into a collective of researchers as individual research subjects (see Jespersen et al., 2014):

> It means a lot to me that when I show up, that they all know who I am and they remember my name. I get a feeling that it's just me, although I know that there are many other participants. But I'm the one they care about. I'm the one, whose life they know of. I'm the one they praise. I'm the one who is in the centre of attention. I know there are many other participants, but when I'm present it's 100% me and that's quite nice.

Although Sally was aware that other people took part in the trial, her quote suggests how trial participation as a technology of the self harnessed the participants, as individuals, to an empowering and caring collective of researchers as the centre, rather than a common member.

To receive the researcher's care, however, participants had to subject themselves to their assigned tasks and do what the researchers asked of them. Sally, like many other participants, took some of these tasks to be taxing and uninteresting, "I couldn't care less!" she said, talking about the meal measurements she had to do at home. Although tedious, Sally saw these tasks as obligatory, just like the daily commute:

> Those measurements were a real drag. It wasn't that I had to record what I ate, but more the fact that everything had to be measured. You know, like, "I have been drinking half a litre of water at 4:37 pm." Arhh, come on… But I did it. I did it because I had to and that's also why I cycled every day. It's because I have to.

Considering Sally's reflections, one could say that trial participation and its associated tasks and duties allowed her to harness, in the sense of 'making use of,' the necessity and impetus of the trial protocol. By inscribing her individual self-project into a promise and a committing agreement, Sally was allowed to fuel and give it stability and momentum. This empowered her to do new things beyond the scope of the trial:

> Each and every year we take a group photo at work. We use it a lot when we hand out pamphlets and such to our customers. And always, forever, and always, I think about how to best hide behind someone. I have to say, I work in a company where the girls are extremely slim. [Shows a 30 cm range with her fingers]. You know, they're like professional athletes, former dancers, who do the Iron Man just to warm up, you know. And then, I'm just standing there! [Pats her stomach]. So, I usually just try to hide behind people. This year, however, I did not! This year, I sat front row! I sat down on the first row like this. [Sally shows how she sat with her legs together]. Without any problems! That's strange, huh? It's a giant step for me to move that far forward and place myself in the front. I can still see the row: slim, slim, slim, and then me. But I had no problem with sitting in the front row. I never thought I would do that. I've never done that before! It has something to do with that, I think, that I've changed.

> Do you connect that with the trial? (Me)

> Yeah, why else would it happen now?

Because of her participation in the trial, the annual group photo at her work place; which usually articulated her as bigger and less fit than her colleagues and forced her into hiding; became an opportunity to practice herself anew and cross boundaries that she never thought she would. Sally had several examples that similarly framed trial participation as a cause of change and an arrangement that had enabled her to do other things and take on new capacities. She recounted, for instance, how she felt safer in traffic on the cycle, how she was proud every time she arrived at work on the cycle, and how she felt confident in taking part in a yearly exercise event arranged at her work

place. The above illuminates how the research activities and requirements of the trial gave Sally an opportunity to perform and succeed with a set of tasks that allowed her to constitute herself as an active self and to assume new positions in her everyday life with greater confidence.

Expiry: Uncertainties about Agency

One of the central hypotheses inscribed into the trial design, shared by many participants as a hope, was that the interventions would become routinised into everyday life. Yet, while Niels considered exercising in the trial to be motivating, he was aware that exercising would be difficult when the researchers would eventually 'drop the reins':

> So, yesterday I talked to JSQ, who had these halfway evaluation questions, like, "Would you continue exercising after the trial?" Then I said that I actually think it's going to be kind of hard because, for me, it's important that someone follows me. It is not about control, but it's the fact that there is someone who simply checks up on you, "Is the exercise as it's supposed to be," and so on. That's part of it. The thing is that I know there is someone who will approve, coach and guide me by sending those emails, "It looks good." "Remember to do this and that." That really means something to me.

Like many other participants, Niels knew his exercise compliance and motivation depended on his interactions with the personnel and standards of the trial. He knew that putting on the harness of the trial would connect him to someone whom he knew would care about, watch, and check his workouts, which would give him a reason to check and care for himself. Like Niels, Sally was also worried about her ability to motivate herself to continue exercising after the trial:

> What will be the biggest difference, when you complete the trial? (Me)
> The primary difference will be that I won't have the same slave driver that says, "You must, you must, you must," and "You must meet these goals and standards." I think it's good for me that there is someone who's like, "Here's the carrot! Try to catch it, try to catch it." To be honest, I need that, because otherwise I'm afraid I'll fall back into the old jog trot with public transportation.

While Sally drew the above image in jest, it illustrates how trial participation facilitated a de-centering and relational distribution of Sally as an active person, rather than a process of internalisation, and how Sally as an active person relied on a continuous, distributed, and heterogeneous articulation. The distributing of agency, which trial participation made possible, however, also seemed to make her reluctant to claim credit for her exercising. Instead, she constructed her motivation as a distributed and collective achievement. For Sally, the self-care that trial participation enabled created a kind of confusion about who was acting and an uncertainty

about her own agency and ability to motivate herself, prompting a process of self-realisation. In that connection, the self-irony in the cartoonish scene that Sally drew can be read as her attempt to deal with her realisation that she needs external control and motivation in a time where control and motivation should come from within and where it is shameful to be unable to exercise self-control.

Niels' and Sally's doubts about their abilities to continue exercising on their own suggest how trial participation did not build up isolated, self-motivating individuals, but rather lessened the weight of responsibility for a moment. More generally, their uncertainties about their abilities to keep going suggest how the selves, bodies, and social relations offered by the trial were intimately connected to the longevity of the research practices. So, while the trial may have offered a collective way of organising self-care through exercise, which may be a better alternative than the notion of the individual, the above calls for reflections about the stability, robustness, and expiries of these collectives as well as how the sudden dissolution of a collective in itself constitutes an intervention.

Discussion

Within contemporary public health, the usual strategy is that health intervention research provides governments with evidence suitable to feed into campaigns that, for the most part, address the population on a general level to engage them on an individual level (Mol, 2008, p. 67). The citizen-subjects imagined in many of these campaigns are often construed as responsible, rational, and autonomous actors who behave and adjust their choices and desires in line with the information provided (Bell, 2016). This article interferes with this logic through a study of how a group of Danish citizens who, while literate in public health discourse, took a health intervention research trial as an opportunity to distribute and organise what they all seemed to accept as their individual responsibility to live a healthy life. In particular, I highlighted how a health intervention research trial, of which the ultimate aim was to inform future campaigns on how people should live their lives, became a way to lessen the weight of responsibility imposed by the same kinds of campaigns to which this form of research ultimately gives weight. On a general level, the article thus points to a disconnect between the public imagined in public health policy and practice, and the publics enacted in concrete public health intervention research practices. This discrepancy prompts questions about the entrenched category of the individual as a self-motivating actor, a category directing both public health research and practice (Mol, 2008).

In the context of the exercise trial in question in this article, compliance with a lifestyle change program was not the result of an individual participant's motivation, but a practised and distributed achievement, effectuated through the engagements made available by the social and material tools of trial participation. To unpack these engagements, I used the notion of the harness to zoom in on

the specificities of how the participants engaged with the imperative of active living (Thing, 2010). More specifically, the harness referred both to the heart rate monitor, a device that coupled each participant to a researcher during the trial, and to the multiple ways in which this technology allowed participants to enter into simultaneously constraining and controlling, as well as enabling and caring relations. While a trial can be analysed as a standardising technology for governmentality (Brives, 2016) that streamlines participants and their daily lives through standardised behavioural programs and supports particular ideals of health and the body, this article has shown how the rigorous scheme of the trial protocol also enabled and fostered a multiplicity of self-care practices in which the participants drew on and organised different components of the trial. The heart rate monitor not only connected the participants to a researcher, but also to an authoritative and trusted governmental organisation, a concrete research project, specific researchers, expert knowledge, and a particular protocol comprising specific standards. It thus allowed for the organisation of complex and differentiated patterns of obligation and mutual responsibility.

While the trial was designed to evaluate exercise as a distinct health behaviour, exercising in the trial was concerned with more than simply burning off a dosage of calories; more than a matter of individual self-control or self-motivation. Exercising in the trial, in practice, revolved around other ideals and norms, such as living up to expectations, being a good research subject, learning, being cared for, and caring for others, as well as articulating and caring for oneself in new ways. These norms deserve critical attention as they might foster awareness about the situated and paradoxical ways in which people engage with their health and work on themselves.

This insight also has implication for lifestyle-based public health intervention research. Rather than a distinct object of research, my analysis articulated exercise-based lifestyle change as a joint, distributed practice, involving and working through various elements, logics, and associations, extending beyond both the trial setting and its basic categories. This draws attention to the social and material infrastructures of participation that drives trials of 'behavioural change' and to the disconnect between the ways in which individual health behaviours are framed as objects of research, and the multiple ways these objects are realised in situated trial practices. On a general level, the article thus broaches the need to take seriously the disconnect between the collective and complex ways in which public health research projects produce evidence and the routine ways governments use this evidence to emphasise individual autonomy and responsibility. Articulating the situated and multiple ways in which public health research works *in harness* with its publics might be a way to increase self-reflection within public health research (Mol, 2006) and a way to encourage new ways of situating responsibility and organising people's engagement with imperatives of healthy living.

Conclusions

Staying in the Mud of Trialling

Producing evidence about the health effects of health behaviours and lifestyles is integral to the practice of contemporary health promotion. Within public health intervention research, which underpins this project, the RCT is often highlighted as the best method available, because its rigorous way can yield statistical, quantitative, objective and reliable evidence. A concurrent ambition in this field of research is to produce evidence that can be translated into practical and socially robust solutions in people's everyday lives. At the heart of public health research thus lies the challenge of balancing requirements for methodological rigour and societal relevance.

This dissertation has examined a case of how this is done in practice. The empirical focal point of the dissertation was the GO-ACTIWE project, which tested the health effects of active commuting and leisure time exercise by conducting a trial in the everyday lives of a group of Danish citizens. The analytical purpose was to unpack the work that participants and trial researchers did to realise the protocol. In taking up this project, I aimed to show how the prerequisite for and outcome of this work was a trial-specific everyday life, in which ideals of workability and scientific elegance were continuously sought aligned in practice. The overall purpose of investigating the work of implementing the protocol was to learn about the RCT as a form of intervention and to articulate the social requirements, conditions and implications of the method when conducted in a particular group of people's everyday lives. The central aim was thus not in line with the RCT (to determine *whether* a health intervention works or not) but rather to explore *how* a health intervention works. Two questions have guided this inquiry:

Which kinds of work were involved in the realisation of the trial protocol?

How did ideals of methodological rigour and everyday life workability align in practice?

In answering these questions, I have worked from a performative understanding of science, which construes knowledge production as a practical work involving particular people, tasks, technologies, and collaborative social relationships. In this case, this perspective has enable me to investigate how trial work is productive and the particular ways in which trial subjects, researchers, and routines must be constituted into being in social and material everyday practices. Throughout the

dissertation's two chapters and four articles, I have thus attempted to resist an instrumental understanding of the RCT as a more or less suitable test machine to generate data and evidence. Instead, I have approached the RCT as a performative, productive, and specific event (Will & Moreira, 2010, pp. 8–9) to articulate how realising a trial protocol generates practices, relationalities, subjectivities, and effects that exceed the prescriptions of the protocol. This production of culture, I argue, amounts to a situated, trial-specific everyday life.

In taking up this project, I have changed the original project description, which proposed an ethnological analysis of the participants and their everyday lives and its possibilities and barriers for active living. The original ambition inscribed into the project was that combining ethnological and biomedical perspectives on exercise in everyday life would generate a socially robust knowledge outcome. However, while understanding what it entails to work out in everyday life is a public health concern to which ethnology can contribute valuable knowledge, I learned that RCT-based intervention research indexes forms of problematisations that require an analytical strategy that takes lifestyle change and research as co-constituted in everyday trial practices, rather than separate activities.

The distinct feature of the GO-ACTIWE trial was that it did not aim to facilitate and promote physically active lifestyles on the premises of the already existing barriers and potentials in the participants' everyday lives. As a research endeavour, instead the objective was to make the effect of a specific dosage of energy expenditure based on specific exercise activities measurable every day for six months. As I have shown throughout the dissertation, this requirement and its associated biomedical practices of measurement and standardisation, as well as the necessary social collaborations between researchers and participants in various ways, came to shape the process of lifestyle change promoted in the trial. The compliance requirement implied, for instance, that the participants did not choose for themselves which of the exercise interventions would fit their particular everyday lives, that they were under zealous observation, and that their everyday lives underwent meticulous reconstruction to ensure compliance with an unyielding trial protocol throughout the intervention period. Due to these trial-specific features, I have approached the trial situation as an opportunity to explore what a health intervention trial is and requires to work in practice, i.e., the everyday life of trialling. This focus on the entanglement and co-constitution of lifestyle research and individual lifestyle change practices implies that the contributions of this dissertation both follow and go beyond established social science engagements with public health research, and RCT-based intervention research in particular.

Unlike governmentality-inspired studies that approach public health research as an alliance partner in biopolitical projects of producing and governing specific subjects in the name of health,

my interests have been to investigate how biopolitical concerns (in this case, about obesity and physical inactivity) materialise in situated trial research practices. Therefore, I have approached the GO-ACTIWE trial as a situated and specific practice, rather than an instantiation of a coherent disciplinary regime (see e.g. Rose, 2007). This focus on the trial-specific realities also means that I, unlike recent social science engagements with public health research and practice, have not reacted to the idea of 'health behaviour'. In contrast to the conceptual criticisms that Cohn (2014), Bell (2016) and Blue et al. (2016), among others, have levelled against the concept of 'health behaviour' and its influence on public health research and practice, I have studied ethnographically the work involved in making a health behaviour, (i.e., physical activity), into an object of intervention and inspection. By doing so, I have aimed to offer new ways of reflecting on current health intervention research through analysis of its principles in action.

However, although I have focused on RCT-based knowledge production, my engagement with trial research has not been driven by epistemological discussions about RCT principles, causality, or how to conceptualise contexts or complexity in theory, which constitute key points of discussion within the field of public health research. Based on a performative approach to knowledge production, I have tried to articulate an empirical complexity by examining the practices, subjects, and socialities that RCT principles require and foster in practice. My strategy has thus been to introduce an approach to complexity that does not aim to order health interventions into smaller 'parts' or 'active ingredients', but rather that emphasises the relational, heterogeneous and social complexities included in the practical implementation of an RCT protocol.

This focus on the empirical realities of trialling in action means that my dissertation in various ways has followed the agendas of anthropological and ethnographic engagement with RCT, in particular, studies that have examined the everyday 'experimental work' involved in trialling. However, in contrast to many RCT ethnographies, I have not taken up established critical agendas, by utilising politics, ethics or care as my primary analytical entrances. Although these are crucial issues in the conduct of RCTs, I set out to explore what the central actors—the participants and the researchers—considered critical in the daily practice of trialling. As such, I have tried to let the concerns that the participants and the researchers have identified in the day-to-day work of realising the protocol drive my project, i.e., concerns about recruitment, monitoring, routinisation, and self-realisation.

Situated in the intersection of public health research discussions, critical public health and RCT ethnography, one can construe the dissertation as an ethnological contribution to discussions about the 'social effectiveness' of health intervention projects (Hulvej Rod et al., 2014). In so doing, I focused on a foundational criterion in trial research, which is compliance with the plan that

determines what counts as 'the intervention' in the causal equation that a given trial is designed to test. As the Exercise Manifesto of the trial described, it is 'absolutely vital' that the participants follow the protocol: 'No exercise, no results' (see Chapter 1). By focusing on this fundamental requirement of compliance, my interest has been to explore the work involved in making the protocol function as a script for both research projects and lifestyle change projects, and as a way to pursue both ideals of methodological rigour and everyday workability.

Exploring this question of compliance, I followed Mol and Law (2001) by trying to 'bring down the trial to earth' (p. 610) and by staying with the 'muddy' practices of trialling. As one of the main architects behind the trial's design pointed out, lifestyle intervention research is 'muddy' (see Chapter 1). In this dissertation, I have suggested that this mud, this mixture of different elements, can be understood as the practices that arise in the attempt to mix, align and realise ideals and projects of scientific elegance and everyday life workability and what these endeavours carry. Staying in this mud has been my way of engaging with the complexity of health intervention research. Further, the concept of mud, as Donna Haraway (2016) points out, can act as a theoretical trope that can 'trouble the trope of visual clarity' (p. 174). 'Empty spaces and clear vision are bad fictions for thinking' (Haraway, 2016, p. 174). For me, rather than a theoretical trope, the notion of 'mud' has functioned as a methodological reminder to stay with the trial trouble at all times and to consider the practice of trialling as a complex and muddy work, rather than a clear-cut, smooth and streamlined flow, as the RCT iconography suggests (see Figure 16.)
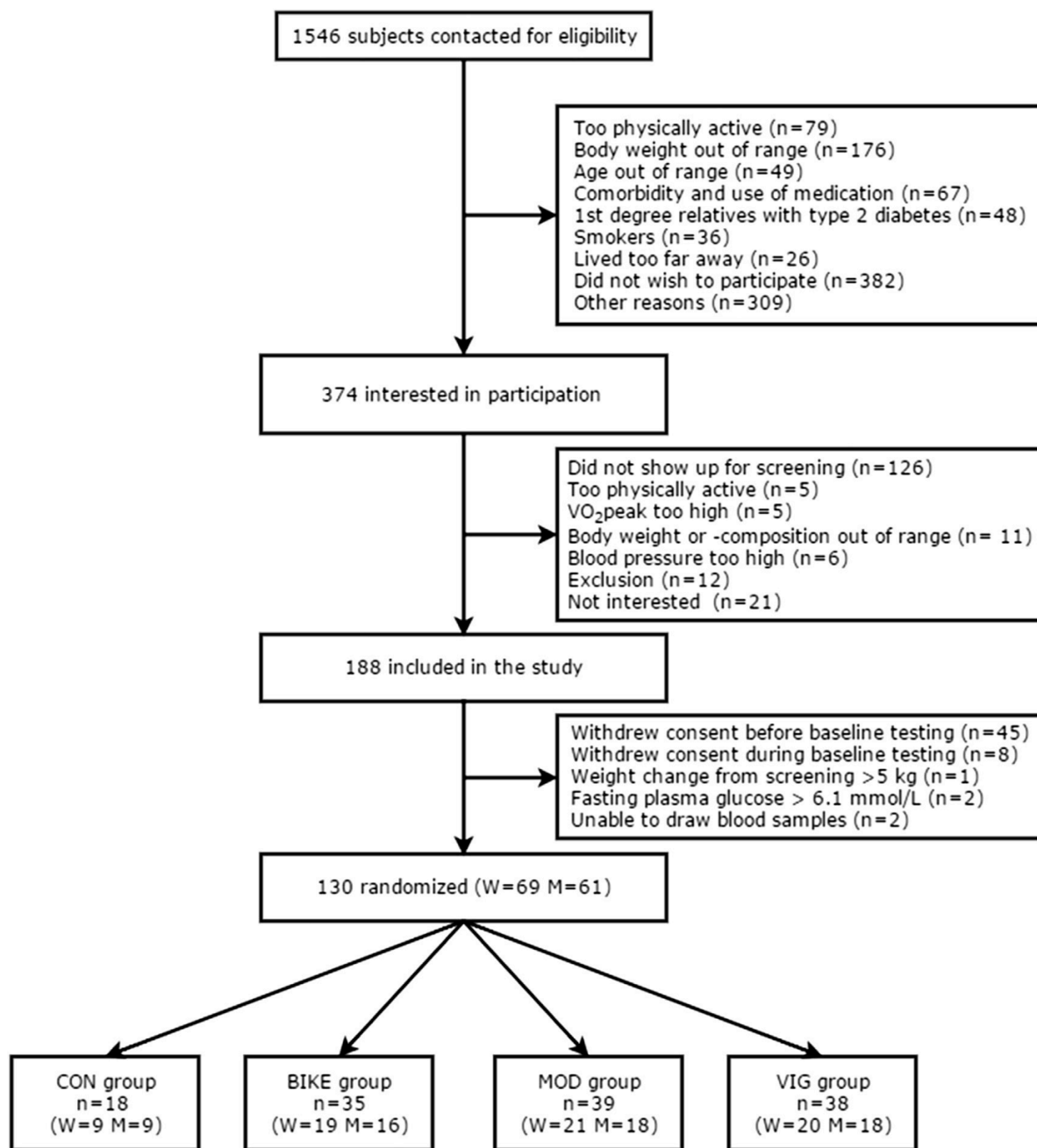
Figure 16: Trial flow chart (Rosenkilde et al., 2017)

Figure 16 depicts the trial in the form of a flow diagram, and it represents an alternative version of what has interested me in this dissertation. In brief, the figure shows an overview of inclusion and exclusion of participants; from their first contact with the trial to their location in one of the four groups. More specifically, the figure summarises that 1,546 people contacted the project, 374 were interested, 188 people were included and 130 people were randomised to the four intervention groups. The boxes of the figure also show that participants were excluded or excluded themselves for different reasons, e.g. because they did not turn up, fit the inclusion criteria, or they changed their minds and withdrew their consent. However, while the figure depicts a trajectory characterised by inclusion, exclusion, and various problems, it does not reveal the social processes and the work the researchers and participants have done, which is what I have tried to do with this dissertation.

Instead of looking at the trial as a clean figure, I have tried to see the trial as smeared and realised in everyday trial practices. In particular, rather than admiring and allowing myself to be overawed by the ostensible simplicity of the trial plan, I have tried to open the 'black boxes' of the figure and go beyond apprehending the trial's realisation in terms of input/output or intervention/outcome to articulate the work that goes into producing statistical, quantitative, and 'hardcore' evidence for public health. As Latour (1999) has described, 'black boxing' refers to:

> the way scientific and technical work is made invisible by its own success. When a machine runs efficiently, when a matter of fact is settled, one need focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become. (p. 304)

Accordingly, my aim has been to foreground the social and material workings of the everyday life of the GO-ACTIWE trial and foreground the work and social mechanisms involved in making the trial protocol workable, socially effective, and robust in the participants' everyday lives.

In what follows, I sketch out the main findings, this approach has yielded and their implications, after which I discuss their bearings on health intervention research and future ethnological engagements with such projects.

Researcher Work

Article 1, *Recruitment Tests* and Article 2, *Proper Vision* focus on the researchers' day-to-day work of recruiting and retaining participants. Overall, the articles show how the researchers' work was integral to the participants' protocol compliance, and how researchers both had to enforce the protocol and actively take part in facilitating the practices it prescribed and solving the problems it caused.

Recruitment Work: Creating Trial Subjects

In *Recruitment Tests*, co-authored with Line Hillersdal and Astrid Pernille Jespersen, we unpack the constitution of a trial subject, i.e., the specific relations that made up a suitable trial participant. In the article, we approach the recruitment scheme of the GO-ACTIWE trial as a series of situations, in which relations between participants, researchers, and specific trial requirements and practices were tested.

The article shows, more specifically, how an advertisement tested the basic premise of the trial of being able to align lifestyle change research and lifestyle change practice; how an information meeting tested relations between committed members and a research project; how a screening procedure tested compatibilities between inclusion criteria and participant bodies, between researcher and participant, and between research categories and self-understandings; how a baseline test tested relations between laboratory procedures and participant bodies; and how the randomisation tested agreements between trial-specific interventions and participant preferences.

From our analysis, three points can be made about participant recruitment to trials. First, participant recruitment not only entails recruiting biologically suitable bodies that match the formal inclusion criteria; it also involves creating trial-specific subjects with the right motivation for their participation and subjects who fit the design and its requirements. Second, participant recruitment unfolds through social and material situations, in which different configurations of participants, researchers and trial requirements are 'tested'. Third, participant recruitment involves not only the creation of participants; researchers also need to assume particular subjectivities in the process of recruitment. In sum, we thus argue that trial participants are not singular pre-existing subjects, but subjects who are enacted in concert with the specific practices and researchers involved in a trial.

For the researchers, recruitment work involved trying to place the participants in the relationships that the trial protocol prescribed and in doing so to particularise these relationships by balancing research and care practices on-site. The article thus shows how the scripted and formal steps of participant recruitment to trials entail both a formal process of selection and exclusion and a situational process of mutual acquaintance. The article suggests that the challenge of aligning workability and methodological requirements in concrete trial encounters concerns the cultivation and maintenance of specific researcher and participant relations through situational care work. Every research encounter, from this perspective, is a test that generates friction that must be handled creatively, immediately and on-site.

For public health projects that seek to promote healthy lifestyles, one implication of this understanding of recruitment is that one acknowledges people are not recruited to particular and

circumscribed 'health behaviours' or interventions, but to the particular social and material organisations that promote these behaviours and interventions. In particular, this insight draws attention to the subjectivities these organisations require to work and to the material and social infrastructures of participation through which these subjectivities are enacted. Articulating the social and material relations that interventions work through, in other words, can be a way to unpack why some health interventions succeed in 'recruiting carriers' (Blue et al., 2016), while others do not. Moreover, taking up this strategy is a way to understand the social relationships that particular health intervention projects require to be socially effective (Hulvej Rod et al., 2014). In relation to this question, the article emphasises how health intervention projects require subjectivities that need to be coordinated and maintained for such projects to be socially effective, robust enough to withstand sustained testing, and workable in the process of being conducted in people's various everyday lives.

More generally, the article draws attention to how research populations are enacted in relation to certain research questions, design requirements, and specific social collectives. As Cohn (2016) has argued, a research population, rather than a representative sample of a pre-existing population, constitutes "a strategic creation that identifies and constructs a group of individuals according to particular hypotheses and research enquiries" (p. 33). This argument invites one to acknowledge how research designs and questions produce populations, rather than the other way around, and how trials, by producing both evidence and particular kinds of subjectivity, come to function as technologies of citizenship (Rose & Novas, 2005).

As anthropologists Robert Pool and Catherine Montgomery (2017) argue in their study of trial recruitment in Zambia, "the recruitment of particular groups to clinical trials is not simply a scientific question, but has deep social implications relating to citizenship and representation" (p. 10). While the societal contexts of Zambia and Denmark differ significantly, their point broaches the need to reflect critically about the implied normativities of trial-specific population constructions, how research populations are defined by more than descriptive characteristics, and how particular research questions and designs require and produce certain populations alongside the exclusion of others. Importantly, however, the analysis also suggests that the work of producing trial-specific subjects is precarious, laborious, and continuously tested by other subjectivity-producing projects and practices in everyday life. Rather than operating in social vacuums, RCTs attain and lose their governmental effectiveness in an ongoing social world.

Compliance Work: Achieving Compliance from a Distance

In *Proper Vision*, I follow the researchers' work of monitoring the participants and ensuring their compliance with the exercise protocols at a distance. By focusing on their monitoring set-up as an 'apparatus of visual production', I highlight how the researchers worked to achieve participant compliance by shifting between four interrelated ways of seeing, relating to, knowing, and intervening on the participants, their compliance and their everyday lives.

The first 'way of seeing' worked through the heart rate monitors that the participants had to wear during each of their workouts. By transposing exercise data into a table, the researchers could monitor and micromanage the participants' compliance by relating to their exercise as data on heartbeats and energy expenditure. The second 'way of seeing' worked through telephone and email-based communication, which allowed the researchers to position themselves as participant-specific 'everyday coaches' and to attain knowledge about how to intervene in the participants' everyday lives to help them routinise the exercise protocols. The third 'way of seeing' also worked through telephone and email-based communication, in which the researchers sought to 'meet the participants at eye level', i.e., to approach them as people in specific life situations and to maintain their personal relationships with the participants. Through the fourth 'way of seeing', researchers tried to handle non-compliance by spelling out the rules of the trial or by ignoring non-compliance and through such form of strategic blindness to maintain the illusion of control.

The article shows how realising scientific ideals of control and compliance was fundamentally a fragile affair, which relied on the researchers' ability to create continuously objects and subjects for inspection and intervention. More generally, my argument is that the goal of securing high participant compliance relied on achieving a 'panoptic effect' through these 'ways of seeing, controlling and intervening' and on assuming the subjectivities that each of these ways of seeing implied. The article thus shows how realising ideals of methodological rigour and workability relied on the researchers' compliance with both their research projects and their specific relationships with their group of participants and, in particular, how unstandardised delivery of the interventions was a prerequisite for producing standardised and reliable data. In light of the article, health interventions projects attain their effectiveness and robustness at a distance through careful differentiation and particularisation of researcher and participant relationships.

With its focus on monitoring technologies, the work they require to be effective, and what they make of researchers and participants, the article also draws attention to the situated co-production of trial staff and target populations and how different forms of engagement and motivation entangle in health intervention projects. In particular, the article highlights how the researchers' ambitions and stakes in securing the proper execution of the protocol constituted a crucial prerequisite for the participants' compliance with both the protocol and their individual lifestyle change projects. This

point broaches questions regarding the significance of the work that intervention staff do in ensuring the social effectiveness of a health intervention project and the conditions that circumscribe this work (i.e., working hours, motivations, ambitions, and social, technological and material resources).

While emphasising the researchers' zealous engagement, the article also highlights how realising goals of standardisation, control, and monitoring constitute hard-won achievements. Rather than operating as a 'powerful tool of governmentality' (Brives, 2016, p. 6), the article portrays the governmental powers of the RCT as inherently impaired and challenged by its accompanying logics (and ideals) and their shortcomings in everyday lives that do not operate according to its presumptions. Apprehending RCTs (Brives, 2016), not in terms of their ostensible governmental powers, but in terms of the mundane work that trial researchers do and the (social and material) technologies they use, might be a way to explore what makes up the particular social, contextual, cultural and societal preconditions of controlling a health intervention project.

Participant work

Article 3, *Routines on Trial*, and Article 4, *Self-Care in Harness*, concern the participants' work in the trial and what compliance with the protocol entailed for them. Overall, the articles show how protocol compliance involved a work of realising unyielding exercise protocols in ongoing and dynamic everyday lives, and a work of making trial participation meaningful as a form of self-care.

Roadwork: The Hidden Work of Trial-based Lifestyle Change

Routines on Trial focuses on the participants' work of making the exercise protocols into routines in their everyday lives and the various frictions that emerged in the process. In the article, I develop the notion of 'roadwork' to explore how they 'extended the laboratory' (Latour, 1983) by creating conditions for a new bodily routine and performing this routine according to the generic trial protocol. The analysis thus highlights a trial work not measured by the heart rate monitors, evaluated, or included in the biomedical assessment of the exercise interventions. Rather than being isolated 'pills', I used three participant cases to foreground how health interventions in everyday life give rise to intervention-specific work that reconfigures parts of everyday life.

In the analyses, I conceptualised this work as roadwork and unpacked how it implied working out frictions between an unyielding protocol and shifting conditions for compliance every day through trial-specific planning, tinkering and restructuring of existing everyday life routines. By focusing on how the participants were active in the realisation of the trial protocol, the article pointed out that

the built-in norms and assumptions of the protocol sometimes prevented workability. When studied in practice, the implicit norms of protocols and their associated implication became visible, just as it became clear how existing routines and practices and their flexibility, in other words, constituted situated conditions for the possibility of achieving methodological rigour in ongoing everyday lives.

More generally, the article points out how health interventions carry (implicit) normativities (Mol, 2013) about time, space, sociality, routinisation, and bodily practice, as well as *who* and *what* an intervention addresses, and how these norms generate frictions and tensions between other norms and practices. When followed in practice, health intervention protocols problematise specific elements of existing everyday life routines and practices, which, in turn, problematise the assumptions and norms of these protocols.

With the focus on roadwork, the article constitutes a contribution to current discussions within critical public health concerning the complexity of health practices by articulating the associated work of establishing a health practice. By considering health interventions as forms of problematisations and in the light of their required work, one can begin to appreciate and explore how routinisation of health practices is inextricably linked to, conditioned by and potentially in tension with practices that do not necessarily appear health-related, such as transportation, breakfast eating, school assignments, and child delivery. In other words, apprehending health interventions as labour-intensive and labour producing problematisations of everyday life makes it possible to take into account the scope of what changing (someone's) lifestyle entails. In this context, ethnology can contribute with studies of the construction work, tinkering and heterogeneous engineering (Law, 1987) that go into making new health routines under the auspices of particular health intervention projects.

Additionally, the article's analyses suggest that compliance with a lifestyle programme must be regarded as more than a result of individual motivation. In light of the article, compliance figures depend upon the situational and shifting possibilities for making and remaking everyday life. Compliance, in this perspective, becomes a question of whether a particular lifestyle programme is 'compliant' with the organisations, practices and norms constituting people's everyday lives and whether it is 'generous' (Gomart, 2002) with regards to creating meaningful processes of change, in which the work of creating the conditions for a given health routine and actually practising the routine is balanced.

With its focus on the participants' work with the trial protocol in their everyday lives, the article also move beyond the clinical or laboratory encounter, which has been a key focus in the ethnographic study of RCTs (see e.g. Jespersen et al., 2014). The article thus sheds light on the RCT's spatial extension and associated implications outside the laboratory or clinic in contexts that work

through other logics, norms, and practices. Following the protocols and how they are followed beyond labs and clinics can provide a pathway to explore the situated entanglements of biomedicine and everyday life and the 'awkward zones of engagements' (Kontopodis et al., 2011; Tsing, 2005) that emerge in the process. Rather than a uniform process of (bio)medicalisation, the article suggests how RCT logics and assumptions entangle, co-constitute, but also fall short, when mobilised 'in the wild' (Callon & Rabeharisoa, 2003). As such, locating RCTs in contexts beyond the lab and clinic constitute a future line of inquiry that can yield new understandings of the co-production of RCTs and everyday life, and how RCTs are normalised, domesticated, problematised, and reappropriated in different contexts and by different carriers.

Self-Work: Making Trial Participation Meaningful in Everyday Life

While Routines on Trial highlighted the hidden work involved in complying with the trial protocol, Self-Care in Harness investigated how this work related to the possibilities of the trial to work as a 'technology of the self' (Foucault, 1997b), i.e., as a form for self-care related to imperatives of active living. *Self-Care in Harness* thus complements Routines on Trial by showing how the participants' roadwork was bound in the self-care projects that trial participation allowed. In the article, I use the notion of 'harness' to explore how trial participation and the heart rate monitor, more specifically, allowed the participants to subject themselves to research-based control, monitoring, and surveillance, and to engage various aspects of the trial as components in their self-care projects. As such, the article also complements, *Proper Vision* and *Recruitment Tests,* by unpacking how the participants relate to and engage with the researchers' monitoring practices and the subjectivities offered by trial participation.

In the article, I highlighted, for example, how the trial's authority as a state-sanctioned research project allowed the participants to assume a position as dutiful citizens and become responsible for implementing a lifestyle change protocol as a way to take responsibility for their lifestyle. In the article, I also showed how the compliance requirements of the trial gave rise to certain partnerships, correspondences, and exchanges, and how the participants in different ways authorised the researchers as significant Others. Through the notion of harness, I showed how 'the trial' emerged as a multivalent and multiple Other through which the participants could distribute, lessen, and reorganise the responsibility for living a healthy life for a moment. The article thus showed how the research project was part of (and depended on) projects other than research projects, and how its ability to accommodate individual and specific projects was a prerequisite for the standardised implementation of the protocol.

In light of the article, one might infer that a distinctive feature of what makes lifestyle intervention trials work and socially effective is that they allow for particular ways of living, ways of arranging care, and ways of pursuing certain subjectivities and goods alongside the production of evidence. As such, the article contributes to the established interests in the relationship between research and care in RCT ethnography, taking up by, for example, Timmermans (2010) and Wadmann and Høyer (2014), with an analysis of how research practices become relevant as self-care. While contributing to this agenda, the article simultaneously broaches the question of how one might distinguish between the different forms of (self-)care that trials make possible and what kinds of ideals, goods, and values these (self-)care practices carry. Rather than allowing participants to access otherwise unavailable treatments, medicines, livelihoods, or political influences (see review of RCT ethnographies in Introduction), this particular trial allowed participants to engage with certain imperatives of health (Lupton, 1995). This suggests the need to expand the understanding of what a trial is and what forms of participation trials facilitate.

As STS scholar Noortje Marres (2012) has argued, experiments constitute particularly potent forms of public engagement, because of their ability to accommodate a 'multiplicity of purposes' (p. 81). Experiments, Marres argues, not only do 'ontological work' by facilitating integrations of new techno-scientific entities into society (such as evidence on health effects), they also do political or social work by enlisting support or inciting resistance from certain actors and collectives around certain projects and issues. In this perspective, the article invites one to explore how different political, normative, scientific, and public health agendas are enacted and formed through trial participation, and how these various projects hang together, become entangled, and are made to work together in practice.

Consequently, the particular co-constitution and entanglement of lifestyle research and lifestyle change practice also broaches questions regarding the normativity of trialling. By focusing on the situated ways in which lifestyle change research and lifestyle change practice entangled and organised in situated partnerships between researchers and participants, I pointed to a mismatch between routine strategies for health promotion that stress individual autonomy and the multifarious partnerships that drive the public health research processes that support these strategies. The article suggests that unpacking the situated health practices that form in the process of trialling might be a way for public health research and ethnology (as well as other cultural analytical research) to rework the ingrained category of the individual that form the basis of much public health research, practice and policy.

Simultaneously, the article opens for discussions about the implied normativities of the particular techniques of living (Foucault, 1997a), i.e., standards, ideas of the body, technologies, and regimens,

that health intervention research tests and thereby supports. In other words, what kinds of bodies, subjectivities, futures, and selves enable the production of evidence for future public health campaigns, and what does such social and normative genesis of objective evidence mean for possibilities of generalisation?

Interventions as Conventions

On a general level, this dissertation has attempted to show ethnographically how a health intervention does not simply constitute a unidirectional and surgical exact interruption of a body or an individual as a singular biological mechanism, but how a health intervention also generates a complexity of collaborative and social relationships. In doing so, the dissertation has articulated a version of what a health intervention is that differs from the version that a causal logic enacts. This difference is evident in figure 17 and figure 18.

Figure 17: The randomisation buckets with capsules. Photo by author.

Figure 18: Farewell letter from Sarah (a participant). Used with permission from participant.

Figure 17 shows the randomisation buckets with the capsules that contained the 'intervention' that the participants received. These capsules materialise how the exercise interventions were to be evaluated as pill-like entities, and how both the participants, the researchers and their joint work is not included as part of the intervention, or rather how it has been 'blackboxed' in this logic of evaluation. Figure 18 is a farewell gift from a participant by the name of Sarah, and it shows another version of a health intervention. In brief, the image shows how she exhausts herself on an exercise cycle surrounded by the three trial researchers, each of whom is drawn in a credible caricature with their respective trial devices; a knife to take biopsies, a plate of what looks like nasty test food, and a whip and a timer.

On a conceptual level, the drawing depicts a health intervention as constituted through particular situations, in which a particular group of people and materials convene in particular ways to perform particular tests (e.g. a fitness test or an exercise session). Considering how she breathes through the trial technologies and how she works herself to exhaustion for the researchers, the drawing also depicts how a health intervention works through particular social, material, and bodily exchanges, entanglements and collaborations. The drawing also suggests how a health intervention generates outcomes other than numbers and data. Figure 19 and Figure 20 depict two products from the everyday life of the GO-ACTIWE trial and they materialise this variety of outcome:

Time min	Load W	RPM 1/min	HR 1/min	V'E L/min	V'O2 ml/min	V'CO2 ml/min	VO2/kg ml/ min/kg	RER
10:20	170	94	141	72	2687	2837	27.9	1.06
10:30	170	94	144	71	2756	2820	28.6	1.02
10:40	170	95	150	74	2841	2943	29.5	1.04
10:50	170	94	150	79	2960	3097	30.7	1.05
11:00	170	97	148	79	3004	3110	31.2	1.04
11:10	195	96	151	86	3095	3278	32.1	1.06
11:20	195	95	153	82	2994	3184	31.1	1.06
11:30	195	96	153	70	2581	2738	26.8	1.06
11:40	195	97	157	73	2613	2776	27.1	1.06
11:50	195	96	157	84	3155	3373	32.8	1.07

Figure 19: Data print from fitness test.

Thanks for a mega, super, nice project! I know that I whined at times, but being in the project has meant so much to me. I'm really gonna miss you all. You're fantastic!

Figure 20: Sarah's farewell letter.

Whereas the first pair of pictures shows a difference between an intervention as a pill and the intervention as a social and material situation, the above snippet of a data printout from a fitness test (Figure 19) and farewell letter from Sarah show differences of what counts as an outcome. They show differences between an effect and an affect,[72] an inscription and a description, numbers and words, and a hardcore numerical fact detached from its origin story and a heartfelt letter that testifies a significant social and emotional relationship. The bucket with capsules, the drawing, the data printout and the letter, in other words, suggest how biological efficacy and social effectiveness of a health intervention require different formats, languages and technologies to be articulated. With this dissertation, I have aimed to provide an analysis of the latter by articulating social effectiveness as the result of joint work, exchanges, and social and material relationships around protocol compliance.

Importantly, my point is not to establish an ontological difference between nature and culture or between biology and everyday life, but instead to emphasise that biological effects never come without the associated cultural and social effects in everyday life, which deserve attention. As Law and Mol (2004) have put it in a critical commentary to medicine:

> Medicine's activities always concern both what is beneath and what is beyond the skin. But if all medical operations, even if they simply seem to address bodies, are interventions in lives, then they should be appreciated accordingly. Thus not only their effectiveness in improving one or two parameters, but the broad range of their effects deserves self-reflexive attention. [...] Not all of these effects should be expected to be for the better. In articulating how it is doing, in considering the effects of its activities, medicine would be wise to confront its own tragic character: medical interventions hardly ever bring pure improvement, plus a few unfortunate 'side-effects'; instead they introduce a shifting set of tensions. (p. 58)

Mol and Law point out how a medical intervention in the biological body is always an intervention in everyday life. The effects of (bio)medical interventions, they argue, rather than being isolated, are multiple, impure and ambivalent. In the dissertation, I showed several examples of how the 'intervention' introduced particular 'sets of tensions' and ambivalent effects, rather than going straight into the body. Whereas Sarah's farewell letter might testify a 'pure' effect, she simultaneously writes in the letter that she at times 'whined'. For the participant Mary, who was in the same group as Sarah, the active commuting group, the 'effect' of the intervention was that her everyday life became a 'theatre of the absurd' (see Article 3, *Routines on Trial*). Rather than

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[72] With this distinction, I simply wish to stress the difference between understanding effects as isolated hardcore numerical facts and understanding effects as relationally constituted, emotional, social, and transient. I acknowledge how the notion of affect has been developed in, for example, Non-representational Theory (Thrift, 2008) and affective theories (Massumi, 2002)

establishing uniform effects across bodies and lives, interventions are variable, multiple in their consequences in people's different everyday lives, and productive of different kinds problems that require collaborative work to be handled.

Above all, these points highlight the need to expand the understanding of what a health intervention 'is', and perhaps approach health interventions as health conventions. Etymologically speaking, the word 'convention' means rule or agreement, but also assembly or gathering; (*venire* come; *con*-together).[73] Thus, the word captures my overall point that the realisation of the trial protocol depends on establishing and achieving functional and effective social and material arrangements and that the RCT's meeting with everyday life is co-constitutive.

In addition, the notion resonates with established concepts within cultural research that attempt to capture the heterogeneous emergences, shapings, and structurings of agencies, e.g. dispositive/apparatus (Foucault, 1980) and assemblage (Deleuze & Guattari, 1987. While my intention is not to inaugurate another concept into this conceptual family, my modest point is that the notion of convention serves as a constructive contrast to the established notion of intervention within public health research. In particular, it can be used to highlight how health intervention projects unfold as situational, heterogeneous, organised and organising, and provisional social arrangements that produce various kinds of effects.

Unlike *intervention*, which establishes a causal relationship, in which one party interferes upon another party with an effect as a consequence, *convention* points to heterogeneous arrangements of rules, technologies, knowledge forms, materialities, and people that are brought together in a specific way to 'deal with a particular issue', as the dictionary formulation has it. The implied associations of a structured, planned happening of the notion also point to the short-lived and 'project-like' character of health intervention projects. Further, the notion of convention points to interactions, collaborations, and negotiations around particular issues and to the work involved in coming to terms with and finding agreements.

On a general level, it points to the event-like character of health intervention projects and how their durability intimately relates to certain timelines and the availability of social, material, technological, and human resources. On a specific level, the meanings of encounters between different entities, practices, opinions, norms and projects implied by the notion of convention points to the situational, provisional, *ad hoc* and situated enactment of a health intervention projects in particular practices and meetings, such as the fitness test that Sarah depicted.

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[73] Oxford Dictionary (1990)

As we saw in the articles (and in Chapter 3), the trial protocol was realised through various practices, in which a particular issue relating to the general problem of making projects on lifestyle change and lifestyle change research— ideals of elegance and workability—work together was on the agenda (i.e., a laboratory test, data generation, exercise compliance in a gym or on a cycle lane).

All of these meetings were 'conventional' in that they were grounded in procedural, ethical, normative and social rules, in that they required some sort of agreement between various elements, and in that all the meetings included a bodily, social and material engagement that changed the parties involved. Therefore, the notion of convention points to the concrete situations, practices, norms, and standards that circumscribe and set the conditions of possibility and 'becoming with' within the shifting realms of a health intervention project. In essence, these meetings concerned finding a solution a problem or task, overcoming a test and creating interconnectivity across various kinds of difference. The necessity of negotiation to "make it work", i.e., to come to terms and reconcile differences, in other words, formed the basic, and generative, mechanism in the establishment of effectiveness and the cultivation of robustness.

On a general level, thinking of health intervention projects as conventions might be a fruitful starting point for taking into account how interventions in the body are always also interventions in and productive of everyday life practices. Further, the notion of convention highlights how health effects and compliance with a lifestyle change regime is hardly an automatic effect of simply receiving a protocol. If one thinks of health intervention projects as conventions, in which a variety of actors (e.g., partners, children, researchers, environments, transportations schedules, cars, heart rate monitors, exercise standards, working hours, girlfriends and boyfriends, dreams, rules, fitness centres, school assignments) might become central actors or issues, one might be able to understand the collective work needed to promote individual health and the social processes that make a health intervention project work.

Towards New Conventions

While ethnology (or rather, me as an ethnologist in the trial) did not form an integral actor in the social arrangements that drove forward the realisation of the protocol from day to day (consider my absence in Sarah's drawing above), ethnology nonetheless participated in the development and performance of the trial. Accordingly, the idea of health interventions as conventions invites one to reflect upon the collaborative partnership between biomedicine and ethnology and how research projects and research identities become with each other when convening in the everyday practices of a health intervention project. As I showed in Chapter 2, I engaged with the trial in various ways during my fieldwork, through which I took part in trial-specific situations, which positioned me

differently and shaped my commitment and my study in specific ways. More specifically, I was positioned differently as an ethnologist, when attending meetings in the Faculty Club, when helping in the laboratory, when collecting qualitative data, when exercising with participants, when doing fieldwork at the researchers' office and when analysing at my desk. This multipositionality raises questions about the possibilities of 'ontological politics' (Mol, 1999) in ethnological engagements with a strong actor, such as a biomedical RCT-based research project, whose built-in and routinised assumptions and requirements probably cannot be undone, but perhaps tinkered with (Law, 2004, p. 39).

In other words, in engagements with a health intervention project like GO-ACTIWE, ethnology finds itself in a situation in which it must find ways to, on the one hand, actively take part in shaping the framework—the conventions—for the project, and on the other hand, to understand and assess what goes on. As such, interdisciplinary engagements in projects such as GO-ACTIWE broaches questions about how ethnology might deal with the classical dilemma of working in the cross-section between projects that aim to improve and intervene in people's lives and bodies and projects that aim to understand (and perhaps 'curate') certain versions of what it entails to have, do and be a body and live in everyday life (Damsholt & Jespersen, 2014).[74]

With this dissertation, I have tried to handled this conundrum by interfering with, tinkering with, and shifting the original project description and its idea of the participants' everyday life by articulating the 'everyday life of trialling' as a site for ethnological engagement in public health intervention research. In doing so, my aim was to provide a cultural analysis of the performativity of trialling, and how a 'trial' and 'people's everyday life' generate each other in a continuous practice of trying to make them work together. Rather than a passive, ready-made, default context of research, I have tried to show how everyday life in relation to health interventions should be understood as the work practices through which a trial and the projects it gathers comes to work. So, rather than studying the participants and their everyday lives and possibilities and barriers for healthy living as separate from the research practices, I have tried to develop an interest in the everyday realisation of the protocol by exploring compliance as distributed, complex work. This shift in focus may have consequences for how ethnology might engage in future health intervention projects and for the projects, ethnology can bring to the table and take along from it.

While my engagement in the construction of the GO-ACTIWE design and protocol was mediated and curtailed by disciplinary collaboration structures and biomedical requirements, my analysis

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[74] See Damsholt, 2016; Jespersen et al., 2012; Petersen & Munk, 2011 for more on this ongoing discussion within ethnology.

suggests that integrated ethnological engagements with not only overall trial designs, but also protocols and research specifics could be intensified in the future. After all, the practice of trialling health behaviours concerns the production and transformation of everyday life and as such strikes at the disciplinary heritage of ethnology in projects of governance (see Damsholt, 2016; Damsholt & Jespersen, 2014). The performativity of trialling, in other words, raises questions about how ethnology can engage in these governmental practices. With this dissertation, I propose that an ethnological commitment in trial research could concern making available for reflection the everyday lives of trialling (including those that participate in the genesis of a trial design (see Chapter 1) and the mundane workings that go into making a trial protocol work every day (see Chapter 2 and articles).

By foregrounding the everyday life of trialling as performative and 'done' in concrete trial-related practices, I contend that ethnologists can participate in discussion and re-envisioning of the social and material practices and norms—the kinds of conventions—that drive and derail change processes and query the effectiveness, workability, as well as opportunities and problems of these change-producing everyday lives. For starters, this implies focusing on and participating in the formulation of the specifics of the protocols that structure practices of trialling. While they might appear as biomedical categories, exercise norms about energy expenditure, heart rate levels, ideas about everyday life domains, and procedures of randomisation are not simply scientific questions, but norms that carry, presume and produce certain ontologies. Such research specifics, in other words, participate in the enactment and problematisation of everyday life in trial research and as such call for ethnological engagement.

Foregrounding what Mol (2013) has termed 'ontonorms', i.e., how norms carry particular ontologies, in other words, constitute, one way in which ethnology can engage constructively in developing and improving health intervention research. As Mol (2006) has commented, social science engagement with practices of health care sometimes overlook the technicalities of the treatments and regimens that people are subjected to in their engagements with biomedicine in their quest to explore the meanings of health and illness. As a consequence, the specifics of research and the related tinkering that people and health professionals do often do not receive attention, which leaves little material for critical self-reflection on how to improve health care practices and in this context trial research practices (Mol, 2006, p. 411).

Developing the partnership between biomedicine and ethnology in future trial-based projects, therefore, could be about improving the material and social infrastructures for joint reflection about the everyday life of trialling, its costs, required work, problems, and potentials. This might improve the possibility of integrating alternative forms of (critical) evaluation and assessment that can

supplement, but also challenge the causal evaluation logic that underpins RCT-based health intervention and inspection that aims to improve people's bodies and everyday lives. Working on the everyday life of biomedicine and ethnology and finding out new ways, situations, meetings, conventions and tables, where joint reflection can take place and have an impact, in other words, can be a way to make new forms for organising and reflecting upon relations between assessment and improvement, knowing and intervening. The challenge, as I see it, is to find ways to make available the paradoxes, tensions, built-in criticisms and costs of the everyday life of trialling 'inside' trials, and by doing so to improve the possibility that the RCT learns something along the way, but also from one trial to another. Making available the muddy practices of health intervention projects as materials and tropes for joint critical reflection might be one way to develop health intervention projects that take into account how knowing and changing the body is always also an intervention into and productive of everyday lives.

Making It Work: 'This Table Deserves Respect'

Table 2. Exercise compliance during the intervention and in the week leading up to test day 1 for completers of the study

Full intervention	BIKE (n=19)	MOD (n=31)	VIG (n=24)
Exercise frequency, sessions week^{-1}	3.9 ± 0.4	3.9 ± 0.6	3.9 ± 0.6
Adherence, % of prescribed days	89 ± 9	90 ± 15	92 ± 12
Exercise energy expenditure, kcal session^{-1}			
Women	330 ± 30	335 ± 50	305 ± 35
Men	475 ± 50	460 ± 80	440 ± 85
Total compliance, % prescribed kcal	95 ± 12	98 ± 18	93 ± 12
Exercise intensity, %VO$_2$peakR	54 ± 8	49 ± 5	66 ± 7[a, b]
Exercise heart rate, beats min^{-1}	133 ± 9	126 ± 9	143 ± 11[a, b]
Exercise duration, min session^{-1}	46 ± 10 [b]	54 ± 10	37 ± 8[a, b]
Training in the last week before test day 1			
Last exercise bout before testing at 3 months, days	2.6 ± 1.4	2.3 ± 0.8	2.3 ± 0.8
Exercise frequency before testing at 3 months, sessions week^{-1}	3.6 ± 1.2	3.9 ± 1.1	4.1 ± 1.0
Last exercise bout before testing at 6 months, days	4.7 ± 6.8	3.1 ± 2.8	2.9 ± 1.6
Exercise frequency before testing at 6 months, sessions week^{-1}	3.9 ± 1.6	3.5 ± 1.4	3.4 ± 1.4

Data are presented as mean (SD). Abbreviations: BIKE: active commuting group; CON: control group; MOD: moderate intensity exercise group; VIG: vigorous intensity exercise group.
[a] $P < 0.05$ vs. BIKE; [b] $P < 0.05$ vs. MOD

Figure 21: Table showing exercise compliance.

At the last SAB meeting in the Faculty Club in October 2016, one of the biomedical researchers presented some preliminary results from the biomedical part of the GO-ACTIWE trial. One slide in his PowerPoint presentation contained a table that showed compliance across the three interventions group had landed at a remarkable average of 90–99%. Pointing to the table, he proclaimed, "This table deserves respect for all the hard work!", after which he moved on to present a series of graphs showing the health effects of exercise in everyday life. With this dissertation, I have attempted to give this table respect through a cultural analytical treatment of 'all the hard work' involved in complying with a protocol. In so doing, I have unpacked the complex social processes that goes into producing a percentage figure, which often forms an implicit premise for the effects on different biomarkers presented in graphs and described carefully in the final reports that travel on from trials. Throughout this dissertation, I hope to have provided possible lines of inquiry to understand the complexity of compliance and the everyday life of producing evidence about what works. My hope is that my analyses can contribute to the invention of new tables and conventions that can organise participants, researchers, and ideas of and visions for everyday life in new ways that might work for both public health and its publics.

Resumé

Indenfor sundhedsforskningen fremhæves det randomiserede kontrollerede forsøg (RCT) som den bedste metode til at producere statistisk valid viden om effekterne af interventioner, der skal fremme sundhed i befolkningen. Ud fra en ambition om at producere viden, som også er social relevant, udføres denne form for forsøg i stigende grad uden for laboratoriet i folks hverdagsliv. Dette skaber en situation, hvor videnskabelige idealer om kontrol og standarisering skal bringes i samspil med forsøgsdeltagere og deres igangværende hverdagsliv. Denne afhandling er en kulturanalytisk undersøgelse af, hvordan denne ambition forfølges i praksis.

Afhandlingen bygger på et engagement som etnolog i et tværvidenskabeligt forskningsprojekt i Danmark om fedme og fysisk inaktivitet. Forskningsprojektet var struktureret omkring et interventionsforsøg, som testede sundhedseffekterne af træning i hverdagen. Igennem et etnografisk feltarbejde blandt deltagerne og forskerne i forsøget sætter afhandlingen fokus på den praktiske gennemførelse af forsøgsprotokollen. Med afsæt i en performativ tilgang til videnskab undersøger afhandlingen, hvordan idealer om *metodisk rigiditet* og *gennemførlighed i hverdagen* bringes til at virke sammen i forskellige former for *forsøgsarbejde*. Afhandlingens fire artikler viser, hvordan hverdagsliv og biomedicinsk forskning mødes og gensidigt transformeres i arbejdet for *på* en gang at skabe valid viden og meningsfuld livstilsforandring. Med fokus på denne samskabelse udfolder artiklerne empirisk, hvordan interventionsforsøget afhænger af og genererer et hverdagsliv, bestående af forsøgsspecifikke praksisser, sociale relationer og subjektiviteter.

Den første artikel fokuserer på deltagerrekruttering og de tests, som indgår i skabelsen af en forsøgsdeltager som både lever op til formelle inklusionskriterier og kan gennemføre forsøget i praksis. Igennem en tæt empirisk analyse af rekrutteringsforløbet udfolder artiklen, hvordan forskningsprocedurer og ambitioner om livsstilsforandring håndteres i forbindelse med blandt andet informationsmøder, screeningsundersøgelser og laboratorietests. Den anden artikel undersøger, hvordan forskerne sikrer, at deltagerne følger træningsprotokollen i deres hverdag. Artiklen viser, hvordan forskerne med hjælp af en række monitoreringsteknologier gør deltagerne og deres træning til objekt for forskellige former for indgriben og hvordan forskerne i dette arbejde på en gang forsøger at kontrollere forsøget og gøre det meningsfuld for deltagerne. Den tredje artikel fremhæver deltagernes arbejde med at omsætte træningsprotokollerne til træningsrutiner i hverdagen. Gennem analyser af tre deltageres rutiniseringsarbejde udfolder artiklen, hvordan efterlevelse af protokollen giver anledning til forsøgsspecifikke hverdagspraksisser, som både forandrer og udfordrer etablerede praksisser i hverdagen. Den fjerde artikel undersøger, hvordan deltagerne bruger forsøgsdeltagelsen som en måde at omlægge deres livsstil. Analysen viser,

hvordan deltagerne inddrager forsøgets forskere, standarder og teknologier som komponenter i et selvarbejde, som er karakteriseret ved både kontrol og omsorg, begrænsning og facilitering.

Tilsammen udgør artiklerne en kulturanalytisk undersøgelse af de praksisser, som gør en sundhedsintervention social effektiv, robust og virksom i igangværende hverdagsliv. Samlet set bidrager afhandlingen med en kulturanalyse af de kulturelle normer, antagelser og praksisser som indgår i produktionen af sundhedsvidenskabelig evidens og dermed de måder hvorpå både hverdagsliv og RCT problematiseres i aktuel sundhedsforskning. Afhandlingen rejser spørgsmål om muligheder for at designe sundhedsinterventioner, som tager højde for denne gensidige sammenskabelse af intervention og hverdag.

Summary

Within the field of health research, the randomised controlled trial (RCT) is often highlighted as the best method for producing statistically valid evidence about the effects of interventions to promote public health. To produce evidence that is also socially relevant, health researchers increasingly perform trials outside the laboratory in people's everyday lives. This creates a situation, in which scientific ideals of methodological rigour must be made to work with trial participants and their ongoing everyday lives.

Based on an engagement as an ethnologist in an interdisciplinary research project in Denmark concerning obesity and physical inactivity, this dissertation explores how this ambition is pursued in practice. The project in focus was structured around an intervention trial that tested the health effects of exercise in everyday life. Through ethnographic fieldwork among the participants and researchers in the trial, the dissertation focuses on the practical implementation of the trial protocol. The dissertation builds on a performative understanding of science and examines how ideals of methodological rigour and everyday life workability are made to work together in different forms of *trial work*. Through four articles, the dissertation shows how everyday life and biomedical research meet and mutually transform in the work of creating both valid knowledge and meaningful lifestyle change. With a focus on this co-production, the articles unfold empirically how the trial requires and generates an everyday life consisting of trial-specific practices, social relationships, and subjectivities.

The first article focuses on participant recruitment and the tests through which a trial participant who meets criteria for inclusion and participation is created. Through an empirical analysis of the recruitment scheme, the article unpacks how research procedures and ambitions of lifestyle change are coordinated at information meetings, in screening examinations, and during laboratory tests. The second article examines how researchers ensure that the participants follow the exercise protocols in their everyday lives. The article shows how various monitoring technologies enable the researchers to intervene in the participants' exercise compliance and how the researchers in the process try to control the trial and at the same time make it workable for the participants. The third article highlights the participants' work of translating the exercise protocols into exercise routines in their everyday lives. Through three cases, the article explores how compliance with the protocol gives rise to trial-specific everyday practices that both change and challenge already existing practices in everyday life. The fourth article examines how participants use trial participation as a way to change their lifestyle. The analysis shows how the participants involve researchers, trial standards, and

technologies as components in a self-care practice, which is characterised by both control and care, constraint and enablement.

Overall, the dissertation make up a cultural analysis of the practices that make a health intervention project socially effective, robust, and workable in ongoing everyday lives. By highlighting the everyday practices that form part of a health intervention project, the dissertation draws attention to the cultural norms, assumptions, and practices that constitutes the conditions of possibility for the production of evidence and lifestyle change. The dissertation broaches questions about how to design health intervention projects that can take into account the co-production of a health intervention and everyday life.

Appendix

A. Interview Overview

Moderate-Intensity Group				
Participant 1 (w)	July 31, 2014, Fælled Parken.			
Participant 2 (m)	July 11, 2014, Panum.	November 14, 2014, Home, Copehagen.	February 10 2015, Home, Copenhagen.	June 10, 2015, Panum, Copenhagen.
Participant 3 (w)	November 12, Fitness World, Hvidovre			
Participant 4 (w)	November 26, Fitness World, Vanløse.	March 9, Fitness World, Vanløse.		
Participant 5 (m)	July 10, Panum.			
Participant 6 (m)	November 24, Fitness World, Amager.	January 26 2015, cafe, Copenhagen.		
Participant 7 (m)	January 28, Fitness World, Taastrup.			

High-intensity group				
Participant 8 (m)	June 11 2014, Café, Copenhagen.	September 9, Work place, Vallensbæk.	January 20, 2015, Café, Copenhagen.	
Participant 9 (w)	July 11, 2014, Fælled Parken, Copenhagen.	November 24 2014, Cafe, Copenhagen.		
Participant 10 (w)	May 8 2014, Home, Copenhagen.			
Participant 11 (m)	November 19 2014, Fitness World, Copenhagen.			
Participant 12 (m)	May 22 2014, Enghave Parken, Copenhagen.			
Participant 13 (w)	November 26 2014, Fitness World, Copenhagen.	January 27 2015, Fitness World, Copenhagen.		
Participant 14 (m)	February 3, 2015, Fitness World, Næstved.			
Participant 15 (w)	January 27, 2015, Panum.			
Participant 16 (w)	September 16, Work place, Hvidovre.			
Participant 17 (w)	May 13 216, Panum.			

Active Commuting Group				
Participant 18 (w)	May 15 2014, Panum.	July 16 2014, Panum.	February 12, 2015, Cafe, Copenhagen.	
Participant 19 (w)	December, 1, 2014, Panum.	February 5, 2015, Panum.		
Participant 20 (w)	August 18 2014, Panum.			
Participant 21 (m)	July 8 2014, Panum.			
Participant 22 (w)	January 9, 2015, Panum.	March 17 2016, Workplace/cafe, Copenhagen.		
Participant 23 (w)	May 21 2015, Home, Copenhagen.	September 14, Cafe, Copenhagen.		
Participant 24 (m)	September 22, 2015, Home, Copenhagen.			
Participant 25 (w)	October 2, 2015, Panum.			
Participant 26 (w)	December 11 2015, Panum Office.	February 23, 2016, telephone interview.		
Participant 27 (m)	January 13, 2016, Panum.			

Control Group				
Participant 28 (m)	August 8 2014, Panum office.			
Participant 29 (w)	September 1 2015, Interview, Work place, Copenhagen.	November 11 2015, Panum.		
Participant 30 (m)	March 19, 2016, Panum.			

Staff				
Group Interview: MB, JSQ, ASG, MR	November 26 2015, Panum Office.			
ASG	April 15, 2015, Panum.			
MB	April 24, 2015, Panum.			
JSQ	April 15 2015, Panum.			
MRL	April 8, 2016, Cafe. Copenhagen.			
Gruppeinterview: five students and ASG	December 11, 2015, Panum.			

B. Participant Characteristics

Characteristics	All participants (n=130)	CON (n=18)	BIKE (n=35)	MOD (n=39)	VIG (n=38)
Table 1. Baseline participant characteristics					
Age, years [a]	34 (7)	35 (7)	35 (7)	32 (7)	36 (7)
Female, number (%) [b]	69 (53%)	9 (50%)	19 (54%)	21 (54%)	20 (53%)
Educational level					
Less than college [b]	67 (52%)	7 (39%)	23 (66%)	21 (53%)	16 (42%)
College [b]	42 (32%)	5 (28%)	7 (20%)	12 (31%)	18 (48%)
Graduate school [b]	21 (16%)	6 (33%)	5 (14%)	6(16%)	4 (10%)
Job status					
Employed, No (%)[b]	102 (78%)	16 (89%)	28 (80%)	27 (69%)	31 (82%)
Unemployed, No (%)[b]	11 (8%)	0 (0%)	2 (5%)	5 (13%)	4 (11%)
Student, No (%)[b]	17 (13%)	2 (11%)	5 (15%)	7 (18%)	3 (7%)
Civil status					
Single, No (%) [b]	34 (26%)	3 (17%)	8 (23%)	13 (33%)	10 (26%)
Cohabiting, No (%) [b]	96 (74%)	15 (83%)	27 (77%)	26 (67%)	28 (74%)

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Afhandlingens titel:

Making it Work—Trial Work between Scientific Elegance and Everyday Life Workability

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Denne medforfattererklæring gælder for følgende artikel:

Recruitment Tests
Participant Recruitment in an Exercise Intervention Trial in Denmark

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Den ph.d.-studerendes bidrag til artiklen

JW's contributions include:
- Fieldwork and production of ethnographic material.
- Conceptual development.
- Analysis of material.
- Drafting and writing of final draft.

Astrid Pernille Jespersen's contributions include:
- Conceptual development.
- Analysis of material.
- Drafting and writing and final draft.

Line Hillersdal's constributions include:
- Conceptual development.
- Analysis of material.
- Drafting and writing and final draft.

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29/6-2017	Line Hillersdal	Line Hillersdal
30/6-2017	Astrid Jespersen	

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