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# **Thesis Title**

Thesis Subtitle

Master's thesis in partial fulfilment of the requirements for the  
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Salzburg, Date of Submission

# Declaration on oath

I, first name, surname, born on day.month.year in place, hereby certify that I have adhered to the principles of scientific work to the best of my knowledge and belief and that this Master's thesis was written by me independently. I have not used any sources and aids other than those indicated. I affirm that I have not previously submitted the Master's thesis as an examination thesis in any form, either in Austria or abroad, and that this thesis is consistent with the thesis submitted to the assessors.

Place, on day.month.year

First Name Surname

Personal Identification Number

# Zusammenfassung

# Abstract

Brief summary of the thesis (approx. 200 words) in English goes here

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# Chapter 1

## Introduction

The popularity of home offices has risen again after fading in the 1990s. Americans' work habits and environments have changed dramatically since Coronavirus closed offices nationwide, resulting in millions of professionals suddenly working from home. Many are looking at the likelihood of long-term teleworking to remain an integral part of the work environment long after the pandemic.[**BibEntry2020Jun**]

Unsurprisingly, a survey report conducted by owl labs suggests that workers who were working from home reported to be happy 22 percent more than workers who work in an on-site office environment.[**BibEntry2022Nov**]

The pandemic is not the only reason teleworking is becoming common: With the help of modern technological work tools, more and more people are able to work from no matter where. This opens up opportunities for people who may not have access to traditional office spaces, and it also allows for more flexible working arrangements.

One of the benefits of working from home is that it blurs the line between work and private life. This can be a good thing, as it can make it easier to transition between work and relaxation. On the other hand, working from home can bare some downsides too [**Marsh2022Mar**].

According to a study conducted by Joblist [**Joblist2022Nov**], working remotely led to increased distractability in 53.1 percent of respondents, claiming that they found it to be difficult to stay focused on the task at hand.

Research has shown that digital distraction has become the primary factor for procrastination[**Lu2014Dec**] and Social Media is likely to play a big part of that as there is no doubt that social media can be bad for our productivity.[**Vithayathil2018Jan**]  
In recent years, social media has become an increasingly prevalent part of our lives. According to a study by the Pew Research Center, as of April 2021, 71 percent of American adults use social media platforms such as Facebook, Instagram, LinkedIn, and Twitter.[**PewResearch2022Nov**]

A study conducted by the University of California, Irvine found that social me-

dia is the main distraction at work today. The study found that employees were interrupted by social media notifications an average of every 10.5 minutes , and it took an average of 25 minutes to return to their original task.[**Mark2008Jan**]

David McClelland argued that productivity is important to life satisfaction because it is a key ingredient in achieving goals and meeting needs. He stated that people who are productive are happier and more satisfied with their lives because they feel like they are accomplishing something.[**McClelland1961**] Furthermore, John W. Kendrick argues, that personal productivity is not only a private matter, but a societal one. John Kendrick's argument is that productivity is not only a personal matter, but that it is also a societal one. This means that if individuals are successful and productive, then the whole society will be as well. This is because a productive society is more likely to be prosperous and thrive than one that is not. [**Kendrick1987May**]

Under modern working conditions, it is becoming increasingly difficult to separate work and personal life, as technology allows for more flexibility in where and when we can complete tasks.

Respondents working from home also reported that they would check their work devices more frequently than they did before going remote and they regularly work past normal office hours. In fact, 70.9 percent of managers self-reportedly worked past normal office hours on a regular basis since working from home

Consequently, this can lead to an increase in stress levels and fatigue amongst employees as many are struggling to juggle work, home and family obligations.

Craig Brood characterized this phenomenon as technostress. The idea of technostress is that the computer revolution has had a number of negative consequences for human health, including increased levels of stress and anxiety. Technostress can cause us to become stressed out and overwhelmed, and it can also lead to other problems like addiction and distraction. We need to be aware of the dangers of technostress and take steps to avoid it, especially in an environment where work and private happen simultaneously in a digital world.

By being productive, we can create a sense of satisfaction and fulfillment in our lives [**Csikzentmihalyi1990**] but it is difficult to be productive in an environment that isn't conducive to it.

"To overcome the anxieties and depressions of contemporary life, individuals must become independent of the social environment to the degree that they no longer respond exclusively in terms of its rewards and punishments. To achieve such autonomy, a person has to learn to provide rewards to herself. She has to develop the ability to find enjoyment and purpose regardless of external circumstances." [**Csikzentmihalyi1990**]

We argue that it is more important now than ever to design systems for a productive life

regardless of the physical location and circumstances and create products that inspire us to be productive. We need to form environments that are conducive to productivity, and we need to have attitudes about productivity that support us in our endeavors. We also need to have social media platforms that don't distract us from our goals, and we need to be aware of the dangers of technostress so that we can take steps to avoid it.

# Chapter 2

## Theoretical Grounding

### 2.1 Possible Methods and Solutions

### 2.2 Productivity in HCI

#### 2.2.1 Motivation

definition of motivation

To be motivated means to feel an impulse to do something, but research suggests that motivation is not such a unitary phenomenon. There are not only different amounts but also different kinds of motivation. [Ryan2000Jan] Self-determination theory is the theory that describes motivation as two distinct types of motivation: Autonomous (which is being regulated through natural and internal processes such as inherent satisfaction) and Controlled motivation (regulated through external circumstances and demands) [Lawman2013] these distinctions are more commonly known as intrinsic and extrinsic motivation [Legault2016Nov]

#### **Intrinsic Motivation**

Psychology has a wealth of literature explaining why intrinsic motivation is essential to cognitive growth and organization.

Intrinsic motivation is a fundamental concept in developmental psychology.

Contemporary psychology makes a distinction between two main types of motivation, extrinsic and intrinsic motivation.

#### **Extrinsic Motivation**

”Extrinsic motivation is a construct that pertains whenever an activity is done in order to attain some separable outcome. Extrinsic motivation thus contrasts with

intrinsic motivation, which refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value. ” [Ryan2000Jan]

Social influence theory is a theory in psychology that talks about how people are more likely to do whatever they see as being the norm. It states that people have a tendency to change their behavior according to those around them, and those nearby have stronger effects than those further away.

intrinsic/extrinsic motivation <https://www.sciencedirect.com/science/article/pii/S0361476X99910>  
Self Determination Theory [https://link.springer.com/referenceworkentry/10.1007/978-1-4419-1005-9\\_1620](https://link.springer.com/referenceworkentry/10.1007/978-1-4419-1005-9_1620)

### 2.2.2 Gamification

Gamification is a “persuasive technology that attempts to influence user behavior by activating individual motives via game-design elements” [Blohm]. In this sense, Gamification seems to show a lot of parallels with the concept of nudging. Digital Nudges [Leonard2008Dec] have been described as something aiming to “alter people’s behaviour predictably without forbidding any option”. Some Have also called this libertarian paternalism [Leonard2008Dec]

”Humans are not exactly lemmings, but they are easily influenced by the statements and deeds of others.” [Leonard2008Dec]

Nudging and Gamification have proven to provide a great increase in motivation if applied correctly. For example, there has been a study, where two groups of computer science students had to conduct various tasks on git, 67 percent of the members of the group, where gamification aspects were implemented, reported an increased motivaton to fulfill their tasks. It is remarkable that it seems like there was no impact on age or gender on the percieved effects of this phenomenon. although it must be said that this study marked one of the potential flaws of gameification by design comonly known as ”gaming the system”. An observed phenomenon where the Metrics of success in a gamified system become the main goal for the ”players”, a topic which shall be further examined later on in this thesis. [Ozdamli2021Aug]

Mihaly Csikszentmihalyi, author of Flow: The Psychology of Optimal Experience, discussed the idea of productivity in terms of having a sense of control over one’s work and the ability to engage in it fully. According to Csikszentmihalyi, productivity is not about working hard or long hours, but rather about achieving a state of flow in which you are completely absorbed in your work.