University of Warsaw

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Individual differences in preference for shared leadership

Doctoral dissertation
in the field of Management and Quality Studies

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Warsaw, 2023

Ph.D. Studies in English:
The project 'Multicultural Management in the Era of Globalization' is realized by the Faculty of Management at the University of Warsaw on the basis of the legal agreement no POWR.03.02.00-00-I053/16-00 within the Operational Program Knowledge Education Development 2014-2020 financed through the EU structural funds.

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Abstract:

The main goal of the doctoral dissertation is to answer the research question: Can employees' characteristics explain differences in preferences for team leadership structure: SHARED vs. FOCUSED? This implied three research tasks: (1) identify strategies to conceptualize and operationalize shared leadership in teams; (2) identify employee characteristics that predict their preferences for team leadership structure; (3) conduct research to test the relationship between employees' characteristics and their preferences for team leadership structure.

Based on a review of the literature, it was expected that employees' preferences regarding shared vs. focused leadership depend on their control orientations (hypothesis #1), social motives (hypothesis #3), and supervisor role (hypothesis #4). Furthermore, a main effect was expected (hypothesis #2), with shared leadership preferred on average more than focused leadership.

Two main MTurk studies of 359 US-located employees applied standard measures of employee characteristics (Grzelak's Inventory and SSA) and two new measures of preferences for shared vs. focused leadership: (1) rated using a 10-item scale and (2) based on evaluations of TARGET descriptions of the team leadership structure. TARGET descriptions of shared and focused team leadership structure were crafted and validated in several steps, including an experimental MTurk study of 51 US-located employees focused on the comparison of effectiveness between verbal vs. visual form. Congruent with hypothesis #1, the analysis of study #1 revealed that employees' DOMINANCE orientation predicts stronger preferences for FOCUSED leadership. Employees' COLLABORATION orientation predicts stronger preferences for SHARED leadership. Congruent with hypothesis #2, the analysis of study #2 revealed that SHARED leadership is preferred on average more than FOCUSED leadership – especially by employees with a low POWER motive, low ACHIEVEMENT motive, and being a NON-SUPERVISOR, which was predicted by hypotheses #3 and #4.

The dissertation concludes with a discussion of the research findings, limitations, future directions, and implications for management practice.

Key words: shared leadership, individual differences, Grzelak's control orientations, social motives, hierarchies, leadership preference

Różnice indywidualne w preferencjach dotyczących przywództwa współdzielonego

Abstract (in Polish):

Głównym celem rozprawy doktorskiej jest odpowiedź na pytanie badawcze: Czy cechy pracowników mogą wyjaśnić różnice w ich preferencjach dotyczących rodzaju przywództwa: współdzielonego [SHARED] vs. tradycyjnego [FOCUSED]?
Cel główny wyznaczył 3 zadania badawcze: (1) konceptualizację i operacjonalizację przywództwa współdzielonego w zespołach zadaniowych; (2) identyfikację cech pracowników, które mogą być predyktorami ich preferencji dotyczącymi rodzaju przywództwa; (3) zaplanowanie i przeprowadzenie badań w celu sprawdzenia związku między cechami pracowników a ich preferencjami.
Na podstawie przeglądu literatury oczekiwano, że preferencje pracowników dotyczące rodzaju przywództwa zależą od ich orientacji kontroli (hipoteza #1), konfiguracji motywacji społecznych (hipoteza #3) i roli przełożonego (hipoteza #4). Ponadto oczekiwano efektu głównego rodzaju przywództwa (hipoteza #2), przejawiającego się w dominacji preferencji dla przywództwa współdzielonego (SHARED).
W dwóch badaniach z wykorzystaniem platformy MTurk, w których uczestniczyło 359 pracownicy zlokalizowani w USA zastosowano standardowe miary cech pracowników (Inwentarz Upodobań i Opinii Grzelaka i SSA). Opracowano i przetestowano dwie nowe operacjonalizacje preferencji dotyczących rodzaju przywództwa: (1) wykorzystujące 10-itemową skalę i (2) postawy wobec opisów WZORCOWYCH przywództwa współdzielonego (SHARED) i tradycyjnego (FOCUSED). Opisy WZORCOWE były bardzo starannie przygotowane i przetestowane m.in. w specjalnie przeprowadzonym na platformie MTurk badaniu eksperymentalnym (N= 51 pracownicy zlokalizowani w USA) porównującym różnice w skuteczności informacji tekstowej vs filmowej. Zgodnie z hipotezą #1 analiza wyników badania #1 wykazała między innymi, że silniejsze preferencje DOMINACJI (definiowane przez Grzelaka jako nastawienie na maksymalizację kontroli nad skutkami działań istotnych dla partnera) są związane z silniejszymi preferencjami dla tradycyjnego (FOCUSED) przywództwa. Zgodnie z przewidywaniem silniejsza orientacja pracowników na WSPÓŁPRACĘ (definiowaną przez Grzelaka jako wspólna kontrola nad wynikami) jest związana z silniejszymi preferencjami dla przywództwa współdzielonego (SHARED) Analiza wyników badania #2 wykazała, że zgodnie z hipotezą #2 - na poziomie tendencji ogólnej - przywództwo współdzielone (SHARED) jest oceniane wyżej niż przywództwo tradycyjne (FOCUSED)- szczególnie przez pracowników nie pełniących funkcji kierowniczej o niskiej motywacji WŁADZY i niskiej motywacji OSIĄGNIĘĆ, co było przewidywane przez hipotezy #3 i #4.
Rozprawa kończy się omówieniem wyników badań, wskazaniu ograniczeń, przyszłych kierunków i implikacji dla praktyki zarządzania.

Key words (in Polish): przywództwo współdzielone, różnice indywidualne, orientacje kontroli Grzelaka, motywacje społeczne, hierarchie, preferencja przywództwa.

Contents

Introduction

Justification and problem statement

Already several decades ago, researchers noted that we advance deeper into a *'knowledge economy'* and that *'the basic assumptions underlining much of what is taught and practiced in the name of management are hopelessly out of date... Most of our assumptions about business, technology, and organization are at least 50 years old. They have outlived their time.'*[1]

'As organizations have steadily progressed into the knowledge economy, we can no longer rely on simple notions of top–down, command-and-control leadership, based on the idea that workers are merely interchangeable drones.'[2]

In fact, *'collectivist organizations'* were seen as *'organizational anomalies'* many years ago[3]. But enormous changes in our society, especially toward a knowledge-worker society, made the call stronger for organizational structures to employ their full knowledge potential in order to deal with high *'complexity'* and *'uncertainty'*.

Hence, as a consequence, more organizations are becoming *'flatter'*, but also more *'dynamic'*, *'flexible'* and *'empowering'* to their employees.

This is specifically noticeable in modern workplaces that commonly adopt management frameworks that prioritize people and collaboration, and promote self-management in teams, see, e.g., the rise of agile management[4], or examples of organizations that *'reinvent'* themselves in unconventional ways[5].

There is a **growing number of workplaces** like e.g., that of *'Buurtzorg'*. Buurtzorg is an organization grown out of the Netherlands providing private household nursery services. Its founder Jos de Blok came from an organization that represented a very traditional workplace where nurses were told WHAT, WHEN, and HOW to do all of their work. Giving, e.g., injections to patients was scheduled by the minute, with no time for small talk. However, close to a total organizational collapse, Jos

[1] Drucker (1998)
[2] Pearce (2007)
[3] Rothschild-Whitt (1979)
[4] "Manifesto for Agile Software Development" (2001); Denning (2016)
[5] e.g., Semler (2004); Laloux (2014)

de Blok founded Buurtzorg with a dramatically different work model around 2007 with a first team of 4 nurses. Today, Buurtsorg Netherlands cares for over 70.000 patients per year with approx. 10.000 nurses in over 800 *'self-managed teams'* without any manager, and getting supported by only approx. 60 employees in overhead (coaches and back-office). Importantly, while the traditional work model based on efficiency and central control has driven the former organization close to collapse, the adjusted work model of Buurtzorg based on self-managed teams did empower its employees and made it 'Best Employer of the year' over many years now with a turnover per year of nearly € 300 million.

Again, the Buurtzorg model is not the only case, nor is it an anomaly. Other organizations around the globe experiment with their work models as well, in some cases for many decades already. For example, platforms like *'Intrinsify'*[6], *'Augenhöhe'*[7], or *'Enlivening Edge'*[8] try to identify and connect people, teams, and organizations that practice collaborative and human-centered work models. Others even argue that the *'agile management framework'* is not a niche methodology of the IT sector only, with more and more organizations implementing agile tools and teams[9]. A survey from Deloitte finds *'Building the organization of the future with agility as an integral part'* to be the most important trend for human capital across multiple industries and around the globe, with approx. 90% of the asked executives rating it as important, and approx. 60% even as very important[10].

One of the four core values of the agile manifesto is, e.g., *'Individuals and interactions are valued over processes and tools'*, which translates into 12 principles, with one of them as follows: *'The best architectures, requirements, and designs emerge from self-organizing teams'*[11].

As a consequence, *'self- and shared leadership'* enjoy large research attention as the *'silver bullets'* to deal with the complexities of knowledge work in organizations[12]. The increasing number of respective publications confirms that researchers understood the pressing need of studying complex leadership theories such as, e.g., shared leadership. For example, over the last three decades the *'Web Of Sciences'* lists approx. 28.000

[6] "Intrinsify" (2023)
[7] "Augenhöhe" (2023)
[8] "Enlivening Edge" (2023)
[9] denning2016
[10] "Deloitte Global Human Capital Trends" (2017)
[11] "Manifesto for Agile Software Development" (2001)
[12] Pearce and Conger (2003); Pearce and Manz (2005), Pearce (2007); Uhl-Bien et al. (2007); Zhu et al. (2018)

publications, with approx 20% of publications within the last two years only, and approx. 75% of publications over the last ten years[13].

Important for the present dissertation is the idea of **'shared leadership (SL)'**, which means distributing leadership among many employees of the team or organization. This remains in contrast to **'focused leadership (FL)'**, which means only a few employees lead.

During recent decades **shared leadership** became a **critical component** in the leadership domain[14]. It became prominent not only as a potential solution to the above-mentioned need for organizations and teams capable of dealing with complexity, and because it claims to deliver higher levels of desired outcomes, but researchers in fact repeatedly find evidence to support these claims. For a brief presentation, see section 1.2.3.

Although appealing, increasing organizational or team performance by simply empowering employees allows for an **important question:** *'Who would (not) prefer to be part of an organization or team that shares leadership?'* This question is important for at least **three major reasons**:

First, the concept of **leadership** over time evolved from general specific traits, over situationally contingent behavior, to social cognitions[15], making it a complex social phenomenon[16]. Commonly researchers agree that elements of leadership concern a social influence process in order to determine and drive a group's objectives, but also to maintain and develop the group itself, incl. its culture[17]. However, the specifics of leadership and with it shared leadership are difficult to define, and researchers furthermore offer multiple answers on multiple levels for the following question: *'Who will and/or want to lead, and who will and/or want to follow?'*

Second, the study of **individual differences** can be traced back several millenia[18]. Certainly, it had its ups and downs as a valid stream of research over the past century, but it is one of the most important research streams in social science of the present 21st century. This large research stream suggests that individuals act and react differently connected to different aspects of their social life; e.g., employees would

[13] "Web of Science" (2022) - using e.g., the search term:
`TS=(leadership AND (complex* OR distribut* OR shar*))`
[14] Pearce and Conger (2003); Pearce and Manz (2005); Uhl-Bien et al. (2007)
[15] see Hernandez et al. (2011); Lord et al. (2017); Northouse (2018)
[16] Uhl-Bien et al. (2007)
[17] see Yukl (1989)
[18] Revelle et al. (2011)

act and react differently to different kinds of leadership in their teams. This is due to multiple ranges of characteristics that distinguish employees as individuals, such as gender, age, culture, social position, social orientation, temperament[19].

Third, the study of **power**, **status**, and **hierarchies** throughout the recent decades enriched our understanding of those concepts from many different angles[20]. The above-mentioned question of who would (not) prefer shared leadership becomes especially important with the assumption that sharing leadership, as an empowerment of many employees, concerns the fabric of organizational hierarchies. This is because researchers repeatedly find support that steep hierarchical structures as opposed to flat egalitarian structures (e.g., shared leadership structures) are very prevalent in human social environments, and so as well in workplaces. Hierarchies provide employees with social order and coordination. And they provide each individual employee with incentives to grow. That is, the psychological dynamics of power, but also social expectations and belief systems shape employees' behavior and perceptions. This is instrumental for the rise and fall of hierarchies, and in turn for preferences towards shared leadership.

At least throughout the last century, leadership research predominantly concerned single leaders, e.g., their traits, skills, behaviors, and cognitions. In fact, the study of leadership and the study of individual differences have a long paralleling tradition together and produced a large body of knowledge[21]. However, the concept of leadership became increasingly seen as a complex social network phenomenon, in contrast to the unique contribution of a single leader[22]. Concerning shared leadership, there is a growing body of knowledge predominantly related to aggregated measures on the team level, such as, e.g., team performance, team cohesion, and team satisfaction.

However, there are at least **two main issues** that could be identified in the literature.

First , there is still **no common ground** for the **definition** and **operationalization** of the construct of shared leadership. Although there is good progress for commonalities in the construction of shared leadership, there is still much room for future research to refine the concept and opperationalization of shared leadership[23].

Second, so far there seems to be **little contribution** that concerns **individual-level** antecedents, moderators, and especially outcomes of shared leadership in teams[24].

[19] see, e.g., McAdams (1995); Roberts and Wood (2006)
[20] see Anderson and Brown (2010); Magee and Galinsky (2008); van Kleef and Cheng (2020)
[21] Revelle et al. (2011); Zaccaro (2012)
[22] Lord et al. (2017)
[23] Zhu et al. (2018)
[24] Zhu et al. (2018)

Objectives, scope, and structure

For the present dissertation, the **research question** is as follows:

> *Do employees' individual characteristics explain differences in preferences for shared or focused leadership?*

This implies **three main objectives**:

- **identify** strategies to conceptualize and operationalize shared leadership in teams;
- **identify** employee characteristics that predict individual-level preferences for teams with shared or focused leadership;
- **test** common employee characteristics that predict individual preferences for teams that share or do not share leadership.

With this, **two main contributions** are aimed for:

First, the present dissertation may **add to the body of knowledge** on shared leadership by **incorporating individual-level** measures into the spectrum of research interest in the domain of shared leadership. This is important because if this research can show a difference in preferences for shared versus focused leadership, based on employees' distinct characteristics, then many additional questions become legitimate, e.g., What is the dependency of shared or focused leadership on employees' characteristics?; What is the level of dependency on employees' characteristics for already observed antecedents and outcomes of shared or focused leadership?

Second, the present dissertation may **support human resource management** in questions at an individual level for the process of empowering their employees. For example, the following questions could be important when organizations promote shared or focused leadership. Which of the employees would benefit from the respective promoted team structure and who would not? Who would endorse it or even drive it? Who may have to be supported in dealing with it? And who would potentially resist or sabotage it? All these responses could happen individually differently between employees, within both a shared but also focused leadership team.

The **scope** is limited in the following sense, which gives the present dissertation its **structure**, because the mentioned objectives in connection with the relevant but large

research streams increase the options for what the present dissertation potentially could cover. The present dissertation contains 4 chapters and an Appendix.

Chapter 1, titled **'Literature review for hypotheses development'**, is organized into four sections.

Section 1, titled **'Leadership: from focused to shared'** discusses the concept of leadership as a research domain. A review of the literature contrasts the concept of *'leadership'* with the concept of *'management'*, but more importantly, brings the multiple research approaches into two main perspectives, a *'leader-centric'* and a *'leadership-as-social network'* perspective.

The section concludes that leadership is difficult to define and that shared leadership as a leadership network differs from focused leadership as a leader-centric approach on multiple dimensions and therefore justifies the idea that there is a major difference between focused and shared leadership.

Section 2, titled **'Shared leadership: a social network'**, discusses the approach of shared leadership. A review of the literature shows that the concept of shared leadership is very difficult to define - numerous definitions and related terminologies could be identified. This section also discusses several commonalities between these different approaches, including common operationalizations with only two major approaches. And this section presents some examples of positive outcomes of shared leadership, which, however, concern predominantly team-level outcomes.

The section concludes that shared leadership is still in flux, with much room for future research to refine the concept and its operationalizations but also advance research to an individual level.

Section 3, titled **'Cognitive consequences within social networks'**, discusses several cognitive consequences for employees within social networks. This section begins with a general discussion of why employees may act and react universally similarly due to a universally shared search for control, autonomy, competence, and relatedness. However, employees also act and react individually differently within social networks. Therefore, the section discusses in more detail two main research domains. The first part discusses social orientations as individual dispositions of employees to prefer different kinds of social networks because some care, compete and command more or less than others. The second part discusses the research stream on the prevailing and impactful forces of social hierarchies. Those forces are prestige and dominance to gain status and power.

Section 4, titled **'Theoretical model'**, reflects on previous sections of the review of the literature. This section highlights several important messages and confirms the research gap. Not focused or shared leadership is a panacea. Until now, research concentrated mainly on focused leadership, and within the domain of shared leadership research concentrated mainly on the team level, neglecting, e.g., outcomes on the individual level. To integrate the different streams and provide a base for the empirical work of the dissertation, the section first argues for two extreme forms to clearly distinguish focused and shared leadership, and second, it presents the main aspects of why employees may prefer focused and shared leadership differently.

Chapter 2, titled **'The methods and objectives'**, presents the hypotheses, including comments on their rationale, followed by a description of the samples, procedures, and operationalization of the variables.

The main scope of the conducted studies was a quantitative research design, recruiting respondents on the MTurk online panel (study 1: N = 184, study 2: N = 178; overall > 90% employed; all US located), with no specific restrictions on the sampling procedure, except for several attention checks.

All measures were standard measures except two newly crafted operationalizations for shared leadership. The **team preference** measure is a 'backward referent-shift' 10-item scale. Other researchers shifted the referent of a traditional leadership measure in the form of 'A leader' to 'Each member'[25]. For the present dissertation, the option 'A leader' was added again to provide both options as a choice (focused vs. shared). The **target description** is an experimental manipulation of the team leadership structure that randomly assigns respondents to react to one of the two (focused or shared). Respondents were asked how they would feel (5 items), if they would be satisfied (1 item), and if they would like to work (1 item) in such a team. These target descriptions were newly crafted and validated in multiple steps including face validity, but also validated in an additional test study. Although also videos were tested, the text versions were used as the final solution in study 2.

Chapter 3, titled **'Results'**, contains the analysis of data from two studies.

Study 1 was a correlational study using a multiple hierarchical regression for the analysis. Team preference (focused vs. shared leadership structure) was regressed to four control orientations according to the Grzelak model[26] (H1: dominance, submission, collaboration, autonomy), including age and gender as control variables.

[25] Wood and Fields (2007)
[26] Grzelak (2001)

Six personality scales[27] and two questions for political orientation[28] were included for exploration purposes.

Study 2 was an experimental study using for the analysis a one-way between-subjects ANOVA testing a main effect of the manipulation of the leadership structure (H2), and separate 2x2 between-subjects ANOVAs testing the interaction of the manipulation with each of the dichotomized predictors: social motives according to the McClelland model[29], power (H3a), achievement (H3b), affiliation (H3c); and social rank with being supervisor or non-supervisor (H4). Age and gender were used as control variables.

Chapter 4, titled **'Summary'**, contains a summary of the findings, research limitations, directions for further research, and implications for practice.

The **Appendix** contains supplementary materials that are not necessary to track the course of the argumentation, but are necessary for those who would like to learn about the distributions of variables, details of the analyses carried out, or to replicate the analyses carried out on other data (detailed description of research procedures).

It should be noted that the **present dissertation does not** aim to argue for the superiority of any of the two extreme forms, focused or shared leadership. Furthermore, the objective is not to make any suggestions to human resource management for recruitment procedures.

The focus of the present dissertation is to bring individual differences into the scope of shared leadership research and practice, and to provide initial potential results on common employee characteristics. With this, it rather aims to open the discussion for the idea that employees may react and act differently in one or the other team structure. Additionally, although leadership concerns multiple levels (self, dyadic, team, organisation), and has found research attention for all of them, the present dissertation does not account for a full-fledged discourse. Shared leadership has its roots in team leadership, and therefore most research has been conducted on a team-level[30]. In order to connect to this stream the present dissertation is concerned with shared leadership in teams within workplace settings, but asks the question about outcomes for employees at a cognitive individual level.

[27] de Vries (2013)
[28] Talhelm et al. (2015)
[29] scales included in SSA, after: Nowak2019a
[30] Zhu et al. (2018)

Key terminologies and editorial remarks

Unfortunately, in social science, the literature is not always clear about the distinctions of multiple terminologies. It is not the aim to completely contrast each of the key terminologies which will be of some importance for the present dissertation. Many of those may have great conceptual similarities. Although one can find distinctions, at times they are used interchangeably.

Terminologies that concern the present dissertation to a certain degree are e.g., the distinction between *'preferences'*, *'orientations'*, *'motives'*, and *'needs'*, and the concepts of *'interdependence'*, *'leadership'*, *'social influence'*, *'control'*, *'status'*, *'power'*, *'dominance'*, *'submission'*, *'independence'*, *'autonomy'*, *'collaboration'*, *'affiliation'*, and *'achievement'*.

In fact, there are reviews that try to integrate some of those concepts, e.g., to refine and develop theories[31]. Table A.1 in the appendix presents examples of definitions from the APA Dictionary of Psychology[32].

Social psychological structures that affect employees' behaviors and perceptions on multiple levels concern *'needs'*, *'traits'*, *'motives'*, *'orientations'* to *'preferences'*[33]. The first are rather implicit, unchangeable, and unconscious characteristics as requirements for psychological health. And the latter are rather explicit, changeable, and conscious characteristics that define current cognitive strategies to become psychologically healthy. A typical analogy is hunger: We have a *'need'* for nutrition/food, therefore, we have a *'motive'* to eat, in order to get nourished/fed, so we may *'prefer'* to eat lunch instead of working on the next email.

The present dissertation adapts this idea, but does not aim to make a hard cut between those terminologies, and considers the proximity of *'preferences'*, *'motives'*, and *'orientations'* as behavioral cognitive strategies, but their distinction to *'needs'* as conditions of cognitive tension.

[31] see e.g., Anderson et al. (2015); Galinsky et al. (2015); Grzelak (2001); Mäkikangas et al. (2013); Prentice et al. (2014); Roberts and Wood (2006); Schüler et al. (2018); Sheldon (2011); Sheldon and Schüler (2011)

[32] "APA Dictionary of Psychology" (2023)

[33] see e.g., Mäkikangas et al. (2013); Roberts and Wood (2006); Sheldon and Schüler (2011)

Social interdependence orientations are important for shared leadership. This means that shared leadership, as a form of leadership, concerns team situations of interdependence between employees and therefore a process of social influence. In this context *'social influence'*, *'control'*, *'power'* and *'dominance'* with its potential opposite *'submission'* are often conflated, as is *'independence'* and *'autonomy'*, but also *'collaboration'* and *'affiliation'*.

The present dissertation considers all of those terminologies as conceptionally distinct from each other, although recognizing their large overlap. Sections 1.3.1 (social orientations) and 1.3.2 (hierarchies) discuss some of these distinctions in more detail.

However, the present dissertation at times uses the terminologies *'power'* and *'dominance'* interchangeably in order to keep alignment with the respective theoretical model from which they were borrowed, although they are theoretically distinct concepts. Power is a capacity to control self or others, and dominance is a behavior to control others[34]. However, Grzelak (2001) e.g., uses an *'orientation for dominance'* as one of six control orientations, while other researchers use e.g., a *'motive for power'* as one of the big-3[35]. Both touch on a similar cognitive tendency and the clear distinction can only be made considering the way of the specifically chosen measurement, see the methodology chapter on how those concepts were measured in study 1 and study 2.

Similar analogies concern *'independence'* (to be free from other-control) and *'autonomy'* (to act with self-control). But also *'collaboration'* (to act together with others) and *'affiliation'* (a state of social relationship) have proximity.

All of those concepts can be studied as states, or strategies, distinguishable via the chosen measurement, e.g., state: one can be or feel powerful as a supervisor; and/or strategy: one can seek to be powerful, visible via reported or observed orientations.

[34] Anderson and Berdahl (2002); Keltner et al. (2003); "APA Dictionary of Psychology" (2023)
[35] e.g., Schüler et al. (2018)

Additionally, the present dissertation uses the following terminologies interchangeably. Although *'management'* and *'leadership'* have distinct objectives, those terms are often conflated. For a short discussion, see section 1.1.1 (leadership versus management) and section 1.2 (shared leadership characteristics):

- '*management*'/'*manager*' = '*leadership*'/'*leader*';
- '*shared leadership network*' = '*shared leadership structure*' = '*shared leadership*' = '*SL*';
- '*focused leadership network*' = '*focused leadership structure*' = '*focused leadership*' = '*FL*'

Editorial remarks concern the **paradigm** and **editorial guideline**, which are suggested by my supervisor[36]. The present dissertation follows these recommendations, and a quoted summary of these can be found in the appendix A.1.2 (methodological inference).

[36] Wieczorkowska-Wierzbińska (2021)

1 Literature review for hypotheses development

1.1 Leadership: from focused to shared

Summary: *Traditionally established leadership theories seem mostly outdated and rely on the assumption of only one leader in the group. More plural forms of leadership theories, such as shared leadership, account for more complex leadership networks.*

Several comments are worth highlighting in order to understand the paradigmatic movement towards contemporary concepts of leadership and before attempting a more detailed review of shared leadership as a contemporary leadership concept. The concepts of leadership and management are theoretically distinct but interchangeable for the present dissertation. The understanding of leadership developed from a concept that focuses on a single leader's contributions towards a social network perspective where leadership is shared among all team members.

1.1.1 Leadership versus management: a definition

A recurring question concerns the difference between leadership and management. This is because in practice those terms are often used interchangeably but seem to have different notions. In fact, some, but not many, researchers tried to discuss their (dis)similarities[37].

In short, there is **no established agreement** among researchers on whether those terms are interchangeably the same, whether one inhabits the other, whether they differ but overlap, or whether they are two distinct constructs. Although both seem to involve influence in some way or another and concern the work with people and the achievement of goals, the researchers identified many functions that seem to divide leadership from management.

For example, an often-cited theme according to Kotter (1990) sums up like this: '*Management produces order and consistency. Leadership produces change and movement.*' With this, management functions would concern planning, budgeting,

[37] Bennis and Nanus (1985); Rost (1991); Simonet and Tett (2013); Zaleznik (2004)

organizing, controlling, problem-solving. And leadership functions would involve establishing directions, aligning, motivating, and inspiring employees. However, this is only one point of view, among many[38].

The present dissertation will not enter into a deep discussion of management versus leadership. However, it accepts the connection and necessity of both types of functions, order/consistency, and change/movement, in order for a team to achieve common goals. Therefore, in the context of the present dissertation, the distinction between those terms is irrelevant. However, the focus is on the construct of leadership, and therefore the term leadership will be preferred.

However, the construct of leadership itself is difficult to **define**, **conceptualize**, and therefore to **describe**[39]. During the last century, several hundred different definitions and, with it, a large number of theoretical conceptions evolved, mostly reflecting the realm of their time[40]. But no universal consensus has yet been found[41].

However, a contemporary common ground could be summarized as this[42]. Leadership is a **process** that involves **influence**, occurs in **groups**, and concerns the achievement of **common goals**. With this, leadership is not a linear one-way event but rather an interactive event. Leaders affect followers and vice versa. And leadership is actually available to everyone and not restricted to formal positions. Without influence, there is no leadership. It emphasizes the attention to direction, mutual purpose, and togetherness within a group or team; or in other words, social networks.

1.1.2 Leadership approaches: two main perspectives

The landscape of leadership research seems **scattered**. However, several patterns can be observed and had been described already in the literature[43].

Table 1.1 provides a summary of the most important streams including their major contents for the present dissertation, highlighting the major developments of the leadership construct from a *'leader-perspective'* (focused) towards a *'leadership-perspective'* (shared).

[38] in Northouse (2018)
[39] see B. M. Bass (1990); Northouse (2018); Rost (1991); Stogdill (1948)
[40] Avolio et al. (2009); Bryman et al. (2011); Lord et al. (2017)
[41] see Hernandez et al. (2011) for a common language; or Rost (1991) for a review of definitions
[42] Yukl (1989)
[43] see e.g., Avolio et al. (2009); Hernandez et al. (2011); Lord et al. (2017); Northouse (2018)

Table 1.1: Leadership approaches: two main perspectives (own summary).

Selected streams	Summary	Content	Sources
The 'Leader' perspective			
- leader traits and skills	- leaders are great men;	- many characteristics not supported by empirical tests, but effective leaders seem to be e.g. high in emotional intelligence and extrovertion, but low in concienciousness and neuroticism	Northouse (2018)
- transformational leadership; - path-goal-approach - situational leadership; - contingency model;	- leaders move others (to higher levels of engagement); - leader behaviours are contingient (on situation and follower attitudes);	- effective leaders behave charismatic and transformational; - effective leaders adjust behavior (acc. followers needs and attitudes, and task-type) * directive (task-focus) * supportive (relationship-focus) * participative (process-focus) * achievement-oriented (identity/status focus);	B. M. Bass and Bass (2008); Blake and Mouton (1964); Fiedler (1964);House (1996); Hersey et al. (1979); Judge and Piccolo (2004); Katz (1949)ö Lewin (1947);
The 'Leadership' perspective			
- leadership emergence; - leaderless groups; - implicit theories and identity construction of leadership and followership; - leader-member-exchange; - followership theory; - relational leadership; - complexity leadership; - team-leadership; - shared leadership;	- leadership is emergent; - leadership is a cognitive construct; - leadership is a group dynamic;	- separating leadership functions from leadership roles; - leaders emerge through multiple mechanisms and levels (individual, relational, collective) - leadership emergence is usually unstable and non-linear - leaderhip is attributed due to implicit identities and theories (stereotypic leaders and followers); - leadership can be enacted by every team member; - leadership is sometimes shared and somtimes focused (chaotic versus structured);	Acton et al. (2019); B. M. Bass (1949); K.-Y. Chan and Drasgow (2001); Epitropaki et al. (2013); Epitropaki et al. (2017); Fleishman et al. (1991); Graen and Scandura (1987); Graen et al. (1982); Hanna et al. (2021); Uhl-Bien et al. (2014); Uhl-Bien (2006); Uhl-Bien et al. (2007); Zaccaro et al. (2001); Zhu et al. (2018);
Additional research streams			
- authentic, servant, spiritual leadership; - cultural leadership	- leadership shall be morally good; - leadership is culture depend;		Avolio et al. (2009);

The **three waves** of leadership research identified by Lord et al. (2017) highlight that leadership research evolved in three major shifts historically throughout the last century. And a **two-dimensional framework** for leadership research described by Hernandez et al. (2011) supports this by placing multiple leadership research streams on the two dimensions of WHERE and HOW leadership happens[44].

This provides a base for a common language in order to contrast the distinctive perspectives on the leadership phenomenon from an *'individual leader'* to a *'social network'* perspective, and to identify potential dimensions for why employees would prefer one or the other team leadership structure (focused or shared).

The 'leader' perspective

In the first half of the last century, researchers mainly believed that leaders are somewhat born. This prompted a search for characteristics or traits of what *'leaders are'*. However, researchers realized that the better question is what *'leaders do'*, searching for effective behaviors of leaders in order to engage employees. Starting approximately at the same time, but holding longer breath, researchers found evidence that there is no universal recipe for leaders' contributions, they are *'contingent'*. Many moderators were identified to influence the correlation of leadership contributions towards a team's performance, e.g., the influence of attitudes, and motivations of managers and employees, but also the type of situations or contexts they face. **Two ideas** dominated this time.

First, effective leaders **move others** to higher levels of engagement through charismatic and transformational leadership as powerful behaviors[45]

Second, effective leaders must adjust their behavior **depending** on the followers and the situation or task. For example, the leadership contingency model[46], the situational leadership model[47], the path-goal theory[48], but also the work on leadership motives[49] distinct between task and relation concerns of leaders. Tasks can be structured, repetitive, and predictable, or unstructured, complex, and unpredictable, so can leader-follower relationships be strong or pure. Followers differ in their competence and commitment, but also in their motivations, by seeking control via others or

[44] figure A.1 in the appendix presents the framework of Hernandez et al. (2011)
[45] see e.g., B. M. Bass and Bass (2008); Judge and Piccolo (2004)
[46] Fiedler (1964)
[47] Blake and Mouton (1964); Hersey et al. (1979)
[48] House (1996)
[49] McClelland (1982)

themselves, and by seeking affiliation and/or achievement more or less. Leaders should and can respond to those contexts with different behaviors in order to remove any obstacles along the path of followers to reach a desired goal, e.g., with *'directive'* behavior to provide a task focus, with *'supportive'* behavior to provide a relationship-focus, with a *'participative'* behavior to provide a process-focus, or with an *'achievement oriented'* behavior to provide an identity/status focus.

It is worth noting that within these streams leadership motivations and ambitions for status and power found importance in leadership research[50], which will be discussed within section 1.3. However, most research on those former streams concentrated on the contributions of a single leader at the top or center.

The 'leadership' perspective

Later, the idea of *leadership as a social network* became more prominent.

For this, leadership must be **anchored** somewhere and must have some **functional basis** for what it is doing. Hernandez et al. (2011) identified *'five loci'* to what leadership can potentially be anchored to, and *'four mechanisms'*, that describe what leadership does, in order to describe any of the leadership concepts, but also proposed that only a theory that recognizes more loci and more mechanisms can capture more variance of the leadership effects.

According to those, leadership can be focused on the *'leader'*, on the *'follower'*, on the *'leader-follower-dyad'*, on the *'collective*, or on the *'context.* And leadership can be based on *'traits'*, *'behaviors'*, *'cognition'*, or *'affects'*.

This idea of leadership as a social network gave rise to **several ideas**.

The *first* idea is that **leadership emergence** is an important integral concept that could be traced back to the beginnings of leadership research from the last century, but mainly focused on the leaders who would emerge in a team. By separating leadership roles from leadership functions, researchers on leadership emergence and leaderless groups explained and found evidence that employees in fact emerge as both leaders and followers throughout complex processes within the team itself[51]. This means not only formally assigned managers lead, but potentially everybody in the team can become a leader or a follower[52].

[50] K.-Y. Chan and Drasgow (2001); McClelland (1982)
[51] see Fleishman (1953); Fleishman et al. (1991); Zaccaro et al. (2001)
[52] Acton et al. (2019); K.-Y. Chan and Drasgow (2001); B. M. Bass (1949); Hanna et al. (2021)

In short, **three principles** could be identified for leadership emergence[53]:

Research indicates *THAT* employees emerge as leaders, showing specific behaviors, such as listening, participation in group discussion, and task facilitation. In addition, those who have higher levels of emotional intelligence, cognitive abilities, knowledge, motivation to lead, self-efficacy, self-esteem, self-confidence, self-monitoring, extroversion, openness to experience, and conscientiousness, as well as low neuroticism, emerge as leaders. Additionally, those emerge who are tall, strong, and physically fit, as well as those who fit the stereotypical prototype of the given occupation, e.g., the race-occupation fit, persons with masculine or androgynous features emerge more than feminine features, men emerge as task-oriented leaders in less complex short-term teams, and women as relation-oriented leaders.

Additionally, research highlights that employees emerge as leaders *BECAUSE* on an *'individual level'*, they have to be perceived (recognized and associated) but also reinforced (responding to task requirements and expectations of others) as leaders. On a *'relational level'* they emerge because they satisfy and do not discrepant from self- and other-ideals, and fill or are inferred with coconstructed identities. However, additionally, they emerge on a *'collective level'* because certain forces exist that let team members enact leadership or followership. Acton et al. (2019) argues that this is from a social network or social exchange perspective due to social dependencies. From a complexity perspective, this happens through multiple phases: from uncertain conditions (disequilibrium), over-promising opportunities (amplification), and a series of experimentations (recombination) towards confirming environmental feedback (stabilization/settlement). From an idiosyncratic perspective, the leadership credits earned in the beginning help emergence in future situations. And from quantum and social identity perspectives, emergence is due to identity self-structures that are perpetuated, if self-schemas are activated, but also perceived and compatible with the others' leadership schemas.

Three theoretical categories describe the *DYNAMICS* of the leadership emergence process. Leadership emergence has generally been found to be *'unstable'*, at least on the collective level. However, on the individual level, this depends on the stability of the task requirements. Once the task requirements are stable, the emergent state is rather stable as well. Leadership emergence is also found to be *'non-linear'*, that is, e.g., task type, team type, and characteristics of employees interact with each other. And leadership emergence depends on the stage of the team life cycle. In

[53] see B. M. Bass (1949); Acton et al. (2019); Hanna et al. (2021)

earlier stages, surface-level diversities have more impact, whereas in later stages, deep-level diversities have more impact.

A *second* idea of leadership as social network concerns the work on implicit theories and the identity construction of leadership and followership which suggests and found evidence that leadership is not only behaviors, but also **cognitively constructed**[54]. Employees build cognitive schemas that are used to construct identities and implicit theories about leadership and followership. A *'schema'* is a cognitive summary of a certain concept, e.g., leader, follower, leadership, followership, me, others, etc. A schema can have multiple antecedents, e.g., experience or socio-cultural endorsement. If a schema is activated within a certain situation or context, it adds to the construction of *'identities'*, e.g., one's own leader or follower identity, but also *'implicit theories'*, e.g., what a typical leader or follower is or does. Leadership outcomes are therefore also a result of those subjective identities and theories.

A *third* idea of leadership as a social network thinks of leadership as a **group dynamic** which strengthens the importance of relationships between managers and their employees as leaders and followers, but also expands it by the fact that potentially everyone can contribute to the leadership process, not only managers but also employees.

For example, the work on leader-member-exchange suggests that leadership effectiveness depends on *'high-quality relationships'* by building so-called *'in-groups'* with strong connection and high levels of influence, respect, and trust among each other, distancing those from *'out-groups* which lack those connections[55]. Uhl-bien expanded this with her followership theory and relational leadership theory by proposing that leadership does not exist without followership and that, although unpopular, the component of followership in the process has to be understood better[56].

Uhl-Bien et al. (2007) goes even further by describing a yet relatively novel approach that stems from observations from practice and tries to explain why at times organizational structures are rather chaotic and complex, and at other times very structured and formal. Whereas all the other approaches discuss individual contributions to the leadership process, complexity leadership theory discusses systemic responses to environmental influences. According to this theory organizational leadership structures have a tendency to move towards an ordered, often formal, operational leadership system. But in order to react to new and unknown situations, there is a rather chaotic, often local, entrepreneurial leadership system. Additionally,

[54] see Epitropaki et al. (2013); Epitropaki et al. (2017)
[55] Graen and Scandura (1987); Graen et al. (1982)
[56] Uhl-Bien (2006); Uhl-Bien et al. (2014)

the argument is that neither the ordered nor the chaotic structures are necessarily good or bad, but that those are only two of three emerging but needed leadership structures of a constantly changing leadership network. The third structure connects the two others as an unstable adaptive space moving the system from one extreme to the other. Please note that this parallels the discussion on hierarchies which will be discussed in section 1.3.2.

Shared leadership is traditionally located within the team-leadership stream that has its roots in functional leadership, with all of them currently still concentrating on team-level outcomes[57]. Whereas other approaches concern mainly teams supervisor, external leaders, or employees as individuals including their relationships with each other, this stream concerns the team itself and indicates that all employees enact leadership functions collectively in order for effective teams to find direction, enable the right team structure, and use their resources effectively.

Additional research streams

Additional research streams concern researchers with issues related to leadership respective to the Zeitgeist of their time[58]. These additional streams concern e.g., inequalities in leadership positions, like, e.g., the gender gap, or discrimination of other social groups. For example white, male, westerner, middle-aged team members have an attributed leadership advantage. These additional streams further concern morality, rightness, values, and integrity, e.g., authentic leadership, servant leadership, ethical leadership, and spiritual leadership. For example, effective leaders shall be good people. And these additional streams concern the importance of cultural differences, e.g., research around the GLOBE-Project. For example, leadership research in the past mainly focused on westernized settings, but effective leadership depends on culture.

[57] see Fleishman et al. (1991); Zaccaro et al. (2001); Zhu et al. (2018)
[58] Avolio et al. (2009)

1.2 Shared leadership: a social network

Summary: *Accounting for more complex leadership networks makes shared leadership vulnerable in terms of a clear understanding of how exactly it differs from other forms of leadership, and how to operationalize it. Three commonalities (laterality, emergence, and dispersion) give rise to consensus in describing shared leadership. Again, everything rests in the notion of: Dealing with different kinds of shared leadership network means dealing with different types of social networks.*

The former section highlighted that leadership does not have to rely on a single manager because every employee can potentially exercise or even must exercise leadership, in order for a team to be effective. This is because the sheer number of different leader behaviors makes it very unlikely for one manager to exhibit all of them. And it potentially overburdens a single manager, which in turn frustrates the rest of the employees, who possibly want and, in certain circumstances, are even more capable to lead. High-performing teams must rely on joint accountability, and it is essential to draw on the strengths of all employees. This also means allowing all employees to lead at times[59].

1.2.1 The difficulty of defining shared leadership

Again, moving to a more plural form of leadership[60] gives rise to a **definitional misalignment**, because one adds several dimensions to the concept of leadership. Some researchers tried to summarize terminologies and definitions concerning plural forms of leadership, in order to find commonalities and clear distinctions. For an exemplary overview of definitions of shared leadership see table 1.2 and for an exemplary overview of terminologies see table 1.3.

[59] Derue et al. (2011); Pearce and Conger (2003); Pearce and Sims (2002)
[60] see Denis et al. (2012)

Table 1.2: Definitions of shared leadership (Zhu et al., 2018).

Reference	Definition
Erez et al. (2002)	Leadership can be shared over time whereby team members share (albeit not at once) in responsibilities involved in the leadership role ... by clarifying who is to perform specific role behaviors (i.e., leader and member). (pp. 933–934)
Pearce and Conger (2003)	A dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both. (p. 1)
Mehra et al. (2006)	Shared, distributed phenomenon in which there can be several (formally appointed and/or emergent) leaders. (p. 233)
Carson et al. (2007)	An emergent team property that results from the distribution of leadership influence across multiple team members. (p. 1218)
Pearce et al. (2010)	Shared leadership occurs when group members actively and intentionally shift the role of leader to one another as necessitated by the environment or circumstances in which he group operates. (p. 151)
Nicolaides et al. (2014)	A set of interactive influence processes in which team leadership functions are voluntarily shared among internal team members in the pursuit of team goals. (p. 924)
D. Wang et al. (2014)	An emergent team property of mutual influence and shared responsibility among team members, whereby they lead each other toward goal achievement. (p. 181)
D'Innocenzo et al. (2016)	An emergent and dynamic team phenomenon whereby leadership roles and influence are distributed among team members. (p. 5)
Chiu et al. (2016)	A group-level phenomenon generated from reciprocal reliance and shared influence among team members so as to achieve team goals. (p. 1705)
Lord et al. (2017)	Shared leadership can be viewed in terms of how different individuals enact leader and follower roles at different points in time. (p. 444)

Note. This is only an exemplary selection from Zhu et al. (2018).

Table 1.3: Concepts of collective forms of leadership (Ulhøi & Müller, 2014).

Reference	Concept
Ensley and Pearce (2001)	Shared cognition
Brown and Gioia (2002)	Distributed leadership
Carte et al. (2006)	Participative leadership
Uhl-Bien (2006)	Relational leadership
W.-P. Wu and Lee (2001)	Participatory management
Gronn (2002)	Concertive action
Hiller et al. (2006)	Collective leadership
Vangen and Huxham (2003)	Collaborative leadership
Huxham and Vangen (2000)	Collaborative governance
McCrimmon (2005)	Informal leadership
Pearce and Sims (2000)	Emergent leadership
Sally (2002)	Co-leadership
Etzioni and Lehman (1968)	Dual leadership
Choi and Beamish (2004)	Split management
Klakovich (1996)	Connective leadership

Note. This is only an exemplary selection from Ulhøi and Müller (2014).

In sum, plural forms of leadership, and with it the concept of shared leadership, still need some alignment among researchers[61]. The most common terms used are shared leadership and distributed leadership. Goksoy (2016) argues for the interchangeability of both terms, while distributed leadership is used rather in the education literature, and shared leadership is a term well established in the management and leadership literature. And yet others use the terms distributed and shared leadership as special, but distinct forms of adaptive leadership[62].

The present dissertation adopts the term shared leadership and this definition:

> **Shared leadership is:** *'a dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both. This influence process often involves peer, or lateral, influence and at other times involves upward or downward hierarchical influence'.*[63]

[61] Zhu et al. (2018); Ulhøi and Müller (2014); Carson et al. (2007); Pearce and Conger (2003)
[62] Goksoy (2016); Derue et al. (2011)
[63] Pearce and Conger (2003)

1.2.2 The commonalities of shared leadership

Again, the leadership capabilities and perspectives are distinct, numerous, and spread among the team members. Shared leadership therefore constantly allows for the following questions: *'Who will be the leader? And how many leaders will there be?'*

In addition, shared leadership is widely treated as a **group-level phenomenon**. This means that some researchers make the assumption that shared leadership is nothing more than traditional leadership behaviors performed collectively by group members[64]. However, in line with empirical research on dynamic leadership, suggesting that team members exert leadership roles on demand, there is an emphasis that not all team members act equally as leaders and exhibit different leadership functions or no leadership at all[65]. Researchers often cite **four leadership functions**[66]: searching & structuring information; problem-solving; managing personnel resources; managing material resources.

Thus, for some researchers shared leadership is rather an emergent compilation, than a structural composition of these functions[67].

However, a recent review tried to put it in perspective[68]. In their review of shared leadership, they identified **three key commonalities** that are prevalent throughout the research on shared leadership. Although some researchers use assumptions in some cases of their definitions[69], many would agree with the broad definition that shared leadership is *'LATERAL'*, *'EMERGENT'* and *'DISPERSED'*. This means shared leadership recognizes the leadership influence among peers, leadership roles and influence are distributed across peers, and with it shared leadership emerges as a team phenomenon.

[64] e.g., Hmieleski et al. (2012); Ensley et al. (2006); Pearce and Sims (2002)
[65] Aime et al. (2014); Hoch (2012); Klein et al. (2006)
[66] Fleishman et al. (1991)
[67] Drescher et al. (2014)
[68] Zhu et al. (2018)
[69] This only narrows down the definition of shared leadership. For details, see Zhu et al. (2018).

In consequence, these characteristics provide **three implications** for researchers.

First, shared leadership **challenges traditional paradigms** of leadership by calling for perspective shifts on at least **three aspects**:

- broadening the **sources of leadership influence**
  from vertical/elected towards horizontal/emergent[70];
- change of the **unit of analysis**
  from individual-level designation towards team-level emergence[71];
- emphasis on **distribution of leadership influence**
  from centralized on a few members toward distributed among many members[72].

Second, shared leadership raises **three form questions** about the leadership process:

- **Approach** - *What is shared?*
  distribution of specific leadership styles[73],
  or overall aggregation of individual leadership functions[74];
- **Modality** - *How is leadership shared?*
  co-performance, emergence, rotated leadership, cross-functional roles[75];
- **Formality** - *How formal are shared leadership roles?*
  planned, implemented, and formal,
  or ad-hoc, emergent and informal[76].

The *third* implication concerns the **operationalization** of shared leadership. This implication requires additional attention on how to measure shared leadership. Because the decentralization of the leadership process opens up multiple dimensions, as seen above. This makes the entire assessment more complex because researchers would now need to capture the exhibited leadership throughout the entire team. In contrast, traditional streams usually looked only through the single leader, usually a formally designated leader at the top. Including all team members makes it possible to capture if leadership is shared, what of the leadership is shared, and

[70] Nicolaides et al. (2014); Locke (2003); Pearce and Sims (2002)
[71] Chiu et al. (2016); Hernandez et al. (2011)
[72] Meuser et al. (2016); Drescher et al. (2014)
[73] e.g., Schaubroeck et al. (2016); Ensley et al. (2006); Hiller et al. (2006)
[74] e.g., D. Wang et al. (2014); Mathieu et al. (2015); Carson et al. (2007); Fleishman et al. (1991)
[75] see Zhu et al. (2018); Lord et al. (2017); Contractor et al. (2012); Davis and Eisenhardt (2011); Morgeson et al. (2010); Pearce et al. (2004); Erez et al. (2002)
[76] see D'Innocenzo et al. (2016); Morgeson et al. (2010); Klein et al. (2006)

how leadership is shared. Therefore, researchers came up with two main approaches, which are briefly described below[77].

The first approach is called **aggregation**. This approach uses mainly the so-called referent shift which allows the use of traditional leadership scales[78]. This means that the source of leadership is shifted from a single leader to all team members, and the resulting ratings are later aggregated at the team level[79]. This certainly addresses the latency and emergence of shared leadership; however, it assumes decentralization and a shared convergent perception of all team members about the amount of leadership their peers provide. In other words, it is difficult to say what the aggregation instruments measure, if a team is moderate to low decentralized or if team members differ in their personal perceptions of the exhibited leadership of others[80].

A second approach is called **social network approach**. This approach is based on social network theories[81]. Instead of simply shifting the referent, which is the source of leadership, this approach measures the dyadic leader–follower relationships to form an overall leadership structure. This allows researchers to create **two distinct indexes** to characterize leadership structures:

- **density**[82]: the level of leadership, which is equal to the amount of leadership exhibited throughout the team, e.g., in a dense leadership network there are rather many and/or strong leadership dyads, and in a non-dense leadership network there are rather few and/or weak leadership dyads;
- **decentralization**[83]: how leadership is configured, which is the distribution of leadership across the team members, e.g., in a centralized leadership network most leadership dyads concentrate to rather few members, and in a decentralized leadership network most leadership dyads are distributed between rather many members;

The measures of the social network approach help researchers understand the recursive leader–follower processes among team members and identify the unique influence of each member[84].

[77] Zhu et al. (2018); Nicolaides et al. (2014); D. Wang et al. (2014)
[78] D. Chan (1998)
[79] e.g., D. Wang et al. (2014); Hmieleski et al. (2012); Ensley et al. (2006)
[80] Zhu et al. (2018); D'Innocenzo et al. (2016); Carson et al. (2007)
[81] see L. White et al. (2016); Carson et al. (2007); Mehra et al. (2006)
[82] D'Innocenzo et al. (2016); Carson et al. (2007); DeRue et al. (2015); Mathieu et al. (2015)
[83] e.g., Mehra et al. (2006); Erez et al. (2002)
[84] D'Innocenzo et al. (2016); Carter et al. (2015); Carson et al. (2007)

Although both approaches exist, it is important to mention that some researchers argue in favor of the social network approach, which provides a richer level of analysis. The same researchers additionally note that, although density is most commonly used, many researchers widely use either one index or the other, density, or decentralization. However, they also remind us to use both jointly, in order to properly assess a team's leadership structure[85].

1.2.3 Research examples of shared leadership

To be competitive, organizations must be effective and innovative and must leverage their human and social capital. Shared leadership seems to play an immanent role in that. The research evidence already largely demonstrates **positive effects** of shared leadership on team innovation, team cohesion, team performance, and team satisfaction.

For example, shared leadership allows team members to enact their collective psychological capital and supports knowledge sharing, leading to a more participative and innovative organizational culture[86]. Therefore, shared leadership is predictive of innovative behavior at the team level and creativity at the team level - partially mediated by knowledge sharing and pronounced through greater task interdependence[87]. Although mediated through team cohesion, team satisfaction, coordination activities, goal commitment, and knowledge sharing, shared leadership - compared to focused leadership - appears to be a better predictor of higher team performance, lower team conflict, greater team consensus, higher intragroup trust, and higher team cohesion[88]. In virtual teams, it appears to facilitate team satisfaction and moderates the impact of trust and autonomy on satisfaction[89]. And, for the top management team members in Christian church organizations, it decreased negative outcomes for the team members, such as role overload, role conflict, role ambiguity, and job stress[90].

[85] D'Innocenzo et al. (2016); DeRue et al. (2015); DeRue and Ashford (2010)
[86] Nonaka et al. (2016)
[87] Gu et al. (2016); Hoch (2012); D. S. Lee et al. (2015)
[88] Han et al. (2018); Robert and You (2017); Mathieu et al. (2015); Bergman et al. (2012)
[89] Robert and You (2017)
[90] Wood and Fields (2007)

1.3 Cognitive consequences within social networks

Summary: *Although universally humans strive for control, autonomy, competence, and relatedness, there are multiple individually distinct cognitive consequences for employees in social networks. Social orientations are strong modulators of our preferences and perceptions of social environments. Some employees care, compete, and command more or less than others. Social hierarchies are the predominant forces of social navigation. Dominance and prestige are the core of social hierarchies.*

Researchers commonly agree that humans universally seek to bring about some effects in the world around them. This is reflected in general by placing some value in control, or more specifically, a **universal striving for control** to direct behavior to the most effective goals[91]. For this **universal efficacy** individuals must be functional at their full potential (self-actualization)[92].

However, to achieve this personal self-actualization, employees must first be physiologically and psychologically prepared for it. For this psychological preparation, there are universally shared at least **three basic psychological needs**: autonomy, competence, and relatedness[93].

Individuals need **autonomy** as a form of casual ownership of their own actions, and freedom of internal will. Individuals need **competence** as a form of controlling their own progress and accomplishment, a source for mastering new things and personal growth. Individuals need **relatedness** as a form of their connection to peers, a source for maintaining high-quality relationships. For general well-being, all of those three basic psychological needs have to be satisfied.

In addition to those intrinsic universally shared needs, humans are social actors and inevitably connected to each other, which makes a large number of inferences and perceptions social in nature. This makes the question of *'me'* to a question of *'me and others'*[94]. Furthermore, social environments are rather complex[95], and there are many cognitive processes to deal with this complexity, because the human brain is limited in resources[96]. This **implies:**

[91] Heckhausen and Heckhausen (2018)
[92] Kenrick et al. (2010), Krems et al. (2017); Maslow (1943); Neel et al. (2016)
[93] Deci et al. (2017); Ryan and Deci (2020), (2000)
[94] Wojciszke and Abele (2018); Abele and Wojciszke (2007)
[95] Uhl-Bien et al. (2007)
[96] see e.g., Kahneman (2011); Maniscalco et al. (2017); Matthews et al. (2000); Norman and Bobrow (1975); Wickens (2002)

- not all situations and social connections provide opportunities, congruent to the intrinsic strivings[97];
- cognitive effort is reduced, by reducing any kind of cognitive dissonance[98].

This elicits **multiple consequences** of importance for the present dissertation.

First, **cognitive tendencies** individually adapt and individuals develop distinct orientations, motives, etc.[99].

Therefore, control is valued individually differently instead of universally the same. It turns out that individuals not only seek control to direct their own personal sphere but what is outside their personal sphere, e.g., Who should be in control over outcomes of whom?

This means that in addition to the three universal basic psychological needs, additional levels of corresponding social orientations are added, which are individually different, e.g., distinct social motives, or distinct control orientations. See a detailed presentation in section 1.3.1.

Second, **agency and communion** are two important concepts used for social inferences. That is, the question of *'me and others'* is a question of categorizing social actors and elements with their expected *competence* and *intention*[100].

With that, among other consequences, individuals **construct identities and implicit theories** concerning leadership and followership in order to quickly infer who should lead or follow and who should not[101]. At least **three reasons** for this are the following:

- **Cognitive shortcuts** allow categorizing social environments with minimal effort, which is using a minimum of information cues[102].
- **Cognitively narrated stories** allow sense making of the perceived world[103].

[97] see Deci et al. (2017); Ryan and Deci (2020), (2000); Schüler et al. (2018); Sheldon and Prentice (2019); Sheldon (2011); Sheldon and Schüler (2011)
[98] Aronson (1969); Festinger (1957)
[99] Caporael et al. (1989); Grzelak (2001); McClelland (1987); Ryan and Deci (2020); Schüler et al. (2018); Wojciszke and Abele (2018)
[100] Wojciszke and Abele (2018)
[101] Epitropaki et al. (2017); Epitropaki et al. (2013)
[102] e.g., Dovidio (2001); McGarty et al. (2002); Tajfel (2001)
[103] McAdams (1995)

- **Cognitively constructed representations** allow to recognize other social actors, social groups, etc.[104].

Third, **higher-level characteristics** are important indicators for social inferences, because of the cognitive construction of valuable beliefs to socially categorize self and others[105]. For example, quickly recognizable and intensely used, especially for leadership and followership constructions, are gender, age, and social ranks, like positions in an organizational hierarchy[106].

Fourth, humans are highly tuned to **hierarchies, power, and status**, because their navigation through social environments is very important. Hierarchies are prevalent, easy to recognize, and have a great impact on individuals[107]. See a detailed presentation in section 1.3.2.

1.3.1 Social orientations: preference for different social networks

The outline of the former subsection highlighted THAT employees differ, and to a certain extent WHY. The current subsection tries to present HOW employees individually differ in terms of social orientations.

In fact, there is a manifold of **theoretical** and **empirical developments**, which overlap with each other, but more importantly, connect with the idea of dispositions in social orientations: Self-Determination Theory (SDT)[108], Motive disposition theory (MDT)[109], Two Process Model (TPM)[110], Power Motivation[111], Achievement Motivation[112], Effectance motivation[113], Social motivation[114], Social Dominance Orientation (SDO)[115], Social Value Orientation (SVO)[116], Control Orientations (CO)[117].

[104] see e.g., Epitropaki et al. (2017)
[105] Bodenhausen and Peery (2009); Liberman et al. (2017)
[106] see e.g., Epitropaki et al. (2017); Epitropaki et al. (2013); Shondrick et al. (2010); Shondrick and Lord (2010); Sy (2010)
[107] van Kleef and Cheng (2020); van Kleef and Lange (2020)
[108] Deci et al. (2017); Ryan and Deci (2020); (2000)
[109] McClelland (1987)
[110] Prentice et al. (2014), Schüler et al. (2018); Sheldon (2011)
[111] Galinsky et al. (2015); Keltner et al. (2003)
[112] Atkinson and Raynor (1978); McClelland et al. (1953)
[113] Harter (1978); R. W. White (1959)
[114] Geen (1991); Pittman and Heller (1987)
[115] Pratto et al. (1994), degree of preference for inequality based on social dominance theory
[116] Balliet et al. (2009); McClintock and Allison (1989); Van Lange (1999)
[117] Grzelak (2001), formerly also called control preferences

The review of the above streams holds the following. There is already a long tradition for researchers who studied several **social motives as dispositions** of what humans seek in life. Usually, this is studied as the motive X situation interaction, e.g., why humans approach or avoid certain situations.

Although there are many possible motives, three of them became the most prominent. The **Big-3** social motives of **power**, **achievement**, and **affiliation.**

These motives traditionally are studied as **implicit motives**, which are unconscious motivational adaptations, which develop throughout early life stages to become substantially permanent dispositions and change only over decades. Implicit motives, due to their unconscious nature, are usually assessed via projection measures[118] and are rather considered as value constructs.

However, researchers clearly distinguish those from corresponding **explicit motives**, which are rather conscious and change more rapidly over time. Explicit motives are commonly measured through self-reports and are usually conceptualized as goals.

In general, researchers found theoretical and empirical grounds for the following.

First, implicit and explicit motives **can, but not have to be in line**, e.g., a high implicit power motive with a low explicit power motive, which may result in a reaction to the discouragement of dominant behavior in a respective environment. However, if they are not in line, which is usually called low self-concordance, then our general satisfaction and related individual outcomes suffer, which is detrimental to an individual's well-being[119].

Second, the **key characteristics** of the three motives in summary are:

The **affiliation** motive[120] is theorized as a need to belong and be socially accepted by others, as a result of uncertainty and fear of being socially rejected, but also the hope of closeness or intimacy. An affiliation motive is a form of social distance regulation. That is, a psychological security system and a psychological arousal system interact to find optimal levels of closeness to familiar or unfamiliar objects. High affiliaters pay attention to affiliative cues, try to gain sympathy and peace, avoid competition and conflict, initiate social interactions, spend more time with others, and readily change

[118] e.g., Picture-Story-Exercise (PSE), Thematic-Apperception-Test (TAT), Implicit-Association-Test (IAT) etc.

[119] see e.g., Sheldon et al. (2015); Sheldon and Elliot (1999); Thrash and Elliot (2002)

[120] Hill (1987); Hofer and Hagemeyer (2018); Steinmann et al. (2020); Steinmann (2017); Steinmann et al. (2016)

our opinions and attitudes. High affiliaters are more cooperative, less dominant, integrate everyone, and rather endorse a *'we' and 'us'* instead of an *'I'*.

The **achievement** motive[121] is theorized as a constant evaluation of actions and competence of oneself against a standard of excellence, as a result of fear of failure and/or hope of success. High achievers constantly try to excel or compete with others and fundamentally approach situations that bring success, but avoid situations that bring failure. When high achievers acquired treasured objects, they feel joy, but grief when they lose them. And if high achievers can dominate, they feel pride and gesture superiority. However, when they have to submit, they feel shame and show appeasement. Therefore, high achievers seek valid information about their competence and seek situations where success is either guaranteed or failure is at least not connectable to their own competence and actions.

The **power** motive[122], generally, is conceptualized as an inclination to exert influence over others, e.g., on their thoughts, feelings and behaviors. However, power is a kind of special motive among the three. It has two distinct faces, does not fit the psychological need system neatly, and seems to be a strong and prevailing force in social interactions, see section 1.3.2 on the dynamics of power in hierarchies. As fear of being weak, its incentive is to experience and show strength and social impact, which can lead to independence and autonomy. In its personalized form, it manifests itself as destructive and abusive behavior to increase personal gains. However, tamed by a high affiliation motive, its socialized form is rather a productive use of influence to benefit others and the interest of the whole community. Those with a high-power motive put emphasis on feeling strength and showing strength to others. They feel optimistic when wielding power but feel stressed and ill, when they feel powerless, or their power motive got frustrated. Generally, those with a high-power motive feel a more positive affect, but also greater satisfaction in their lives, jobs, and relationships. High-power seekers look for dominance and prestige. And because those are the core ingredients of social hierarchies, the power motive supports the formation of social structures and regulation of communities.

Third , researchers have every reason to assume a more general **efficacy motive**, of which the power motive and the achievement motive are actually two parts[123]. The efficacy motive, a universal motive to produce an effect, splits early in life

[121] Brunstein and Heckhausen (2018); McClelland et al. (1953); Weiner (1985); Festinger (1954)
[122] Busch (2018); Russell (2004); McClelland and Burnham (2008); Schüler et al. (2018); van Kleef and Cheng (2020); Winter (2006)
[123] Busch (2018); Vignoles (2011); Vignoles et al. (2006)

into two sub-parts. One motive aims at the effect of meeting a certain criterion (success/failure), and one motive aims at the effect to impress and therefore influence others (strength/weakness). The first is the achievement motive and the second is the power motive.

Fourth, the three motives sometimes work in **specific interaction** to each other, although they are usually studied in separation. Research on these motives has been done mainly apart from each other, with a strong emphasis on the achievement motive and the power motive. However, classical studies in leadership revealed a so-called *'leadership motive pattern'*[124] some decades ago. Studies showed evidence that the most effective leaders had a *'leadership motive pattern'* of high power and low affiliation. However, recent evidence indicates that a *'compassionate leader profile'* is even more predictive of success in a leadership role[125]. Those who are high in all, power, achievement, and affiliation, had much higher performance ratings compared to other profiles. This may be an indication that the *'compassionate leader profile'* generally has a better profile for high leadership success. But it could also indicate that the *'leadership motive pattern'* fitted better in the time of McClelland's original studies, where management structures were tighter. And the *'compassionate leader profile'* is more useful in the current times of more relaxed structures and greater emphasis on relational factors within workplaces[126].

Fifth, it seems reasonable to assume that even **other interactions** of these motives exist, which may manifest in different kinds of social orientations. In fact, researchers found theoretical ground and empirical support for distinct control orientations, several social orientations, and other taxonomies that describe individuals as either rather pro-self or rather pro-social[127].

One example is based on a review of the established research on control, power, social orientations, interdependence theory, and others. In general, Grzelak found good reasons and empirical evidence for **six distinct control orientations**, which can be considered as general dispositions of *'who should control the outcomes of whom'*[128]. See table 1.4 for a presentation of these orientations[129].

[124] e.g., McClelland (1987)
[125] Steinmann et al. (2014)
[126] Steinmann (2017)
[127] Grzelak (2001); Pratto et al. (1994); Van Lange (1999)
[128] Grzelak (2001)
[129] Zinserling and Winiewski (2011)

Table 1.4: Control Preferences (after Grzelak, 2001).

Name	Preference	[...] control	[...] outcomes.
proactive autonomy	self-control	Maximize one's	over one's own
dominance	power	Maximize one's	over others'
submission	dependence	Maximize others'	over one's own
respect autonomy	respect	Maximize others'	over others' own
collaboration	collaboration A	Maximize joint	over one's own
	collaboration B	Maximize joint	over others'
reactive autonomy	reactive	Minimze others'	over one's own

Note. 'joint' = one's and others' control.

Sixth, there is a **direct relationship** of the **social orientations** with the **basic psychological needs**. Researchers found sufficient ground and argue for the connection between that two spheres[130].

It seems that the **achievement** motive is an over/under compensation for the **competence** need, based on fears to fail and/or hopes to succeed.

The same seems to hold for the **affiliation** motive, as an over/under compensation for the **relatedness** need, based on fears to be rejected and/or hopes to be intimately connected to others.

A similar analogy could be inferred for the **power** motive and the **autonomy** need, as a quest for **independence**. However, the evidence does not show a clear picture of this. The autonomy need is fundamentally related to the self: seeking ownership of own actions, but not necessarily independence from others. The power motive places emphasis on others, seeking influence or control over others, however, based on the fear to be weaker than others and/or the hope to be stronger than others. Independence is not the fundamental motor, but both (power and autonomy) may eventually move individuals toward independence.

The **connection between SDT and MDT** is reflected in the TPM. This model considers two processes that work together. On the one hand, basic psychological needs remain unchanged, regardless of motive dispositions. That is, well-being suffers if not all three basic needs are met. However, on the other hand, individuals place more or less emphasis on some needs but not on others. This provides a kind of motivational boost for these specific needs but does not downgrade or upgrade any

[130]Schüler et al. (2018); Sheldon (2011); Sheldon and Gunz (2009)

of the basic psychological needs. This is a potential reason why high-achievement and/or high-power but low-affiliation seekers can still suffer from low well-being. Although they may satisfy their power/achievement/affiliation motives, they may consequentially lack high-quality relationships, which dissatisfies their relatedness need and hence lowers their well-being.

Seventh, not only research around MDT studies motive dispositions. The TPM suggests their integration with SDT. However, researchers around SDT with its multiple *'mini-theories'* recognize and in parallel find support for **adaptations** in **motivational striving**[131].

For example, according to one of the mini theories of SDT called *'Relationships Motivation Theory (RMT)'*, it is possible to adapt the correlation between autonomy and relatedness to be negative. Usually, this is positive. With that, individuals would adopt a rather low-quality (ambivalent) relatedness while sacrificing autonomy. Or they would adopt a rather low-quality (reactive) autonomy sacrificing relatedness.

1.3.2 Social hierarchies: predominant forces in social networks

The previous subsections highlighted the points that employees differ in at least two ways. Employees have individual dispositions in their social orientations, and employees belong to social groups, e.g., male or female, supervisor or non-supervisor, which prescribe them with higher or lower levels of status and/or power, and with it, they impose expectations on specific dimensions, like, e.g., Big-3: achievement, power, affiliation; or the Big-2: agency, communion. This indicates the importance of *'me versus others'*, this indicates the importance of *'status'* differentials, and this indicates the importance of social *'hierarchies'*.

Social hierarchies are important because they imply **predominant and prevailing forces** for employees to navigate their social environment. Research indicates that there is no world without hierarchies and that hierarchies have **tremendous effects** on employees in organizations.

First, researchers from multiple angles commonly agree that social hierarchies concern **omnipresent social stratification** of social groups and actors, based on **dominance and/or prestige**. That is, there are two forces that humans use

[131] see e.g., Deci and Ryan (2014); Ryan and Deci (2020), (2000); Sheldon and Prentice (2019)

to construct hierarchies. Both eventually result in the ascribing or prescribing of employees of different ranks[132].

The first and more ancient force is that of **dominance**. An employee with more power over another employee exerts dominance. Dominance is therefore seen as an *active form of rank-taking via cues of power*, a form of influence via, e.g., rewards, punishment, coercion, or information advantage - higher organizational positions may induce power due to formalized authority. However, this makes dominance rather volatile and prone to resistance. It may at first be effective and seen as good, but this usually erodes with time, as low-ranking coalitions form and/or the risks for the group become higher than their benefits.

The other force is **prestige**, an evolutionary younger concept. An employee with higher status compared to another employee is ascribed more prestige. Prestige is seen as a *passive form of rank receiving or exhibiting cues of status*, a form of influence via, e.g., respect, admiration, or possession of valued or threatening features, where more competent individuals may get more status. Compared to dominance, prestige is more *durable*. This is, the chance is higher that prestige differentials are defended and less resisted. This is because high-prestige employees enjoy more legitimacy through meritocratic dynamics: effort equals fairness. However, prestige is *constrained* if mutual expected benefits do not hold. That is, mutual recognition is undeserved, or the success of one group does not benefit the other. This can result, e.g., in anti-sentiments, which seems to be strongest for low-ranking groups, or collectivistic societies.

Both, power and status, are very **close concepts** and often can overlap, conflating power with status, and vice versa, e.g., giving status to somebody, purely based on the position that person holds. However, by the above, it should be clear that there are differences between hierarchy, rank, power, status, dominance, and prestige. And it should be clear that decreasing or increasing stratification through one force, e.g., dominance, does not necessarily decrease or increase stratification through the other, e.g., prestige, but can often do so.

Second, hierarchies are important because hierarchies **support social perceptions** and give employees an orientation to the status quo, but also specifically for times of conflict or insecurity[133]. This implies a **manifold of characteristics**:

[132] Anderson and Brion (2014); Blader and Chen (2014); Boehm (2001); Cheng (2020); Cheng and Tracy (2014); Cheng et al. (2010); Fiske and Bai (2020); Galinsky et al. (2015) Henrich and Gil-White (2001); Kraus et al. (2013); Magee and Galinsky (2008); Maner (2017); Maner and Case (2016);

[133] Friesen et al. (2014); Zitek and Phillips (2020)

Hierarchies find great support because they are very **easy to recognize**[134]. Hierarchies are inferred practically **automatic**, very **early** in the encounter with the respective group, and substantially **accurate**. Hierarchies **support personal agency**, because they provide a **sense of control** through greater clarity and predictability of their structure, opportunities, and responsibilities within them. This provides valuable cues for goal-directedness. They are mental representations that are often **grounded in external cues**[135].

These **cues are**, e.g., body signals of formidability, which gives those in higher rank often a fitness advantage. Body signals have evolved to be important for males in signaling their strength to other males. For some researchers, this seems to be a reason for our evolution of sex dimorphism[136]. For example, higher rank is still inferred from lower voice-pitch[137], higher muscularity, height, or facial features[138].

Overall, hierarchies support **social judgments**[139] and regulations of **social dependencies** and **social distances**[140], typically through multiple characteristic **emotions**, e.g., pride, shame, anger, fear, sadness, disgust, contempt, envy and admiration[141].

Third, there is substantial support that hierarchies are prevailing because they have **enormous impact on employees**. Changes in hierarchy and/or rank, affect employees in multiple ways[142].

Specifically, researchers looked at **stress** concerned with social hierarchies[143]. Researchers found physiological responses[144] of the body connected to hierarchy dynamics, as indicators for *'threat or challenge'*[145].

[134] Zitek and Phillips (2020); Kteily et al. (2017)
[135] Aung and Puts (2020); Matheson and Barsalou (2018); Schubert (2020); Witkower and Tracy (2019)
[136] Kordsmeyer et al. (2018)
[137] e.g., Feinberg et al. (2018); Ko et al. (2015); Lukaszewski et al. (2016); Puts and Aung (2019); Puts et al. (2014); Puts et al. (2006)
[138] e.g., Haselhuhn et al. (2015); Oosterhof and Todorov (2008); Spisak, Dekker, et al. (2012); Spisak, Homan, et al. (2012); Todorov (2017)
[139] e.g., Giessner and Schubert (2007); Hasty and Maner (2020); Phillips et al. (2018); Scholl (2020)
[140] see Magee (2020); Magee and Smith (2013)
[141] see Gilbert (2000); Steckler and Tracy (2014); van Kleef and Lange (2020); Witkower et al. (2020)
[142] Sapolsky (2005); Stamkou et al. (2020); van Kleef and Lange (2020)
[143] Knight and Mehta (2017); Marr and Thau (2014); Pettit et al. (2016); Pettit et al. (2013); Pettit et al. (2010)
[144] Akinola and Mendes (2014); Scheepers and Knight (2020); Scheepers and Ellemers (2018); Scheepers et al. (2015); Scheepers et al. (2009); Sherman and Mehta (2020)
[145] Blascovich (2008)

Cortisol levels generally increase with **status** losses. For high-status employees, cortisol increases even only due to their sense of loss of control or when their status becomes unstable[146].

Specifically, researchers found evidence through individual cardiovascular and neuroendocrine responses that stable status hierarchies threaten low-status employees. However, unstable status hierarchies become challenging for them, as they probably see the chance to increase their status. In contrast, for high-status employees, unstable status hierarchies mean a threat to their status, and with that a threat to them. There was even a proposed dual hormone hypothesis. That is, both cortisol and testosterone interact to respond to the dynamics of the status. However, recent research shows that both hormones have a large impact on responses to status dynamics, but both separately.

In other words, **status dynamics stress** employees, depending on the **status level** and the **meaning they put** into it.

Because status was assumed to be rather static in previous research, studies on the dynamics of status are relatively new[147]. Therefore, the evidence is **not abundant** but already indicates the above.

However, research on **power** has a long tradition and **is abundant**. Research shows multiple effects that power has on employees, once they have or try to attain it[148].

Power is shown to **improve cognitive functioning**[149] in terms of controlled processing[150] , executive functioning[151] and abstract thinking[152].

In other words, power **focuses the mind and actions**, to be more goal-directed, to pay attention to rewards, not threats, and to use fast automatic cognitions not slow controlled cognition[153].

[146]Dekkers et al. (2019); Knight et al. (2017); Mehta and Josephs (2010); Sherman et al. (2016); Turan et al. (2015)
[147]Bendersky and Pai (2018); Pettit and Marr (2020)
[148]Anderson and Brion (2014); Galinsky et al. (2015)
[149]e.g., higher in: intentionally, inhibition, working memory, cognitive flexibility; specifically via impressions of social distance or reduced cognitive vigilance (attention, alertness, wakefulness), see Yin and Smith (2020);
[150]Schmid Mast et al. (2020);
[151]see Diamond (2013); Miyake and Friedman (2012)
[152]Scholl and Sassenberg (2015); Smith et al. (2016); Smith and Trope (2006)
[153]see Anderson and Galinsky (2006); Anderson and Berdahl (2002); Cho and Keltner (2020); Guinote and Kim (2020); Guinote (2017), (2007); Galinsky et al. (2003); Keltner et al. (2003); Pike and Galinsky (2020)

Research also indicates that power is **not necessarily antisocial** or corrupting.

Employees who have or try to attain power rather perceive others in agentic terms[154] and are more inclined to use stereotypes[155] , but the evidence is not clear about the accuracy of their social judgments to be better or worse than low-power employees[156].

While this speaks for their agency on the one hand, researchers found evidence on the other hand, that power amplifies moral thinking, a part of communality[157].

This speaks against a generally inferred corruptive label for those high in power. Specifically, those high-power employees have more advantage for richer, mature, and multifaceted thinking, which increases their options to exhibit at least three out of four forms of moral thinking[158].

Over all, power generally leads to behavior that is **more agentic**, but **not** necessarily **less communal**.

Fourth, although hierarchies are omnipresent, important, and prevailing, hierarchies are **not a panacea**, at least not those based on power. Researchers found sufficient evidence for this.[159].

For example, research shows that well-being connected to stratification concerns rather subjective social perceptions of **status, but not power**[160]. This means that *'sociometric gradients'* count more than *'socioeconomic gradients'*. Studies showed that health increased through perceived status, not through sociostructural assets. And happiness increased more through status increases than through an increase in satisfaction of psychological needs. And peer standing was more important than demographic standing.

Additionally, anthropological research argues[161], that throughout most of history, humans lived in rather **egalitarian, small-scale societies** that actively suppressed

[154] see Hasty and Maner (2020); Maner et al. (2005)
[155] see Civile and Obhi (2016); Fiske (1993); Gruenfeld et al. (2008); J. A. Kennedy and Anderson (2017); Swencionis and Fiske (2020)
[156] Hall et al. (2016); Hall et al. (2015)
[157] Fleischmann and Lammers (2020); Fleischmann et al. (2019); Lammers et al. (2010)
[158] more for (1) iteration, (2) deliberation, and (3) orientation to rules; but less for (4) sentiment, see Conway et al. (2019)
[159] Anderson and Brown (2010); Hooper et al. (2010)
[160] Anderson and Kennedy (2012); Fournier (2020); Kahneman and Deaton (2010); Mahadevan et al. (2016); M. Marmot (2007), (2006)
[161] Garfield and Hagen (2020); Kaplan et al. (2009); Mattison et al. (2016); Van Berkel et al. (2015); von Rueden (2020)

steep stratification based on dominance, but incentivized rather shallow prestige-based social structures. That is, according to those findings, humans lived most of the time in rather *'flat prestige-based hierarchies'*, not in *'steep dominance-based hierarchies'*. However, demographic and ecological conditions allowed this. With later developments towards agricultural societies, constraints of coercion weakened, and dominance was added again to our social structures.

However, other research on political leadership/followership indicates[162], that followers **select dominant leaders** happily, but **only strategically**. Dominant leaders enhance options to aggressively attack other groups, especially in times of conflict or when there are conflictual viewpoints on certain salient aspects. However, there also is an intuition to fear, identify, and counteract the exploitation of the same selected dominant leader.

Other examples show **cultural differences** determining the conceptualization of hierarchies[163].

Research indicates that in *'individualistic cultures'*, hierarchies are rather vertical, and power is meant in personalized terms for self-benefit. Status is earned through competence, not warmth, violations of social norms are common, and people generally strive for power as a means to happiness. In *'collectivistic cultures'*, however, hierarchies are rather horizontal, and power is meant in socialized terms for other-benefit. Status is earned through competence and warmth, obedience to social norms is valued, and people generally strive for status as a means to happiness.

Fifth, it seems that the **value of social rank** is universal, but not the same way for everyone[164].

This is very important for the discussion of the present dissertation. Although there is some universality to a higher rank, there is also some individual difference.

However, some **employees differ** in their desire for rank. As research shows, those with higher levels of testosterone, self-monitoring, and abstract information processing desire higher rank more than those with lower levels. The same is true for those who have higher orientations in prestige and/or dominance. This implies and finds empirical evidence that some others do not desire to maximize their social rank. A high rank means stress for employees with less testosterone. A higher rank

[162] Bastardoz and Van Vugt (2019); de Waal-Andrews and van Vugt (2020); Kakkar and Sivanathan (2017); Laustsen and Petersen (2017); Petersen and Laustsen (2020);
[163] Torelli et al. (2020); Torelli et al. (2014); Torelli and Shavitt (2010);
[164] Anderson et al. (2015); Mitchell et al. (2020)

is also detrimental for those who fear not being able to hold high expectations of others. However, others have associations that their peers perceive them negatively, once they would have a higher rank. Overall, the desire for higher/lower social rank becomes salient in situations that threaten or challenge individuals' control, self-esteem, competence, or their rank itself.

1.4 Theoretical model

The literature review of both how leadership research evolved from a focused perspective toward a shared, or social network perspective, and the multiple consequences of social networks confirms **several important messages**.

First, there is **no panacea** for leadership structures, neither the focused nor the shared perspective.

Second, by far research has **concentrated** on the **focused leadership** perspective.

Third, when it comes to research within the **shared leadership** perspective, the attention was **concentrated** on the **team level**, and especially on the effectiveness of teams.

Fourth, the review of the consequences of social networks indicates some **important aspects** of the **behavior and perception** in changing social environments. Some of those aspects are universally shared, but multiple aspects are individually distinct among employees. Not surprisingly, the content of those findings on those consequences parallels to a certain extent the content of the findings in leadership research.

However, **little attention** was paid to the outcomes of shared leadership compared to focused leadership at an **individual level**. In fact, such research could not be identified. This means that it is not clear whether every employee would prefer shared leadership more or less than focused leadership. And it seems not clear if and how employees with different characteristics react differently within teams that represent one or the other leadership structure, shared versus focused.

1.4.1 Two extreme forms of leadership structures

The *first objective* of the present dissertation is to **identify research strategies** to compare employees' preferences for shared and/or focused leadership on an individual level. The review of the literature implies that there are **many forms** of shared leadership. In fact, according to the literature review, our research group developed a simple framework that would identify multiple leadership structures, which could be called *'shared'*, see, e.g., figure 1.1, which may be used to pitch different forms of shared leadership.

		CENTRALITY			
		high		low	
		STABILITY		STABILITY	
		high	low	high	low
FORMALITY	high / very formal	PURE FOCUSED HIERARCHY	/	FORMAL MATRIX ORGANIZATION	FORMAL DOUBLE TOP
	middle / rule based	/	/	RULE BASED ASSIGNMENTS	RULE BASED SELF-MANAGEMENT
	low / very informal	/	/	PURE CONSENSUS	PURE SELF-MANAGEMENT

Figure 1.1: Conceptual draft of different forms of shared leadership considering three structural dimensions: de-centrality, in-formality, de-stability. Although density is a fourth dimension found in the literature, it rather adds in terms of how strong a leadership network is but does not provide an indication about the structure of the leadership network itself (own elaboration).

However, to contrast the most **extreme forms** of shared versus focused leadership, additional reflections support the following statements.

Shared leadership must be rather **informal and unstable**, providing:

- **more** uncertainties
- **lower** possibility to know who leads or follows
- **higher** potential for everybody to lead
- **less** obligations for everybody to lead or follow
- **many** opportunities to follow (equally to focused leadership)

Focused leadership must be rather **formal and stable**, providing:

- **less** uncertainties
- **higher** possibility to know who leads or follows
- **lower** potential for everybody to lead
- **more** obligations for everybody respectively to lead or follow
- **many** opportunities to follow (equally to shared leadership)

The above statements are derived from the following reflection.

Section 1.2 pointed out that shared leadership is laterally dispersed and dynamic. Dispersed means that more employees in the leadership network are involved in the leadership process. That gives an opportunity for everyone to lead, compared to situations where only a few employees lead across time and aspects that may arise.

The present dissertation adopts the notion that **shared leadership** must be more of an **informal emerging** network than a formalized stable network. Although shared leadership could be formalized to a certain degree, e.g., with some form of rules that define who leads when, whom, and what, it is highly unlikely to absolutely formalize it. Think of a team. In the beginning, formally designate each time and each aspect that may arise who has to lead or follow. However, consider arriving at a high degree of dispersion, that is, as many members as possible enact leadership. First, it is very unlikely that one will anticipate how long that team will last and what aspects may arise. But even if this could be anticipated, it is even less likely to nominate in advance the right employee for the right time and the right aspect to lead or follow, but additionally holding a high degree of dispersion, which means as many as possible employees take part in leading.

On the other hand, a notion that is less pronounced in the literature but finds support with the following arguments is the following. **Focused leadership** must be more of a **formalized and stable** network than an informal and emergent network. An informal setting does not necessarily exclude the possibility that focused leadership emerges. This means, in centralized terms, that only one employee emerges to lead all the time in all aspects of the team. However, the likelihood of that seems rather low, not high. The likelihood of that should even decrease, by adding more time, more aspects, and/or more employees into consideration. On the other hand, consider formalization. It is difficult to imagine a maximum of formalization that comes with a maximum of focused leadership, again, one appointed employee that leads all the time for all aspects. Reaching this maximum is unlikely because the opportunity to emerge as an additional leader cannot be absolutely eliminated, even in a highly formalized setting. This seems even less likely considering all the multiple elements involved in the enactment and construction of leadership. However, exactly for this complexity of leadership construction, it seems clear that, for more focused leadership, more formalization would actually be needed. Otherwise, it increases the likelihood for others to emerge, which would decrease centrality, and therefore, decrease focus.

Yet another argument for considering focused leadership as formalized and stable is the following. Imagine the likelihood would high for only a few strong leaders to emerge in a rather informal setting, which would give rise to true focused leadership to emerge, overall time and aspects. This may be possible if only a few employees are perceived as strong leaders and most of the others just follow by mutual agreement. In fact, by pure face validity, everyone would agree that these situations may occur by chance. Almost everyone can recall situations, project teams, assignment groups,

etc., where one person just dominated the scene. However, more important for teams that would aim for focused leadership for whatever reason, this would imply two things for those teams. Either (a) those teams would have to trust in pure chance. This implies that shared leadership must also be accepted to some extent because one can never be sure if one is relying on chance. Or (b) those teams would need to select and/or allocate the right employees to the team, or manipulate their skills, motivations, etc. to make focused leadership happen, in fact, emerge. However, this would be similar to formalizing the leadership process and would be a totally different challenge for the organization. Then it would not be the question of how to structure leadership, focused versus shared, but it would be a question of how to best manipulate the leadership process to make any of the structures happen, depending on the team's aims. For example, teams could train 'leadership skills' to the already assigned formal leaders in the hope that those leaders will then lead better. Teams could put effort into selecting the 'right' employees for formal leadership positions. Or, teams could train employees, e.g., in communication or collaboration skills to foster greater participation, such as in shared leadership. In sum, regardless of which constellation, to intentionally ensure focused leadership, teams must formalize and teams must intentionally stabilize.

The above argument should support the following statements:

First, it seems clearer that **shared leadership** is not only more **decentralized**, it must also be rather **dynamic** through **informality** and **instability**. Compared to focused leadership, this implies that shared leadership provides: a lesser degree of possibility to know who leads and follows; a higher degree of potential for everybody to lead; to a lesser degree of obligations for everybody to lead or follow.

Second, on the other hand, it seems clearer that **focused leadership** is not only more **centralized**, it must also be rather **not dynamic** through **formality** and **stability**. Compared to shared leadership, this implies focused leadership provides: a higher degree of possibility to know who leads and follows; a lower degree of potential for everybody to lead; a higher degree of obligations for everybody to respectively lead or follow.

Additionally, *third*, the **opportunities to follow** should be rather **high not low in both**, but not higher nor lower in one or the other, focused or shared leadership. In other words, focused leadership, by definition, provides much space to follow. Everyone who wants to follow can potentially follow, at least as anticipated from the mere structure of it. Shared leadership, by definition, implies no prohibition to follow. Hence, it implies enough space to follow for everyone who wants to follow, at least anticipated from the mere structure of it.

1.4.2 Predictors of leadership structure preferences

The *second objective* is to **identify characteristics** for individually distinct responses toward shared versus focused leadership. Reviewing the literature implies that there are at least **three major aspects** of interest. In shared leadership, compared to focused leadership, respondents may react:

- equally due to a **main effect**
  (shared leadership is generally preferred over focused leadership);
- differently due to their **social interdependence orientations**
  (Who should control/influence/lead whom?);
- differently due to their **social rank**
  (having power/status or not)

As means of a high-level theoretical model, the following should be expected.

As a **main effect**, shared leadership should be **more preferred** than focused leadership. Compared to focused leadership, shared leadership provides respondents with **more opportunities** to act according to their own characteristics and orientations, **less obligations** to act against their own characteristics and orientations, and shared leadership provides **more opportunities** to meet, but not frustrate, their universally shared characteristics, e.g., efficacy-motive; status-seeking; three basic needs: autonomy, competence, and relatedness.

Social interdependence orientations come in many different taxonomies, e.g., control orientations: dominance, submission, collaboration, three forms of autonomy; or social motives: power, achievement, affiliation; and many more. However, all seem to have the common core, which is cognitive adaptations such as over or under-compensations in two dimensions[165]:

- **agency:** to get ahead (individual influence, control, or mastery);
- **communion:** to get along (connection, participation with others).

This is important for the present dissertation. In shared leadership, employees have to get along with **many - other - leaders**, while in focused leadership, they have to get along with only **a few - other - leaders**. And if someone wants to get ahead or

[165] Abele and Wojciszke (2018)

not, it should be important that this employee wants to get along with many others or not, in order to prefer one or the other leadership structure. That is, depending on their social interdependence orientations, employees may see and seek **opportunities and obligations** in different ways, both for themselves and for others.

Depending **social rank**, the degree of stability of hierarchies threatens or challenges employees. Therefore, shared leadership should be **less preferred** than focused leadership by those who would be **threatened but not challenged** by **unstable hierarchies**, e.g., those who have power and/or status and therefore could potentially lose it. Shared leadership should be **more preferred** than focused leadership by those who would be **challenged but not threatened** by **unstable hierarchies**, e.g., those who do not have power and/or status and therefore could not lose but potentially gain it.

2 Methods and objectives

2.1 Hypotheses

Two studies were conducted to test the theoretical model described at the end of chapter 1.

Four main hypotheses were formulated, in which the phrase *'FL preference'* means preferences *for focused compared to shared leadership.*

Table 2.1: Hypotheses (own elaboration and own studies).

Hypotheses	Study
H1: FL preferences depend on control orientations: FL preferences are stronger..	
H1a: .. the stronger the orientation for dominance.	S1
H1b: .. the stronger the orientation for submission.	S1
H1c: .. the weaker the orientation for collaboration.	S1
H1d: FL preferences are not related to orientations for autonomy.	S1
H2: FL preferences are weaker than SL preferences (main effect).	S2
H3: FL preferences depend on social motives: FL preferences are stronger..	
H3a: .. the stronger the power motive.	S2
H3b: .. the stronger the achievement motive.	S2
H3c: FL preferences are not related to the affiliation motive.	S2
H4: Supervisors have stronger FL preferences than non-supervisors.	S2

Note. 'FL preference' = preferences for focused compared to shared leadership.

2.2 Rationale for each of the hypotheses

There are two important notes for the following rationale: *First*, all of the following rationale are made in the context of **individualistic cultures**. See section 1.3.2, that the cultural context may change certain dynamics concerning hierarchies. *Second*, the following hypotheses concern each of the **motives and orientation separately**, but not the interactions between them. This is on purpose due to the **following reasons**.

Researchers identified two specific leadership motive patterns, which represent between-motive interactions. However, those were studied exclusively for individuals in leadership positions and only concerned with their effectiveness. Those patterns do not concern non-leaders, and those patterns do not concern affects and attitudes of the individuals themselves, who have these patterns.

Other research for such interactions could not be identified, which would give sufficient support for hypotheses in the context of the present research project. All respective possible between-motive interactions would have to be elaborated separately and would give rise to future research.

Traditionally those three social motives were studied separately with substantial insights, which provides sufficient support for the direction of the present research.

H1a: FL preferences are stronger,
the stronger the orientation for dominance.

An orientation for dominance is considered as a rather agentic component, which lets individuals see, value, and approach opportunities, even if those are low.

Those employees with an orientation for **dominance** primarily prefer to maximize their control over the outcomes of others. This implies that the fewer options others have to control any outcome, the better. And the more options those employees have to control any outcome, the better, especially the outcomes of others. When comparing shared and focused leadership, it should be clear that in shared leadership there are more options to control. However, this applies to everyone. In focused leadership, the options are fewer for everyone. However, it is more likely to overcome only a few members that have control in focused leadership compared to many that have control in shared leadership. With that, focused leadership provides better options.

H1b: FL preferences are stronger,
the stronger the orientation for submission.

An orientation for submission is difficult to clearly categorize as agentic and/or communal. It is possible to imagine that individuals could use the strategy of submission for very different reasons, e.g., loyalty; social loafing; fear to fail or to be rejected; hope to succeed, but with the help of others.

Those employees with an orientation for **submission** primarily prefer to maximize others' control over their outcomes. This implies that the more options others have to lead, the better. And the more options those employees with an orientation for submission have to follow, the better. And the fewer obligations those employees have to lead, the better. Shared and focused leadership provide enough options to follow. Shared leadership provides more options to lead, especially for others, but focused leadership comes with fewer obligations to lead. With that, for those employees with an orientation for submission, it is not clear enough what leadership structure they would prefer because both structures provide enough options to follow. However, the tendency should be in the direction of focused leadership. This is because, within focused leadership, it should catch employees' attention that the obligations to follow apply to most of the members. But in terms of shared leadership, there may be individuals who see the possibility of following, but others may not. These may associate a certain obligation to participate in shared leadership, which is not preferred with an orientation for submission.

H1c: FL preferences are stronger the weaker
the orientation for collaboration.

It is possible to imagine that individuals could use the collaboration strategy for very different reasons.

Those individuals with an orientation for **collaboration** primarily prefer to maximize others' control over their own outcomes, but also their control over others' outcomes. This implies that the more options there are for everyone to lead, the better. And the fewer options for everyone to lead, the worse. Shared leadership offers more options for everyone, while focused leadership is only for a few. Therefore, no matter what the underlying reason is for the orientation for collaboration, shared leadership provides better options.

H1d: FL preferences are not related to orientations for autonomy.

Those employees with **any of the autonomy** orientations primarily prefer to maximize self-control. They seek to (a) maximize the control over their own outcomes with *proactive autonomy*, (b) minimize the control of others over their outcomes with *reactive autonomy*, and (c) maximize others' self-control with *respect for autonomy*. It would not be a clear decision which leadership structures those employees would prefer. This is because there are multiple possibilities on how employees could project the satisfaction of their respective autonomy orientation in shared or focused leadership. **Proactive autonomy** and **respect for autonomy** seem to be concerned with employees' innate basic need for autonomy. One is associated with the self, while the other seems to be projected into others. But both do not necessarily infer any social difference at all. That is, they do not imply any proactivity to lead or to follow, neither for the self nor for others. **Reactive autonomy** seems to concern an aversion or avoidance of control from others. In shared leadership, many have the option to lead, increasing the chance that someone infers into the autonomy of other individuals. In focused leadership, only a few have the option to lead, but many have the obligation to follow, which increases the chance to frustrate the autonomy of most of the employees.

H2: FL preferences are weaker than SL preferences (main effect)

Overall, implications of the two extreme leadership structures suggest a **main effect**. That is, **shared leadership** should be perceived **more positively** than focused leadership. For shared leadership, in terms of leadership and followership, there are mainly opportunities for employees, but no obligations. However, focused leadership comes with equally large opportunities to follow, even the obligation to do so for many employees. But it also comes with fewer opportunities to lead, as only a few get that opportunity, even the obligation to do so. In other words, those who want to lead, as well as those who do not want to follow, have more opportunities to do so in shared leadership. Nothing of the mere structure of shared leadership obliges to do anything else. And those who do not want to lead, as well as those who want to follow, can do so equally likely in both structures. Another argument concerns the universal characteristics, e.g., the efficacy-motive, status-seeking, and the three basic needs autonomy, competence, and relatedness. All point toward directing goals, growing, and being healthy as individuals. Compared to shared leadership, the chances are much higher in focused leadership that those universal needs and motives are frustrated. This is because in focused leadership much depends on the one leader

at the center or at the top, meaning whether this leader does everything to satisfy or frustrate the needs and motives of the rest of the group. However, the more leaders there are, e.g., within shared leadership, there is more chance that need-frustrating behavior from one leader can be counteracted by another leader. The chances are even lower for all leaders to behave in a need-frustrating way. Additionally, the chance is greater in shared leadership that employees can take self-initiative to satisfy their own needs and motives, which is less possible in a restrictive focused leadership structure without making additional assumptions.

H3a: FL preferences are stronger, the stronger the power motive

The **power motive** is a fear to be weak and a motive to impress others, to show strength over others. That means, similar to the dominance orientation, the more options individuals have to impress others with strength, the better. Although there are plenty of opportunities to do so in shared leadership, focused leadership is more restrictive for that. However, focused leadership is more predictable, which should play into the hands of power-motivated individuals, while shared leadership is more unstable and unpredictable, with more opportunities for others to counter any effort in impression-making.

H3b: FL preferences are stronger, the stronger the achievement motive

The **achievement motive** is a fear of failure or a hope of success. This elicits competition towards a certain standard of excellence, equaling an enhanced quest for competence. That means that the higher the chances to excel and meet high personal standards, the better. I did not find an indication in the literature that individuals with a high versus low achievement motive seek more or less leadership or followership opportunities. In this sense, the achievement motive would not predict higher or lower preferences for any of the leadership structures. However, the disposition of the achievement motive makes employees react differently to uncertainties. Leadership structures, which appear more stable, should be preferred by employees with a higher achievement motive. This is because any outcome should be more predictable, outcomes on the team level, but also on the individual level, which is important for achievement-motivated employees.

H3c: FL preferences are not related to the affiliation motive

The **affiliation motive** is a fear of being rejected by others or a hope of being close to others. This makes individuals look for ways to enhance relationships with others. In the literature, I could not find an indication of higher or lower intentions to seek or avoid opportunities for leadership or followership, control, or not control. However, the inclination of this motive is rather to be in connection with others, to please, support, and/or include others. This should be possible in either of the leadership structures. It is possible to satisfy this motive if there are many members of the group who can speak up and with whom individuals could connect. But this motive could also be satisfied by employees as loyal followers of some few or even only one assigned leader, as long as they feel a connection or belonging.

H4: FL preferences are stronger for supervisors than for non-supervisors

As section 1.3.2 pointed out, hierarchies are omnipresent, provide orientation, and have a tremendous impact on employees, but are not a panacea. More specifically, employees see hierarchies everywhere, and depending on where those employees are in the hierarchy, they react differently to its dynamics. Those with less power are threatened by stable hierarchies because there is less chance of rising in rank. However, they are challenged if hierarchies become unstable because the chances increase to rise or speak up. On the other hand, those with high positions in the hierarchy, which provide more power and/or status to them, should be content with stable hierarchies as they just support the precious status quo. However, if hierarchies become unstable, they become threatened because their position is in danger.

It should be expected that preferences for the leadership structure (shared or focused) depend on the **position within the organizational hierarchy** (being a supervisor of others or not). The stability of focused leadership structures should be more preferred, and the instability of shared leadership should be less preferred by those who are supervisors, which implies a certain higher rank, or in other words more power and/or status for them. The opposite should be expected for those who are not supervisors, which implies a certain lower rank, or in other words less power and/or status for them.

2.3 Description of samples and procedures

2.3.1 Study 1. Employees' Control Orientations as predictors of Leadership Structure Preferences (N=184)

Sample

The data for this study consists of one hundred eighty-four respondents, recruited through MTurk[166] on August 24, 2018 and August 30, 2018 (184 respondents, 63% men, 20-71 years, M = 33.48, SD = 10.41, median = 30 years, 80.4% full-time-employed, 10.9% part-time-employed, 8.7% unemployed, all US located). All respondents received $0.50 dollars as a reward for their participation.

Procedure

The entire survey was created and accessed online through Profitest[167], and distributed through MTurk[168]. All respondents went through the following **procedure**, each on separate pages.

First, they had to read and accept informed consent.

Second, they filled in their sociodemographic information: age, gender, and occupational status.

Third, they filled in the measures on the predictors and dependent variables in random order.

Attention checks

Two sets of **attention checks** were applied to block or exclude respondents.

The *first set* was options from the Mturk platform, to verify the location of workers and block duplicate IP addresses.

The *second set* was items to check the randomness of the answers. These were 'What is the current year?' and 'Please mark a strongly agree to answer this question.'

[166] MTurk (2018)
[167] Profitest (2018)
[168] MTurk (2018)

2.3.2 Study 2a. Methodological experimental study - testing two forms of target descriptions (N=51)

Sample

The data for this study consist of fifty-one respondents, recruited through MTurk (MTurk, 2018) on 23 April 2020 (51 respondents, 60.8% men, 22-65 years, M = 37.04, SD = 11.42, median = 33 years, all US located). Eight out of the originally recruited fifty-nine participants were excluded, due to attention checks. All respondents received $0.25 dollars as a reward for their participation.

The **procedure** is described in the description of study 2a in the section of the operationalizations 2.4.3.

2.3.3 Study 2. Employees' Social Motives as predictors of Leadership Structure Preferences (N=178)

Sample

One hundred and seventy-eight respondents, initially recruited through MTurk[169] on October 21, 2020 (178 respondents, 51.7% men, 22-71 years, M = 39.74, SD = 11.50, median = 37.5 years, 70.8% full-time-employed, 17.4% part-time-employed, 11.8% unemployed, all US based). All respondents received $0.65 dollars as a reward for their participation in the first wave, and another $0.65 dollars for their participation in the second wave.

Procedure

The entire survey, including its procedure, was created and accessed online through Profitest[170], and distributed through MTurk[171]. The recruitment was carried out in **two waves**.

In the **first wave**, all respondents went through the following procedure, each on separate pages. *First*, they had to read and accept an informed consent. *Second* , they filled out their sociodemographic information: age, and gender. *Third*, they filled out the measures in a random order about their: social motives. *Fourth*, they filled in additional questions concerning their: occupations.

[169] MTurk (2018)
[170] Profitest (2018)
[171] MTurk (2018)

The **second wave** began two weeks after the first wave was invited. Only respondents who passed the attention checks of the first wave were invited. All respondents in the second wave went through the following procedure, each on separate pages. *First*, they had to read and accept an informed consent. *Second*, they received the experimental manipulation. *Third*, they filled out measures to assess their reactions to the manipulation.

The first wave automatically stopped recruiting more respondents after a threshold of 400 was reached. It was expected to reach an **attrition rate** of approximately 20-50% in total. That is the ratio of the total number of respondents, which went through the first wave, to the total number of respondents, that were included in the analysis. Attrition was due to respondents not taking part in the second wave from their own voluntary initiative, and exclusions in both waves via attention checks. The final attrition was 55.5%, from 400 initially recruited to 178 respondents, which were included in the analysis.

Attention checks

Three sets of **attention checks** were applied to block or exclude respondents.

The *first set* was options from the Mturk platform to verify the location of workers and block duplicate IP addresses.

The *second set* was items to check the randomness of the answers. These were two attention checks per wave, e.g., 'Attention check: please mark the answer "More like A" ', 'Attention check: please mark the answer "Quite often" ', or 'Attention check: please mark the answer "Difficult to say" '.

The *third set* consisted of multiple qualitative checks for the plausibility of given answers.

In the first wave, these were nonsense answers for job description and/or job title; years of professional experience; or years of supervision. The not plausible answers were, e.g.,: 'yes' or 'data' for a job tile; >100 years of job experience; or the negative difference between years of supervision and years of professional experience.

In the second wave, these were nonsense descriptions for what respondents remembered from the target description; why they gave the specific answer for liking the respective team; or what the main (dis)similarities to their current job are. Not plausible answers were, e.g.,: 'I suggest pick whatever closest to the truth for you' or 'similarity and dissimilarity'.

2.4 Operationalizations of leadership structures (focused versus shared)

In many studies, preferences for leadership structure (FOCUSED versus SHARED) were examined in real team settings, which causes multiple other attached variables to potentially moderate any outcome, including employees' preferences and/or perceptions, e.g., team environment, team tenure, etc. Researchers even call for more research on antecedents, mediators, moderators, and boundary conditions, which could have tremendous effects on shared leadership and its outcomes[172].

Currently, available approaches **only account** for density and decentralization. However, these approaches do not capture, e.g., the formality or stability of the leadership structure. Some theoretical proposals have been articulated, but never tested[173]. However, not only can teams with focused leadership be different from teams with shared leadership, but also teams with shared leadership can be different from each other. That is, teams with other forms of shared leadership may be distinguishable not only by dimensions of (de)centrality and density, but also by dimensions such as stability and formality. Current research only considered the former two dimensions. However, new operationalizations, such as those proposed in the present dissertation, could potentially account for more nuanced research.

For this reason, it has been decided that to investigate employees' responses to focused versus shared leadership at an individual level, target stimuli should be the best choice.

No operationalization for shared leadership in contrast to focused leadership could be found that (a) specifically aims at individual-level outcomes and (b) can be used in nonreal-team settings. All operationalizations currently available were measures to assess real team settings to investigate team-level outcomes.

Furthermore, it seems highly welcome to create new innovative measures, which capture the yet unstudied characteristics of shared leadership[174], like, e.g., different configurations or aspects, which may affect its outcomes, including individual outcomes. That means it is from value to create operationalizations that are (a) more **universally applicable**, and not exclusively dependent on real existing teams. And it is from value to create operationalizations that are (b) **potentially adjustable** for future research because the research concept of shared leadership is still in flux.

[172] e.g., Zhu et al. (2018)
[173] see Derue et al. (2011)
[174] see Zhu et al. (2018)

2.4.1 Operationalization 1. REFERENT-SHIFT - Leadership Structure Preferences

To measure preferences for working in a team with shared or focused leadership style, a scale originally developed by other researchers[175] was transformed to measure participants' preference for one of two team types, labeled Team A (where every team member is involved in setting organizational goals) or Team B (where a leader sets the goals).

I call it **REFERENT-SHIFT**, because the referent was shifted from *'Each member'* to *'A leader'*. Often researchers on shared leadership used a referent-shift from traditional leadership measures in the form of *'A leader'* to *'Each member / Other members'*. However, the present approach added the traditional referent again. Wood and Fields (2007) measured the extent of shared leadership of actual teams on a four-point Likert-type scale (1 - definitely not true to 4 - definitely true). This measure was adopted and adjusted for the purposes of the present research to measure preferences between two types of teams, focused versus shared.

This measure was used in **study 1**. Respondents rated their preference on a 5-point scale, with higher scores indicating a stronger preference for focused leadership. The scale consisted of 10 items and exhibited good internal consistency, with a Cronbach's alpha of .84. See the entire scale in the table below.

[175] Wood and Fields (2007)

Table 2.2: Team preferences - 'FL' by Wood and Fields (2007); 'SL' own adjustments.

Focused Leadership	Shared Leadership
A leader of the team establishes the goals for the organization.	Each member of the team participates in establishing the goals for the organization.
A leader of the team frames the vision for the organization.	Each team member helps to frame the vision for the organization.
A leader decides on the best course of action when a problem faces the team.	Each member shares in deciding on the best course of action when a problem faces the team.
Each member is evaluated by and is accountable to a leader of the team.	Each member is evaluated by and is accountable to all other members of the team.
A leader makes decisions that affect the organization.	Team members collaborate with one another in making decisions that affect the organization.
A leader decides how resources are allocated in regard to the team's priorities.	Each member has a say in deciding how resources are allocated in regard to the team's priorities.
A leader identifies, diagnoses, and resolves the problems that face the team.	Each member helps to identify, diagnose, and resolve the problems that face the team.(Reversed)
A leader insures the team fulfills its obligations.	Each member chip in (even if it is outside an area of personal responsibility) to insure the team fulfills its obligations.(Reversed)
The team has one person in charge who ensures that the work is well organized.	The team members collaborate to organize the workflow.(Reversed)
The team has one leader who takes on the responsibility for the team outcomes and guides the team members.	Each team member shares the responsibility for the team outcomes and helps in guiding others.(Reversed)

Note. 'Reversed' order for some items: team A = team SL(FL); team B = team FL(SL).

2.4.2 Operationalization 2. TARGET DESCRIPTIONS - Wholistic Leadership Structure Scenarios

The second operationalization is a **vignette-based measure**. The aim of a vignette approach was to create target stimuli, in the form of distinct leadership structures, that touch the imagination of the respondents.

These could potentially be used in multiple research settings. The process of creating these scenarios turned out to make a loop, from a vignette approach, which was originally aimed at, towards an itemized approach, which was later dropped, back to a vignette approach, which found a final solution.

The following presents a summary of the main challenges concerning the creation of these vignettes.

- At least two distinct vignettes that had to be as similar as possible but only differ in key content that distinguishes the vignettes between focused and shared leadership.
- Vignettes should be able to transmit the main impression of the respective leadership structure and touch the imagination of respondents.
- The word counts had to be as close as possible.
- Additional content should be included for authenticity but limited to a minimum; e.g., in the final version, additional content is: '8 other colleagues', 'though time', and 'individual salaries depend'.
- Names should be either excluded or as neutral as possible, e.g., gender of the protagonist, which would potentially change perceptions. The names were therefore excluded.
- Because the final content versions were implemented as texts and as videos, the videos should not have audio and both videos should have the same time and the same visual content. See figure A.4 *left side* how those videos looked like. The videos were exactly the same, containing a sequence of neutral, black-white, slightly blurred pictures, each picture including a text box of respective vignette text passages. The timing was adjusted, not to be too quick and not too slow, to not unnecessarily stress or bore the respondents, but to give them enough opportunity to consume the content. The videos only differed in the respective textual content, exactly like the text-based vignettes.

- The vignettes were validated through multiple steps. First, face validity through our research group, and second face validity through external individuals who were not involved in the research topic but have business experience. Third, a methodological study tested four final versions; see section 2.4.3.

Appendix A.3 presents the first trial of two vignettes from the first phase, contrasting shared from focused leadership and some examples of multiple iterations from the second phase, an itemized approach, including four semi-final vignettes.

The final operationalization turned out to be the two text-based target descriptions, which passed a multiple-step validation, including the methodological experimental study; see study 2a below.

This measure was used in **study 2**. Respondents first received an introduction text. Then they were randomly presented with one of the two text-based target descriptions and rated three types of perceptions. See a presentation below:

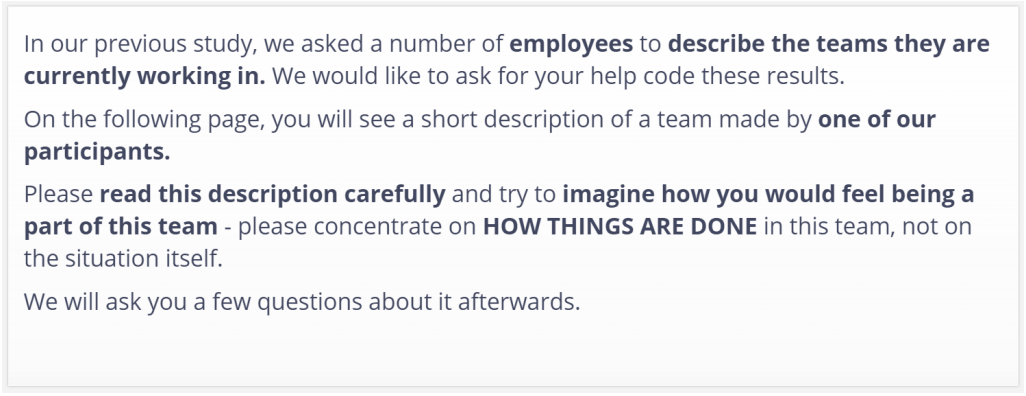

Figure 2.1: Study 2 + Study 2a: Target descriptions introduction text.

Table 2.3: Target descriptions - text-based experimental manipulation (own elaboration).

Focused leadership	Shared leadership
I work in a team with 8 other colleagues and our team leader.	I work in a team with 8 other colleagues. We have no team leader.
Normally, when our team gets a task to perform, our leader thinks how to complete it and distributes the workload and responsibilities between us.	Normally, when our team gets a task to perform, all of us meet and think how to complete it and how to share the workload and responsibilities between us.
Its a thought time right now. Due to the market crisis we had to double efforts.	Its a thought time right now. Due to the market crisis we had to double efforts.
My team leader prepared a plan on what and when to do, and set several deadlines throughout the year.	The whole team came together and prepared a plan on what and when to do, and set several deadlines throughout the year.
He set goals for each one of us, the completion of which he will evaluate later.	We decided on the goals for eahc of us, the completion of which we will evaluate later.
Everybody knows that individual salaries depend on reaching these goals.	Everybody knows that individual salaries depend on reaching these goals.
We will probably see the fruits of our efforts soon.	We will probably see the fruits of our efforts soon.

Part One asked, 'Would you like to be a part of TEAM X?' with a 7-point response scale: from 1 - Definitely not to 7 - Definitely yes.

Part Two asked, 'How satisfied do you think you would be working in TEAM X?' with a 7-point response scale: from 1 - Definitely dissatisfied to 7 - Definitely satisfied. A single mean score was computed as an indicator of the attitudes of the respondents because both liking and satisfaction were highly correlated ($r = .89$).

Part Three asked, 'Please imagine that you are a part of TEAM X. Considering the way things are done in this team, how often do you think, would you experience the following emotions?'; Respondents were given ten emotion items to rate on a 5-point Likert scale: 1 - never, 2 - rarely, 3 - sometimes, 4 - quite often, 5 - extremely often or always. The emotion items were adopted from the JAWS scale[176], and consisted of two subscales: (a) positive: enthusiastic, energetic, inspired, content, at ease, and (b) negative: angry, anxious, depressed, discouraged, bored. Both subscales formed single factors, one for negative affect ($\alpha = .75$) and one for positive affect ($\alpha = .85$). Both factors were correlated ($r = -.60$), and a single mean score was computed from those two as an indicator of the positive-negative affect of the respondents. Both the attitude score and the affect score were correlated ($r = .81$).

[176]Van Katwyk et al. (2000)

Both were standardized and a single mean score was computed, as an indicator for respondents' overall positive-negative perceptions.

2.4.3 Study 2a. Methodological experimental study - testing two forms of target descriptions

Summary: To increase the engagement of respondents, two forms of target descriptions of the leadership structure: video clips versus texts were tested in a methodological experimental study in which 51 subjects participated. Contrary to expectations, it turned out that the text form is more easily perceivable than the video format.

This methodological experimental study aimed to test the vignettes created as new operationalizations for focused versus shared leadership. The objective was to answer two research questions.

1) Which format of vignette presentation (video versus text) predicts more accurate preferences for the leadership structure?
2) Which content of the vignette (focused versus shared) predict more accurate perceptions of the leadership structure?

Procedure

The entire survey, including its procedure, was created and accessed online through Profitest[177], and distributed through MTurk[178]. All respondents went through the following procedure, each on separate pages.

First, they had to read and accept an informed consent.

Second, they filled out their sociodemographic information: age, and gender.

Third, they read an introductory text. This text told the respondents that on the next page, they will see a description of a real team, which they shall read carefully because there will be questions about it afterwards.

Fourth, each participant randomly saw one of the four vignettes: (1) focused-leadership-text; (2) focused-leadership-video; (3) shared-leadership-text; or (4) shared-leadership-video.

Fifth, they filled in responses to the measure below: recall as a manipulation check.

[177] Profitest (2018)
[178] MTurk (2018)

Attention checks

Two sets of **attention checks** were applied to block or exclude respondents. The *first set* was options from the Mturk platform, to verify the location of workers, and block duplicate IP addresses. The *second set* was a qualitative validity check via the coding procedure of the provided answers of the manipulation check. See the procedure below.

Manipulation check

The **manipulation check** was measured with a single question: 'Please shortly describe what you remember from the description you've just read.'. Respondents had the possibility to fill out free-text descriptions. The free-text answers were coded as follows.

Table 2.4: Study 2a: Coding of the recalled content (own elaboration).

Category	Content
Working Mode	
	Distribute the responsibilities
	Distribute the workload
	Evaluation later
	Goal setting
	Preparing a plan
	Setting deadlines
	Think about the task to complete
Situation	
	A team
	Double efforts
	Everybody knows
	Fruits of effort soon
	Individual salaries dependent
	Thought time now

First, nonsense answers were coded with 'exclude' and therefore excluded from the analysis. Eight out of the originally recruited fifty-nine participants were excluded. Examples of nonsense answers were: 'nice', 'ghdfgheheth', or 'It's good'.

Second, the textual content could be divided into content pieces. Each content piece could be categorized as either 'situation', giving general information about

the situation, or 'working mode', indicating information about how the team works. Table 2.4 presents those content pieces. Each piece could be mentioned in some way or another by the respondents in their descriptions. Every mention could indicate a working mode either clearly as 'focused' or clearly as 'shared', or not identified as one or the other. For example, 'Everyone works together in a group to set goals' is an indicator for shared working mode; 'The team leader makes all the decisions' is an indicator for focused working mode; and 'Several goals have been set', without anything else, is an indicator for remembering goal setting but not accountable for shared or focused working mode. With this, two important variables could be coded for each description, which served for later analysis. The first variable counts every mention of a piece of content that indicates the shared working mode. The other variable does the same thing, but for the focused working mode.

Third, both coded variables were subtracted: count-focused-leadership-information minus count-shared-leadership-information. This was done for the following reason. The aim of the study is to observe whether a vignette is perceived more as focused or more as shared leadership. That is, a vignette that elicited shared leadership perceptions, but also focused leadership perceptions, must be weaker than a vignette that only elicited shared or focused leadership perceptions. The subtraction of the two count variables accounts for this notion. Therefore, a single variable was computed for the perception of the leadership structure for the final analysis. The higher the value of this variable, the more accurate the perception of a focused leadership structure. The lower the value of this variable, the more accurate the perception of a shared leadership structure.

Results

A 2x2 between-subjects ANOVA was used for the analysis.

Descriptive statistics are presented in the appendix A.3.3.

The results and supporting figures are presented below.

The respondents mentioned
more FL information after seeing FL content (M=.84), and
more SL information after seeing SL content (M=-.46).

This could be observed overall, but also within the separate groups,
those who saw videos and those who saw texts.

An interaction effect was observed.
The respondents mentioned more correct information
after seeing the texts (SL: M=-.53 ; FL: M=1.27)
compared to videos (SL: M=-.40 ; FL: M=.41).

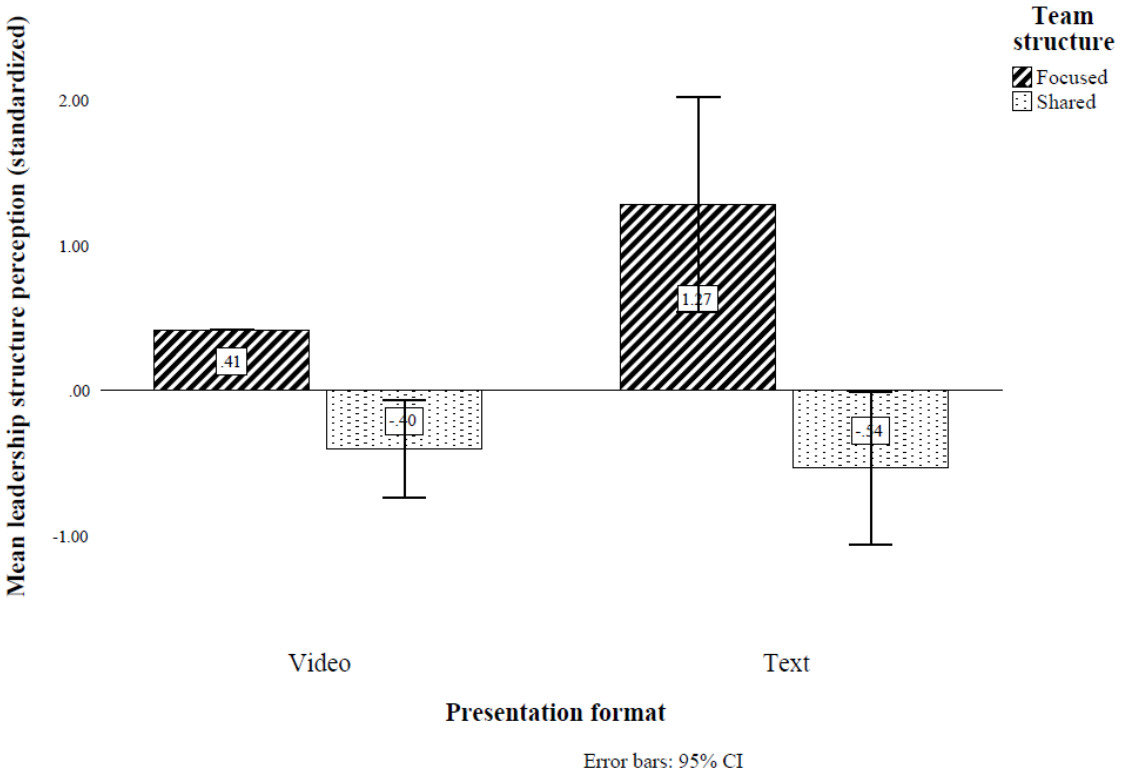

Figure 2.2: Study 2a: SPSS output - plot estimated marginal means of perceptions towards leadership structure by experimental groups.

Dependent Variable: leadership structure perception (standardized)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	23.175[a]	3	7.725	13.535	.000	.464
Intercept	1.603	1	1.603	2.808	.100	.056
team	19.849	1	19.849	34.777	.000	.425
format	1.525	1	1.525	2.672	.109	.054
team * format	2.846	1	2.846	4.986	.030	.096
Error	26.825	47	.571			
Total	50.000	51				
Corrected Total	50.000	50				

a. R Squared = .464 (Adjusted R Squared = .429)

Figure 2.3: Study 2a: SPSS output - ANOVA on perceptions towards leadership structure by experimental groups.

2.5 Operationalizations of predictor variables

2.5.1 Study 1. Employee' Control Orientations as predictors of Leadership Structure Preferences

Control orientations as predictors:

were measured with 24 items[179]. This measure consisted of five subscales: collaboration, dominance, proactive autonomy, reactive autonomy, respect for autonomy, and submissiveness. Respondents rated on a 5-point Likert scale how much they would agree with the statement of each item. See figure 2.4 for an example item. For the present study, Cronbach's alpha ranged from $\alpha = .80$ to $\alpha = .86$ respectively. The three autonomy scales were highly correlated: $r = .60$ for proactive autonomy and reactive autonomy; $r = .60$ for respect for autonomy and reactive autonomy; $r = .77$ for proactive autonomy and respect for autonomy. Therefore, a single factor was computed from the three autonomy scales, as an indicator of autonomy ($\alpha = .85$ explaining 77.36% of the variance). The complete list of items is shown in the appendix, table A.2.

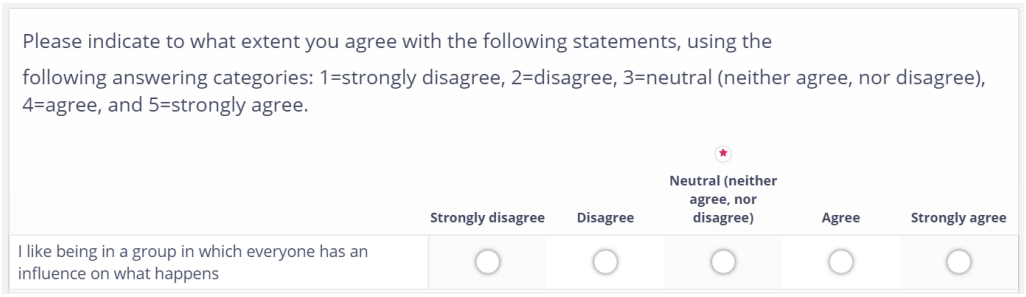

Figure 2.4: Study 1: Example item of the control preferences measure.

[179] by Grzelak (2001)

Personality as additional predictors:

was measured with a 24-item Brief HEXACO Inventory (BHI)[180]. The BHI reflects recent suggestions to add a sixth factor of honesty-humility to the Big Five Model[181]. Therefore, this measure consisted of six subscales: honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience. Respondents rated on a 5-point Likert scale how much they would agree with the statement of each item. See figure 2.5 for an example item. The entire list of items is shown in the appendix, table A.3.

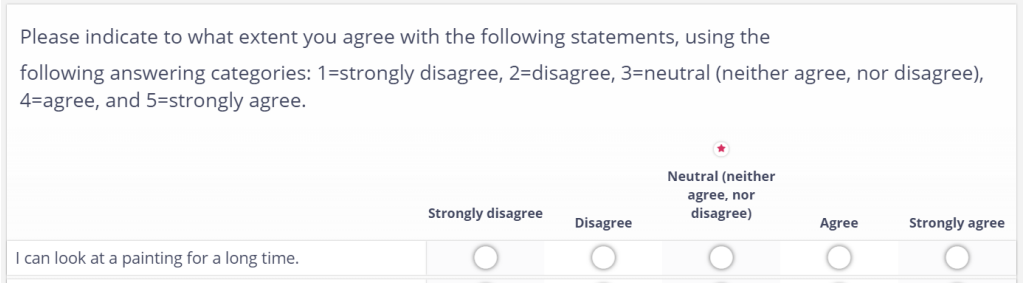

Figure 2.5: Study 1: Example item of the HEXACO measure.

Political orientation as an additional predictor:

was measured with two items[182]. The used items were: 'How would you describe your political outlook with regard to economic/social issues?'. The scale used ranged from 1 - very liberal to 7 - very conservative. Both items were highly correlated with $r = 0.74$. An average was computed as an indicator of political orientation, with higher scores meaning more conservative.

[180] by de Vries (2013)
[181] see Ashton et al. (2010), Ashton et al. (2004); de Vries and van Kampen (2010), de Vries et al. (2009); K. Lee et al. (2013)
[182] by Talhelm et al. (2015)

2.5.2 Study 2. Employees' Social Motives as predictors of Leadership Structure Preferences

Supervision as a predictor:

was measured with a single item, 'Are you formally supervising other employees in your current occupation?'. The respondents chose between 'yes' and 'no'.

Social motives as predictors:

were measured with 15 items[183]. This measure consisted of three subscales: power, achievement, and affiliation. The respondents rated on a 5-point Likert scale to which person they would usually be alike (1 = Usually like A, 2 = More like A, 3 = Hard to say, 4 = More like B, 5 = Usually like). See figure 2.6 for an example item. For the present study, Cronbach's alpha was for power $\alpha = .87$, for achievement $\alpha = .75$, and affiliation $\alpha = .70$. The entire list of items is shown in the appendix, table A.4. For all three subscales, a median split was performed over the whole sample, to derive dichotomous high versus low variables for those.

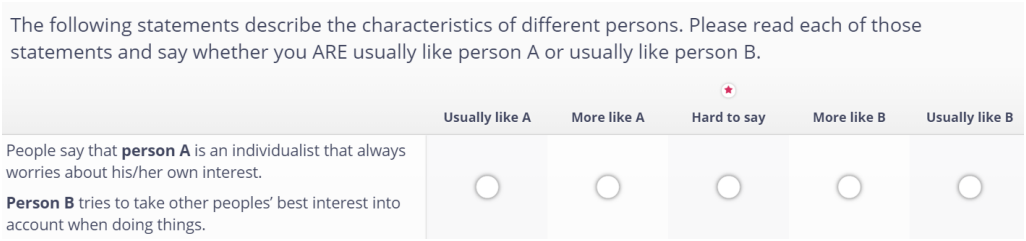

Figure 2.6: Study 2: Example item of the social motive measure.

[183]scales included in SSA, after: Nowak and Mahari (2019)

3 Results

3.1 Study 1. Employees' Control Orientations as predictors of Leadership Structure Preferences

The aim was to test hypothesis H1.

A hierarchical multiple regression was used for the analysis. Team preference (higher values equal higher preference for focused leadership) was regressed on four control orientations (H1), six personality variables (for exploration), and political orientation (for exploration). Age and gender were used as control variables.

Additional descriptive statistics are presented in appendix A.4.1.

The results are presented below.

Age and gender had no relationship with team preference, nor did any of the personality variables.

Team preferences were not related to
the preference for **autonomy** (β=-.08, p=.435) nor **sumbission** (β=.10, p<.226).

FL preferences were stronger
the weaker the orientation for **collaboration** (β=-.40, p<.001),
the stronger the orientation for **dominance** (β=.26, p=.002), and
for a more conservative **political orientation** (β=.10, p=.007).

All hypotheses from H1 were supported, except H1b (preference for submission).

	Model 1			Model 2			Model 3			Model 4		
	β	SE	*p*	β	SE	*p*	β	SE	*p*	β	SE	*p*
age	.01	.01	.558	.01	.01	.201	.01	.01	.221	.01	.01	.449
gender	-.13	.12	.283	-.1	.13	.435	-.07	.12	.582	-.09	.12	.439
agreeableness				.04	.07	.547	.03	.07	.727	-.01	.07	.9
conscientiousness				-.19†	.1	.066	-.1	.1	.299	-.11	.1	.268
emotionality				.04	.09	.66	.05	.08	.488	.04	.08	.577
extraversion				-.09	.08	.27	-.07	.08	.387	-.07	.08	.408
honesty				-.06	.08	.449	.12	.08	.148	.15†	.08	.069
oppeness to experiences				-.1	.08	.23	.01	.08	.863	.07	.08	.384
autonomy							-.1	.11	.359	-.08	.1	.435
collaboration							-.38***	.08	.000	-.4***	.08	.000
dominance							.28**	.08	.001	.26**	.08	.002
submissiveness							.13	.08	.114	.1	.08	.226
political orientation										.1**	.04	.007
R^2		.01			.11			.29			.32	
F(df)		.8 (2, 173)			2.46* (8, 167)			5.49*** (12, 163)			5.86*** (13, 162)	

Note: *N = 184 respondents.*
*† p < 0.1. * p < .05. ** p < .01. *** p < .001.*

Figure 3.1: Study 1: Results of the hierarchical linear regression on predicting leadership structure preferences. Higher β = higher preference for FL. Lower β = higher preference for SL. Figure from Kuźmińska et al. (2019) where results have been published.

3.2 Study 2. Employees' Social Motives as predictors of Leadership Structure Preference

The aim was to test three of the main hypotheses.

A one-way between-subjects ANOVA and four separate 2x2 between-subject ANOVAs were used for the analysis. Age and gender were used as control variables.

Descriptive statistics are presented in the appendix A.4.2.

The results and supporting figures are presented below.

Test of H2: FL preferences are weaker than SL preference (main effect)

The acceptance of focused leadership (M=-.17) was significantly (p=.02) lower than for shared leadership (M=.17) (see figures below).

This result is therefore supporting H2.

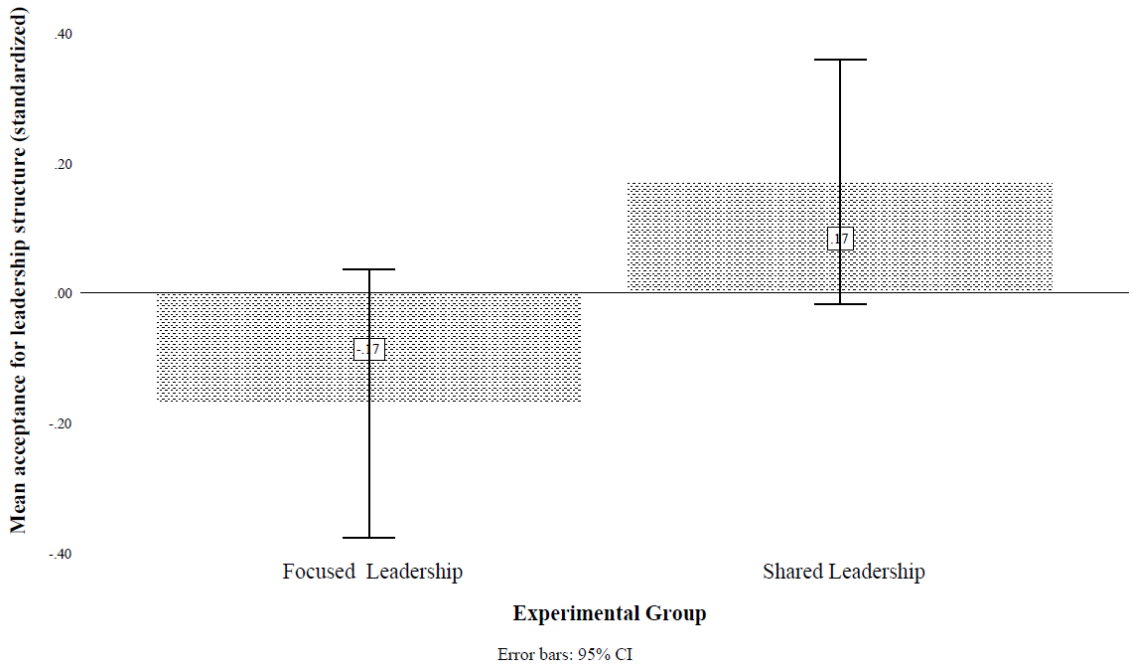

Figure 3.2: Study 2 - SPSS output - box plot estimated marginal means of acceptance for the leadership structure by experimental group.

Dependent Variable: acceptance for leadership structure (standardized)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5.657[a]	3	1.886	2.129	.098	.035
Intercept	.290	1	.290	.327	.568	.002
Age	.011	1	.011	.013	.911	.000
Sex	.434	1	.434	.490	.485	.003
Grp	4.874	1	4.874	5.504	.020	.031
Error	154.092	174	.886			
Total	159.749	178				
Corrected Total	159.749	177				

a. R Squared = .035 (Adjusted R Squared = .019)

Figure 3.3: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group.

Test of H3a: FL preferences are stronger, the stronger the power motive

The acceptance of focused leadership compared to shared leadership was weaker, the weaker the power motive (FL: M=-.39 ; SL: M=.12), and stronger, the stronger the power motive (FL: M=.08 ; SL: M=.23).

This interaction effect was
not significant over all respondents (p=.22), but it was
only significant for respondents with a low power motive (p=.01), but
not significant for respondents with a high power motive (p=.54)
(see figures below).

This result is therefore only partially supporting H3a.

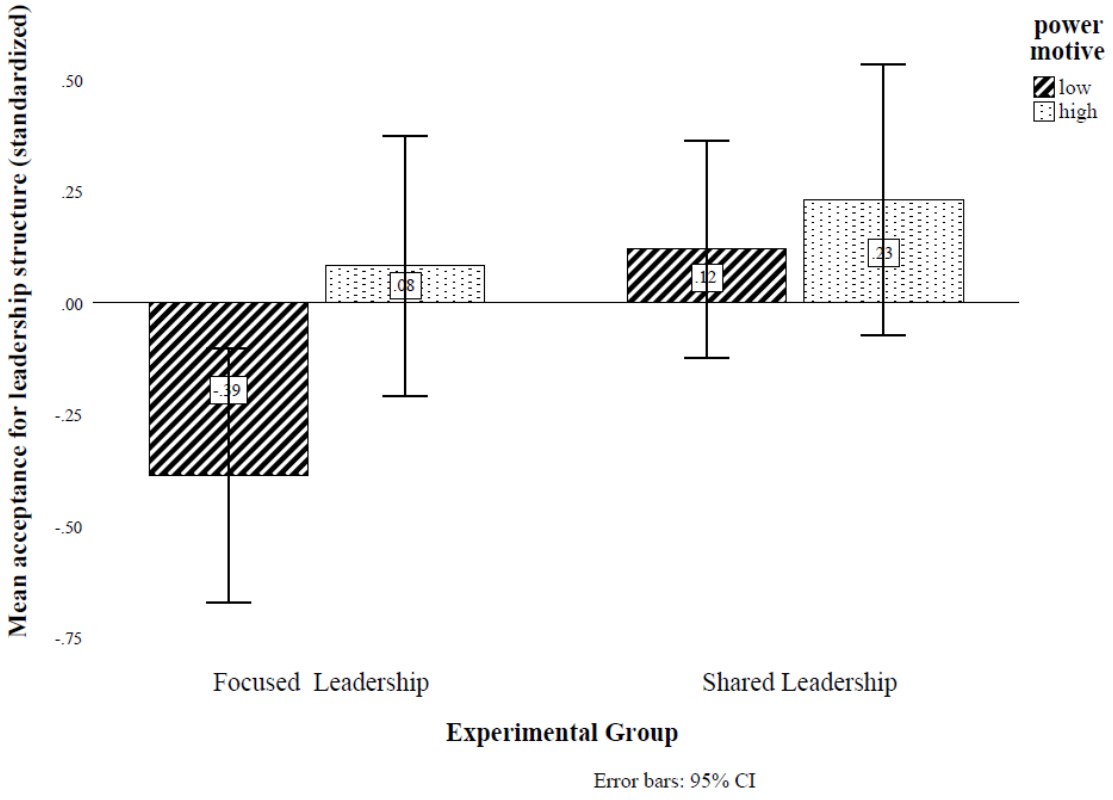

Figure 3.4: Study 2 - SPSS output - box plot estimated marginal means of acceptance for the leadership structure by experimental group and power motive.

Dependent Variable: acceptance for leadership structure (standardized)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11.355[a]	5	2.271	2.632	.025	.071
Intercept	.369	1	.369	.427	.514	.002
Age	.006	1	.006	.007	.934	.000
Sex	1.015	1	1.015	1.176	.280	.007
Grp	4.302	1	4.302	4.986	.027	.028
Pow	4.370	1	4.370	5.065	.026	.029
Grp * Pow	1.281	1	1.281	1.485	.225	.009
Error	148.394	172	.863			
Total	159.749	178				
Corrected Total	159.749	177				

a. R Squared = .071 (Adjusted R Squared = .044)

Figure 3.5: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group and power motive.

Dependent Variable: acceptance for leadership structure (standardized)

power motive	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
low	Corrected Model	9.567[a]	3	3.189	3.924	.011
	Intercept	4.318	1	4.318	5.313	.023
	Age	.976	1	.976	1.201	.276
	Sex	1.517	1	1.517	1.867	.175
	Grp	5.069	1	5.069	6.237	.014
	Error	74.766	92	.813		
	Total	86.050	96			
	Corrected Total	84.333	95			
high	Corrected Model	2.102[b]	3	.701	.785	.506
	Intercept	1.926	1	1.926	2.158	.146
	Age	1.613	1	1.613	1.808	.183
	Sex	.025	1	.025	.028	.867
	Grp	.342	1	.342	.383	.538
	Error	69.588	78	.892		
	Total	73.700	82			
	Corrected Total	71.690	81			

Figure 3.6: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group split by power motive.

Test of H3b: FL preferences are stronger, the stronger the achievement motive

The acceptance of focused leadership compared to shared leadership was lower the weaker the achievement motive (FL: M=-.30 ; SL: M=.11), and higher the stronger the achievement motive (FL: M=-.02 ; SL: M=.23).

This interaction effect was
not significant over all respondents (p=.58), but
only significant for respondents with a low achievement motive (p=.05), and
not significant for respondents with a high achievement motive (p=.23)
(see figures below).

Therefore, this result only partially supports H3b.

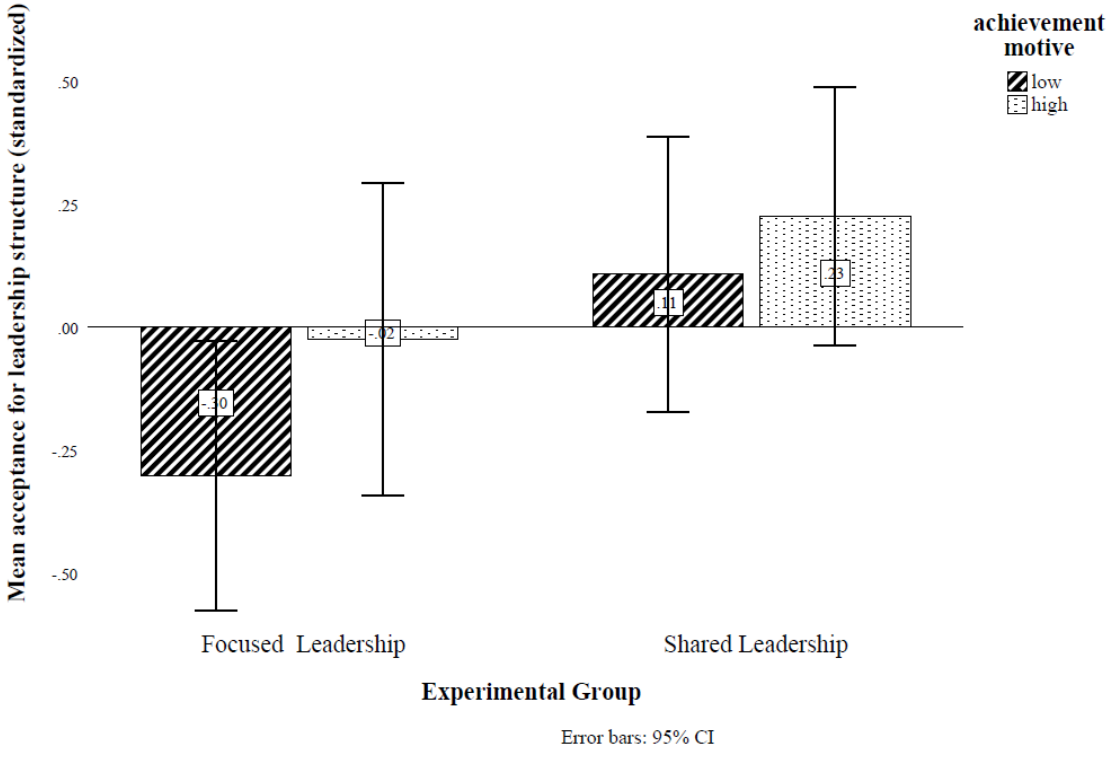

Figure 3.7: Study 2 - SPSS output - box plot estimated marginal means of acceptance for the leadership structure by experimental group and achievement motive.

Dependent Variable: acceptance for leadership structure (standardized)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.711[a]	5	1.542	1.745	.127	.048
Intercept	.217	1	.217	.245	.621	.001
Age	.000	1	.000	.000	.983	.000
Sex	.503	1	.503	.569	.452	.003
Grp	4.498	1	4.498	5.088	.025	.029
Ach	1.782	1	1.782	2.016	.158	.012
Grp * Ach	.273	1	.273	.309	.579	.002
Error	152.038	172	.884			
Total	159.749	178				
Corrected Total	159.749	177				

a. R Squared = .048 (Adjusted R Squared = .021)

Figure 3.8: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group and achievement motive.

Dependent Variable: acceptance for leadership structure (standardized)

achievement motive	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
low	Corrected Model	4.406[a]	3	1.469	1.719	.169
	Intercept	.006	1	.006	.007	.934
	Age	.547	1	.547	.641	.426
	Sex	.212	1	.212	.248	.620
	Grp	3.453	1	3.453	4.041	.048
	Error	72.622	85	.854		
	Total	78.072	89			
	Corrected Total	77.028	88			
high	Corrected Model	2.216[b]	3	.739	.801	.497
	Intercept	.433	1	.433	.469	.495
	Age	.416	1	.416	.451	.504
	Sex	.256	1	.256	.277	.600
	Grp	1.342	1	1.342	1.454	.231
	Error	78.418	85	.923		
	Total	81.677	89			
	Corrected Total	80.634	88			

Figure 3.9: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group split by achievement motive.

Test of H3c: FL preferences are not related to the affiliation motive

The acceptance of focused leadership compared to shared leadership was lower the weaker the affiliation motive (FL: M=-.26 ; SL: M=.07), and higher the stronger the affiliation motive (FL: M=-.08 ; SL: M=.27).

This interaction effect was
not significant over all respondents (p=.96), and
not significant for respondents with a low affiliation motive (p=.13), and
only tendentiously significant for respondents with a high affiliation motive (p=.09) (see figures below).

This result is therefore supporting H3c.

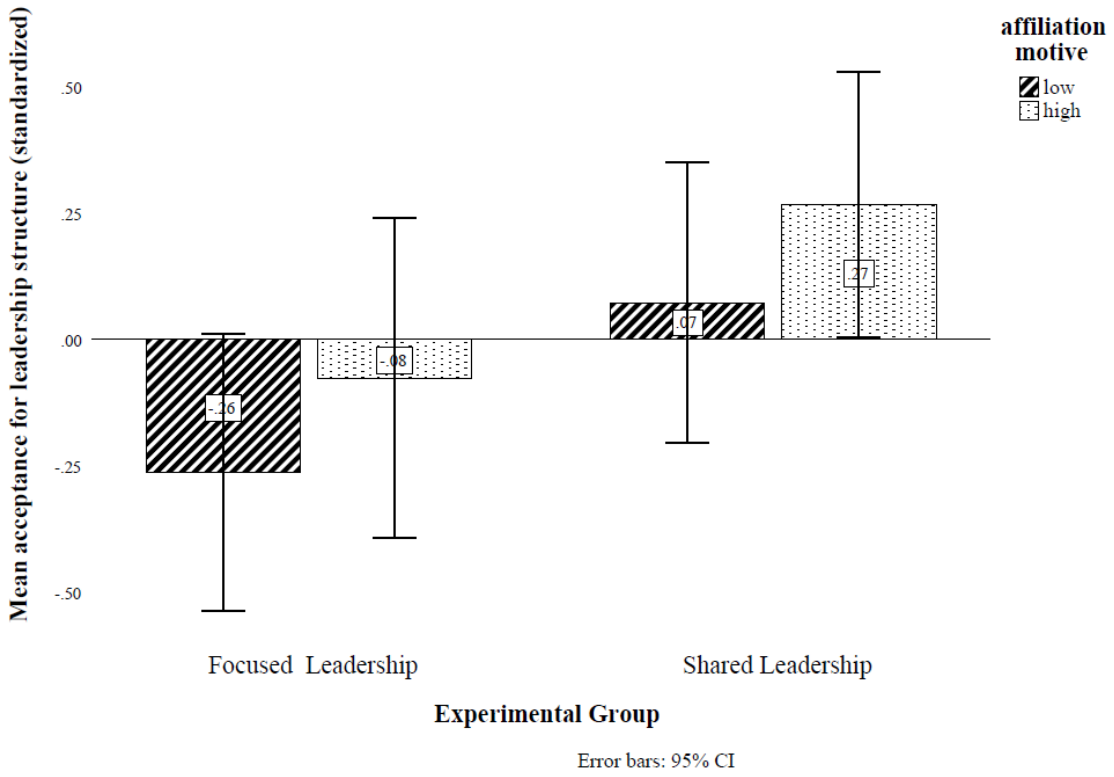

Figure 3.10: Study 2 - SPSS output - box plot estimated marginal means of acceptance for the leadership structure by experimental group and affiliation motive.

Dependent Variable: acceptance for leadership structure (standardized)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.046[a]	5	1.409	1.587	.166	.044
Intercept	.081	1	.081	.092	.763	.001
Age	.004	1	.004	.005	.944	.000
Sex	.246	1	.246	.277	.600	.002
Grp	4.859	1	4.859	5.473	.020	.031
Aff	1.384	1	1.384	1.559	.213	.009
Grp * Aff	.002	1	.002	.003	.958	.000
Error	152.704	172	.888			
Total	159.749	178				
Corrected Total	159.749	177				

a. R Squared = .044 (Adjusted R Squared = .016)

Figure 3.11: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group and affiliation motive.

Dependent Variable: acceptance for leadership structure (standardized)

affiliation motive	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
low	Corrected Model	4.529[a]	3	1.510	1.821	.150
	Intercept	.026	1	.026	.031	.861
	Age	.969	1	.969	1.169	.283
	Sex	1.334	1	1.334	1.609	.208
	Grp	1.926	1	1.926	2.323	.131
	Error	70.476	85	.829		
	Total	75.847	89			
	Corrected Total	75.005	88			
high	Corrected Model	3.303[b]	3	1.101	1.173	.325
	Intercept	.012	1	.012	.013	.911
	Age	.593	1	.593	.631	.429
	Sex	.166	1	.166	.177	.675
	Grp	2.757	1	2.757	2.938	.090
	Error	79.757	85	.938		
	Total	83.902	89			
	Corrected Total	83.059	88			

Figure 3.12: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group split by affiliation motive.

Test of H4: FL preferences are stronger for supervisors than for non-supervisors

The acceptance of focused leadership compared to shared leadership was
lower for non-supervisors (FL: M=-.28 ; SL: M=.23), and
higher for supervisors (FL: M=-.01 ; SL: M=.07).

This interaction effect was
not significant over all respondents (p=.18), and
only significant for non-supervisors (p=.01), but
not significant for supervisors (p=.86)
(see figures below).

Therefore, this result supports only partially H4.

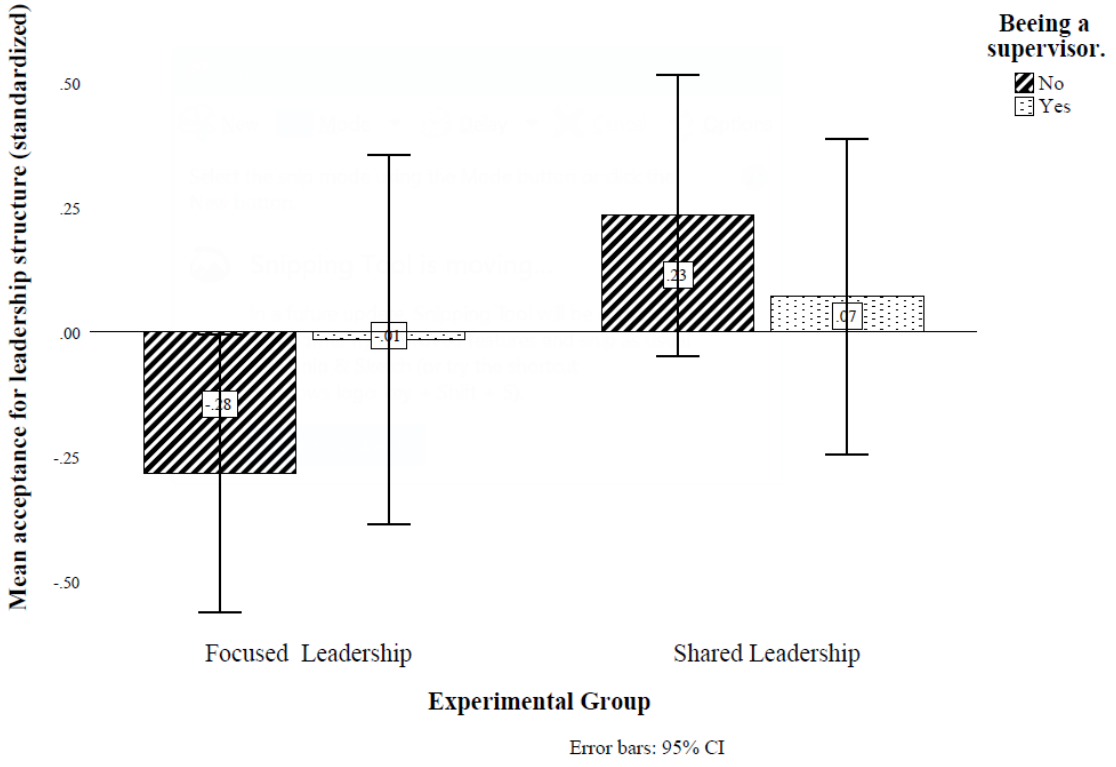

Figure 3.13: Study 2 - SPSS output - box plot estimated marginal means of acceptance for the leadership structure by experimental group and supervision.

Dependent Variable: acceptance for leadership structure (standardized)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.088[a]	5	1.418	1.558	.175	.049
Intercept	.025	1	.025	.027	.869	.000
Age	.154	1	.154	.169	.681	.001
Sex	.527	1	.527	.580	.448	.004
Grp	2.995	1	2.995	3.292	.072	.021
Sup	.210	1	.210	.231	.632	.002
Grp * Sup	1.680	1	1.680	1.847	.176	.012
Error	137.375	151	.910			
Total	144.492	157				
Corrected Total	144.463	156				

a. R Squared = .049 (Adjusted R Squared = .018)

Figure 3.14: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group and supervision.

Dependent Variable: acceptance for leadership structure (standardized)

Beeing a supervisor.	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
No	Corrected Model	6.409[a]	3	2.136	2.337	.079
	Intercept	.018	1	.018	.020	.888
	Age	.052	1	.052	.057	.812
	Sex	.273	1	.273	.298	.586
	Grp	6.356	1	6.356	6.953	.010
	Error	80.448	88	.914		
	Total	87.057	92			
	Corrected Total	86.857	91			
Yes	Corrected Model	3.377[b]	3	1.126	1.272	.292
	Intercept	.145	1	.145	.164	.687
	Age	.594	1	.594	.671	.416
	Sex	2.909	1	2.909	3.287	.075
	Grp	.027	1	.027	.031	.862
	Error	53.986	61	.885		
	Total	57.434	65			
	Corrected Total	57.363	64			

Figure 3.15: Study 2 - SPSS output - between-subject effects of the acceptance for the leadership structure by experimental group split by supervision.

4 Summary

4.1 Summary of Findings

The tests of 9 hypotheses are summarized in the table below.

Table 4.1: Results of hypotheses' testing (own studies).

Hypotheses	Study	Results
H1: FL preferences depend on control orientations: FL preferences are stronger..		
H1a: .. the stronger the orientation for dominance.	S1	Confirmed
H1b: .. the stronger the orientation for submission.	S1	Not confirmed
H1c: .. the weaker the orientation for collaboration.	S1	Confirmed
H1d: FL preferences are not related to orientations for autonomy.	S1	Confirmed
H2: FL preferences are weaker than SL preferences (main effect)	S2	Confirmed
H3: FL preferences depend on social motives: FL preferences are stronger..		
H3a: .. the stronger the power motive.	S2	Partially confirmed
H3b: .. the stronger the achievement motive.	S2	Partially confirmed
H3c: FL preferences are not related to the affiliation motive.	S2	Confirmed
H4: Supervisors have stronger FL preferences than non-supervisors.	S2	Partially confirmed

Note. 'FL preference' = preferences for focused compared to shared leadership.

Study 1 was the first direct test of different social orientations that would predict different preferences for leadership structures. A major prerequisite for shared leadership to be an effective alternative to focused leadership would be the fact that employees would prefer it over focused leadership if they had the choice.

Grzelak's control orientations were used as **predictors** of the preference for the leadership structure. Two additional measures were added as predictors for exploration: personality variables of which we did not expect a relationship to leadership preference, and political orientation, expecting conservative political orientation to predict higher preferences for focused leadership.

Consistent with the expectations, a **collaboration** preference predicted a higher preference for shared leadership (H1c). This is in line with Grzelak's argument that collaboration preferences foster democracy by accepting the joint effort and coordination between all employees by encompassing everybody's interests[184]. Collaborating means giving up at least some part of the control and accepting the influence of peers. Employees with high preferences for collaboration therefore likely believe in the competence and good intentions of others, which is important for shared leadership.

Consistent with the expectations, a **dominance** preference also predicted a higher preference for focused leadership (H1a). As previous research showed, dominant employees value success and higher social rank[185], for which the opportunities seem higher in focused leadership. Such employees are motivated and can potentially envision themselves in leadership positions, which are clearly visible in teams with focused leadership, but not necessarily in teams with shared leadership.

Contrary to the expectations, a **submission** preference does not predict a higher preference for focused leadership (H1b). This may suggest that seeking the control of others can lead to different strategies. Some of these employees may find satisfaction in being controlled by a clear leader in a team with focused leadership, but others may find satisfaction in the control of many other members of a team with shared leadership.

In support of the expectations, the combined **autonomy** scale did not predict any preferences for any of the leadership structures (H1d). The three autonomy scales (proactive autonomy, respect for autonomy, and reactive autonomy) were combined into one autonomy measure due to high correlations. Employees who prefer autonomy prefer personal freedom and with it situations that provide that.

[184] Grzelak (2001)
[185] see e.g., Anderson et al. (2001)

Both, teams with shared but also focused leadership could presumably increase or decrease employees' personal freedom.

Study 2 was an extension in that sense that respondents did not choose between alternatives but reacted to only one of two leadership structures because once an organization promotes one or the other leadership structure, it is essential to know if some employees are benefiting from that and others may not.

This study also changed and extended the variety of **predictors** according to the theoretical model of section 1.4. A main effect of the leadership structure was expected. But the social motives (power, achievement, and affiliation) and social rank (being a supervisor or not) were also used as predictors for the leadership structure acceptance.

Confirming expectations for a **main effect**, shared leadership appeared to be more accepted than focused leadership (H2). In fact, focused leadership was only observed to be perceived as negative, while shared leadership was only perceived as positive. This is in line with the literature that shared leadership increases many desired and decreases undesired team outcomes which depend on employees and their engagement, like team performance, team satisfaction, team innovation, team conflict, etc. This makes sense because if employees would not accept teams based on the team's leadership structure, their engagement would be arguably low.

However, only partially supporting three of the hypotheses, shared leadership appeared to be more accepted than focused leadership only by employees who were low on the **power** motive (H3a), low on the **achievement** motive (H3b), or **non-supervisors** (H4). Employees with a high-power motive, a high-achievement motive, or those who were supervisors did not accept focused leadership more than shared leadership and these effects were also not significant.

This is an interesting finding, as it presents several important points.

First, especially those employees with a low-power motive, a low-achievement motive, or who were non-supervisors showed a clear leadership structure preference. Not only was it observed within these groups that focused leadership is significantly less accepted than shared leadership, but the effect sizes were comparably large indicating that those groups very much dislike focused leadership. This is potentially detrimental to the outcomes of teams with focused leadership because e.g., non-supervisors are usually the larger group within teams, and teams heavily rely on their engagement. This supports the observation of previous researchers that focused

leadership leads to lower team performance outcomes than shared leadership[186], if one assumes that team members would rather dislike focused leadership.

Second, the literature review on social orientations and hierarchies in section 1.3 revealed that employees who are seeking power or achievement, as well as supervisors, are typically considered to be agentic, striving to advance their goals and control their surroundings. It was anticipated that these individuals would prefer the stable, predictable team structure of focused leadership, as opposed to the unstable and uncertain team structure of shared leadership, which could be perceived as a threat to them. However, the results of this study indicated that this tendency was not observed, with insignificant results and effect sizes in the opposite direction to what was expected. This finding does not support the present research expectations, but it supports former research which suggests that having or striving for power can enhance moral thinking[187], cognitive functioning[188], and the focus on opportunities rather than threats[189], which may enable these employees to envision that they would effectively cope with either leadership structure.

Third, it is possible that the interaction of two or more motives may influence leadership structure preferences, as suggested by the literature on social orientations. Agentic employees may have different strategies depending on other dimensions, and this could lead to different leadership preferences. For example, power seekers may exhibit varying strategies for leadership structure preferences due to the taming mechanisms of an accompanying affiliation motive[190] or the underlying reasons for seeking power, such as seeking autonomy or seeking influence[191]. Additionally, the *'Leadership-Motive-Pattern'* and *'Compassionate-Leadership-Profile'* both include a high power motive and may be relevant to a supervisor's leadership structure preferences. The agentic-none-communal *'Leadership-Motive-Pattern'* was observed as effective in a hierarchical context which was the norm many decades ago, while the agentic-and-communal *'Compassioned-Leadership-Profile'* was found to be effective in a collaborative environment which becomes the new normal nowadays[192]. Therefore, it is plausible that the interaction of two or more motives may affect leadership structure preferences.

[186] e.g., D'Innocenzo et al. (2016); D. Wang et al. (2014); Zhu et al. (2018)
[187] Fleischmann and Lammers (2020); Fleischmann et al. (2019); Lammers et al. (2010)
[188] e.g., Smith et al. (2016); Yin and Smith (2020)
[189] e.g., Anderson and Galinsky (2006); Cho and Keltner (2020); Guinote and Kim (2020); Keltner et al. (2003)
[190] Winter (2006)
[191] Lammers et al. (2016)
[192] Steinmann et al. (2014)

Fourth, the results of the two studies appear to be contradictory, as there was no significant effect for employees with a high-power motive (study 2) but a strong preference effect with the dominance orientation (study 1), and a significant effect for employees with a low-power motive (study 2) but no significant preference effect with the submission orientation (study 1).

One explanation for this could be the conceptual and operational differences between the *'social orientations'* from study 1 and the *'social motives'* from study 2, both measuring employees' explicit social-interdependence orientations, as indicated in the introduction and discussed in section 1.3 (social orientations). The concepts of power, dominance, and submission may be related, but not linearly, and e.g., a four-fold option may allow for a more complex investigation: *'rather-only-others-should-lead; nobody-should-lead; everybody-should-lead; rather-only-I-should-lead'*. This complexity may explain why the high-power motive was not confirmed in study 2 to predict a high FL preference, as the high-dominance orientation predicting high FL preferences may be counteracted by a low-submission orientation which was expected to predict a low FL preference. For example, employees who exhibit a high-power motive, as measured in study 2, may be inclined to seek a leadership role (high dominance as measured in study 1), but may not be inclined to follow (low submission as measured in study 1). This suggests that the dynamic of preferring one type of leadership structure over another may be more complex than previously thought, in terms of these orientations. Comparing two example items of each scale may illustrate this idea:

e.g., for leading:

- **submission (S1):** I like it when someone directs me in various things.
- **low-power (S2):** Person B does not feel comfortable deciding how his or her team performs its tasks.
- **high-power (S2):** When taking part in group activities, person A feels good in a leadership role.
- **dominance (S1):** I like leading others.

e.g., for decision making:

- **submission (S1):** I like it when someone makes decisions for me.
- **low-power (S2):** Person A likes when someone else decides for him or her.
- **high-power (S2):** Person B feels irritated when someone else decides for him or her.
- **dominance (S1):** I like making decisions for others.

4.2 Research limitations, future research directions and implications for management practice

Limitations connected with measurements of employees personal characteristics

In this dissertation, all measures were based on self-reports. Not only was the information on the personal characteristics of the respondents, but also their reactions to the target descriptions were self-reported and only hypothetical.

Measuring individual characteristics of employees is difficult due to various issues, such as a lack of conscious awareness of personal needs and orientations, which can lead to social desirability bias or self-report bias, thus potentially making measures inconsistent, invalid, unreliable or confounded with other factors, such as contextual and cultural differences. According to self-verification theory, employees have a need to be seen and accepted by others in accordance with their self-concepts, which is often unconscious to those employees. For example, participants who were asked to write about a time of rejection reported a greater need for self-verification than those who wrote about a time of acceptance by someone else[193].

Additionally, there are many problems related to the operationalization of shared leadership itself, as it is a multidimensional phenomenon at the team level. Primarily, research was conducted in actual team settings, utilizing validated leadership measurement tools distributed among team members and subsequently combining the results to evaluate the extent of shared leadership in real teams, without the need to explain shared leadership to the respondents. The present research sought to make shared leadership and focused leadership comprehensible through target descriptions, which presented a challenge in terms of psychological realism. The two main issues were that the target descriptions had to be both conceivable and evoke respondents' emotions; however, both the target descriptions and the responses were hypothetical. Furthermore, the target descriptions had to be distinct and realistic enough to make any conclusions drawn from them reliable.

To address the above challenges, multiple connected questions were asked and grouped together, and the personal characteristic scales used were validated in previous research. Furthermore, the target descriptions were carefully designed and tested in a multistep validation process, including face validity by employees with business experience and an experimental study; see study 2a in the methodology

[193] Bosson et al. (2000); Swann et al. (2008)

chapter 2. For example, to increase the comprehensibility but also the engagement of respondents, study 2 tested not only the content but also the presentation format. Although videos were created and tested, more content was remembered from text presentations, which therefore were used in study 2.

It should be noted that technological advancements may provide better measurement tools in the future, allowing for the collection of both subjective and objective responses[194].

Yet another important limitation of the research may not be connected to the characteristics of the employees alone but rather to the research design. In both studies, participants were asked to respond to the different leadership structures of the teams, but there was no indication of what role they would play in the respective team. It was entirely up to each of the respondents where in the team they would imagine themselves, which may depend on the respondent's individual characteristics. It is therefore difficult to know whether some results would change or be more nuanced with such indications included. For example, respondents indicated if they were currently supervisors or not, with this in mind, they could have imagined themselves in a supervisor role in the focused leadership team. But what would happen, if some were told to be part of the new team as team members and others were told to be supervisors? Yet other examples would be the following. Would dominance, submission, and/or power, the way they were measured, predict focused leadership preferences if it would be clearly stated for the respondents which role they would play, like e.g., being the supervisor or not in a team with focused leadership; or being a part of the leadership or not within a team that shares leadership?

Limitations connected with samples

It is important to note that the studies conducted in this dissertation utilized the MTurk online panel to recruit participants and only included a selection of the personal characteristics of the respondents. This restricts the scope of the sample.

Data collection through MTurk is a convenient method in social sciences. However, it can present various risks to the reliability of the sample, such as false responses, lack of engagement, and repeated respondents. Despite these risks, there are numerous benefits in using online panels, and strategies to mitigate potential problems have been discussed in the literature as a response to the recent 'MTurk crisis'[195].

[194] see e.g., Nowak (2019)
[195] e.g., R. Kennedy et al. (2020); Paolacci et al. (2010)

Data collection for this dissertation focused on US inhabitants as part of individualistic cultures. It is important to note that approximately 10% of the included respondents declared themselves to be unemployed. Furthermore, it has to be assumed that the included respondents had potentially very different social, economical, educational, and professional backgrounds. As the literature review indicated, cultural context can have a significant impact on hierarchies and the preferences for focused or shared leadership. Additionally, the focus of the present dissertation is on employees in team contexts. The inclusion of respondents with different employment statuses and diverse backgrounds may account for the generalizability of the findings, but it is important to note that shared leadership is contextualized differently in various professional environments, such as e.g., in commercial and non-commercial organizations[196]. The findings may are misleading as they are context-depend.

Additionally, the present research only focused on social orientations and social rank as predictor variables. According to the theoretical model, employees may respond differently to shared leadership depending on their perceived obligations and opportunities associated with the challenges and threats that arise from changing stability and predictability of the leadership structure. Other individual characteristics, such as the desire for hierarchy due to a lack of control[197], the preference for structure due to a methodological working style[198], or stereotypical difficulties based on status differentials[199], may also influence employees' reactions to (in)stabilities and (un)certainties. For example, mainly based on stereotypes, women in non-leadership positions may face difficulties in rising through the ranks, whereas men may be pushed into leadership positions despite a lack of personal desire to do so[200]. However, research suggests that different individuals may have different motivations for seeking or avoiding higher rank, whereas gender was not a predictor of status seeking[201].

The present findings may have limited generalizability to other cultural contexts and may be influenced by various confounding variables, such as gender, generation, educational level, professional context, social and economic status, but also job security. Therefore, caution should be taken when extending these findings to other settings.

[196] see Sweeney et al. (2018)
[197] see e.g., Friesen et al. (2014)
[198] see e.g., Nowak and Mahari (2019)
[199] Kark and Eagly (2010)
[200] see Pietrzak (2020) for a thorough review on gender and leadership
[201] Anderson et al. (2015); Mitchell et al. (2020)

Future Research Directions

The results of the present research, along with its limitations, present several directions for future research. Replication of the research is essential to ensure the generalizability of the findings. Additionally, the newly developed operationalizations should be validated to ensure their reliability and validity. Moreover, it is necessary to expand the scope of the research by considering other relevant personal characteristics and contextual factors. Furthermore, it may be valuable to explore the moderating effects related to, e.g., gender, age, and job experience on leadership preferences[202].

In terms of **replication** and extension of the scope, one possible way would be to conduct larger-scale studies with samples from different populations. For example, instead of using MTurk as a recruitment channel, researchers could consider recruiting employees from the same organization or students from similar backgrounds. Furthermore, conducting similar studies in other countries with individualistic cultures would help to increase the external validity of the results.

Furthermore, the present research could be extended by using different operationalizations of the predicting concepts. For example, exploring social rank based on either power or status, or comparing formal leaders with informal leaders could provide further insight. The present research conflated power and status, and considered only formal supervision. Additionally, examining the latitude of leaders could be informative, such as the level of formal supervision.

The present dissertation faced a significant challenge in **operationalizing** the concept of shared leadership. Although new operationalizations have been created and tested, further validation is required in different contexts with different research questions to enhance their reliability and validity. In addition, there are different forms of shared leadership that could potentially have different outcomes on employee's preferences, such as a 'consensus' model of shared leadership where everyone in the team has responsibility and voice versus a 'double top' model or as Döös and Wilhelmson (2021) termed it 'managerial shared leadership', where two or more managers share the formal leadership position. Therefore, adjusting these operationalizations could increase their authenticity, relevance, and therefore applicability in different contexts, such as, e.g., professional, educational, commercial or non-commercial settings.

Additionally, for more nuanced findings the operationalizations of the leadership structures or study instructions could more clearly indicate what opportunities and

[202] see e.g., Eagly and Chin (2010)

obligations a participant may find in that respective team. This could allow for the test of the assumptions that have been implied for the theoretical model and rationale for the hypotheses of the present research in sections 1.4 and 2.2. For example, shared leadership could be framed as an obligation to lead or as an opportunity to lead; or respondents could be asked to be the leader or to be a member of the new team.

Future research could also extend the present findings by exploring the potential **situational dependence** of control orientations.

The present research concerned a ceteris paribus approach; however, future research could extend this by exploring the potential **situational or contextual dependence** of the findings to better understand the relationships between employees' individual differences and leadership structure preferences. Contextual factors that could be thought of are, e.g., team diversity, the teams' internal environment, team tenure of employees, stage of the team life cycle, the industry in which the organization operates, the type of tasks the team deals with, the country or region and with its cultural background, social insecurities or threats the team and/or employees currently have to deal with. For example, control orientations can be subject to contextual factors[203], or the feeling of lack of personal control can lead to a preference for more hierarchical structures on the job[204]. Thus, it is possible that job or economic instabilities, or the personal significance of certain issues, may influence the dynamic of preferring one or the other leadership structure. Shared leadership may also burden some employees if not everyone is sufficiently engaged, which likely produces a leadership void in a shared leadership setting[205].

Both studies of the present research measured attitudes and preferences towards the leadership structure on a **declarative** and **hypothetical** level, which may not be sufficient to capture the context of the situation. For instance, Jensen and Raver (2012) found that self-management can lead to counterproductive work behaviors if employees do not feel that the organization has faith in them. Future research should explore the **real-world implications** of employees' personal characteristics on their satisfaction, emotions, and work performance within actual teams with different leadership structures. This would provide a more objective basis for the findings and counteract the limitations in people's capacity to introspect and anticipate their emotional reactions. Employees seem e.g., likely to be inaccurate in estimating their future emotional reactions[206], and fail to predict or chose what makes them happy[207].

[203] Grzelak (2001)
[204] Friesen et al. (2014)
[205] Evans et al. (2021)
[206] Wilson and Gilbert (2005)
[207] Hsee and Hastie (2006)

As mentioned before, in the past, social orientations have mainly been studied independently without considering their **interaction** with each other. As mentioned before, researchers have explored ways how the power motive can be balanced with the affiliation motive, and have also identified two motive patterns so far, although primarily among managers and their teams as a whole, the *'Leadership-Motive-Pattern'* and the *'Compassioned-Leadership-Profile'*. However, to my best knowledge, there is a lack of research on how these interactions affect non-managers and outcomes at an individual level, especially across teams with different leadership structures. Future studies could integrate research on these patterns with the present research questions. For example, the present research did not find that power seekers prefer focused leadership significantly more than shared leadership, as hypothesized. This could be because study 2 did not consider why these employees seek power. It is possible that only those with a high-power motive and a low-affiliation motive prefer focused leadership, which might explain why the *'Leadership-Motive-Pattern'* was successful in traditional hierarchical structures many decades ago, but the *'Compassioned-Leadership-Profile'* is more successful in the present time of flatter organizations[208].

Overall, future research should aim to replicate the findings, validate the measures used and expand the scope of relevant personal characteristics and contexts to gain a more comprehensive understanding of leadership preferences and behaviors.

Implications for management practice

To remain competitive and innovative in the knowledge economy of today, organizations need to harness the full potential of their **human capital**. Again, already since decades, more and more organizations around the globe have experimented and transformed their organizational models towards more human or social-centered paradigms. Inspirations can be found in many practiced examples which come under very different labels for such kind of organizational paradigm shifts, like e.g., 'teal'[209], 'b-corbs'[210], 'intrinsifier'[211], 'beta-codex'[212], 'agile'[213] and many more. At least one common link is that many of those organizations rely on self-management

[208] Steinmann et al. (2014)
[209] Blikle (2018); Laloux (2014); "Można Inaczej" (2021)
[210] "B Lab Global Site" (2022)
[211] "Intrinsify" (2023)
[212] "BetaCodex Network" (2022)
[213] "Deloitte Global Human Capital Trends" (2017); Denning (2016), (2016)

as a core organizational tool, which means consequentially sharing leadership across their members.

According to some researchers, traditional 'top-down', 'command-and-control' leadership models seem no longer effective in the knowledge economy, where workers are expected to bring their unique talents and perspectives. And, although shared leadership is still understudied, research suggests that it may be a powerful solution to these challenges[214].

Shared leadership in teams enacts employees' **collective psychological capital**, resulting e.g., in more participative and innovative organizational cultures[215]. As research showed, shared leadership improves innovation behavior[216], increases creativity on individual levels and team levels[217], lowers team conflicts (relational conflicts and task conflicts)[218], and strengthens team performance, which is mediated by team cohesion, team satisfaction, coordination activities, goal commitment, and increased knowledge sharing[219]. Other studies support the claim that shared leadership works better than focused leadership in change management teams[220], virtual teams[221], and new venture top management teams[222].

Shared leadership has the potential to enhance the **employees' well-being**, as research indicates that it leads to reduced role conflict, increased consensus, greater trust, and cohesion within groups[223]. Furthermore, it has been associated with better satisfaction in virtual teams and reduced role overload, conflict, ambiguity, and job stress in top management teams of Christian church organizations[224].

Based on the positive outlook discussed above, shared leadership can be viewed as a **compelling substitute** for focused leadership in enhancing organizational performance and employee engagement. However, a recent review highlights some **potential negative effects** of shared leadership on team members, formal team leaders, and the team itself[225].

[214] Pearce (2007)
[215] Nonaka et al. (2016)
[216] Hoch (2013); Q. Wu et al. (2020)
[217] Gu et al. (2018); D. S. Lee et al. (2015)
[218] Hu and Judge (2017)
[219] Han et al. (2018); Mathieu et al. (2015); Robert and You (2018)
[220] Pearce and Sims (2002)
[221] Hoch and Kozlowski (2014)
[222] Ensley et al. (2006)
[223] Bergman et al. (2012)
[224] Wood and Fields (2007)
[225] Chen and Zhang (2022)

For team members, shared leadership can lead to a power struggle, role stress, and knowledge-hiding behaviors[226]. For example, shared leadership can stimulate power-struggle behaviors among team members, thus inhibiting team performance. Shared leadership may also intensify knowledge-hiding behaviors from team members, which can lead to less team creativity.

For formal team leaders, shared leadership may result in psychological territorial loss, leadership motivation decline, and a so-called 'dualistic paradox of self and group'[227]. For example, shared leadership can lead formal team leaders to face dilemmas, like finding the right balance between self and the group needs, but also in the decline of leadership motivation and psychological territorial loss. In other words, they need to interact as an integral part of the group, but also stand out as different and above the group. This creates a challenge to effectively deal with the paradoxes and maintain individual leadership while promoting teamwork.

For the team itself, shared leadership can lead to inhibition of team performance, low decision-making efficiency, team responsibility dispersion, and team creativity decline[228]. For example, shared leadership is not beneficial for the stage of team innovation convergence, as it can make it difficult for teams to reach a consensus during the decision-making process. Additionally, shared leadership can lead to low decision-making efficiency, dispersion of team responsibility, and group thinking among work teams.

Overall, while shared leadership can have its benefits, it is important to be aware of its potential drawbacks, which can manifest in different ways for team members, formal team leaders, and the team itself. By understanding these potential negative effects, teams and organizations can take measures to mitigate or avoid them and improve the **emergence and effectiveness** of shared leadership.

For example, an internal team environment consisting of shared purpose, social support, and voice was shown to enable the emergence of shared leadership in teams. Under these conditions, team members would be more open to contributing to leadership and accept the influence of other team members because there is a similar understanding of shared objectives, mutual support, and participation to contribute to the teams' purpose and decision-making process[229].

[226] Chen and Zhang (2022); Pearce (2007)
[227] Fletcher and Käufer (2003); Zhu et al. (2018)
[228] Abfalter (2013); Kaur (2013); Nordbäck and Espinosa (2019); H. Wang and Peng (2022); Zhu et al. (2018)
[229] e.g., Carson et al. (2007); Daspit et al. (2013)

In teams of interacting employees that depend on the skills and completion of the tasks of others, research showed that shared leadership emerges through the enhancement of mutual solidarity[230], team integrity in form of transparent communication, high level of reliability, trust, but also fairness[231].

However, shared leadership comes in many forms and, although the present dissertation contrasted it with focused leadership, both could potentially coexist. Leaders external to the team have been shown to support and guide, and even enable teams with shared leadership[232]. But also reward strategies that stimulate employee participation, motivational support, and vertical empowerment can facilitate shared leadership[233]. Yet another important condition for shared leadership in a focused leadership setting is leader humility, the willingness to admit a lack of knowledge or expertise, acknowledge the knowledge or skills of others, and the openness to new ideas[234].

The above outlook of existing research highlights that shared leadership is a **positive alternative** to focused leadership, with certain **drawbacks** that should be mitigated to foster its emergence and effectiveness. The **present research adds** to this body of knowledge that not only team or organizational factors are important in the context of sharing leadership, but organizations should also consider individual differences of their employees. It could be shown that employees generally prefer and therefore potentially support shared leadership in teams, which seems even more so for employees currently not in supervision roles, but also employees, that generally seek to collaborate and try to avoid being in power. However, it would be important for practitioners to consider that the theoretical underpinnings and limitations of this dissertation's research design may suggest yet other individual-level factors that may change the observed dynamic and have yet to be explored in the future.

[230] Fausing et al. (2015)
[231] Hoch (2013)
[232] Carson et al. (2007)
[233] Grille and Kauffeld (2015); Fausing et al. (2015); Hoch (2013)
[234] Chiu et al. (2016)

4.3 Conclusion

The present dissertation contributes at a **theoretical** level with an integrative review of the literature. Shared leadership extends the concept of leadership from a 'leader-centric' perspective to a 'leadership-as-social-network' perspective. Although shared leadership is mainly thought of as a team-level phenomenon, various psychological consequences for employees have to be expected due to individually different social orientations and the dynamics of hierarchies, power, and status.

However, the main outcome of the present dissertation is a **cognitive contribution** to show that employees **differ in their leadership structure preferences**. Shared leadership was on average rated higher than focused leadership, but it turned out that differences in leadership structure preferences may depend on employees' personal characteristics, such as social orientations and social rank.

Furthermore, **two methodological contributions** compound the construction and testing of **target descriptions** to examine preferences for teams with different leadership structures, focused vs. shared, but also the determination of the reliability of the SSA scale measuring the need for dominance[235], in other words, the **motive for power**, an inclination of employees that has important consequences within the workplace.

[235] see Wieczorkowska-Wierzbinska (2014), (2021)

A Appendix

A.1 Introduction

A.1.1 Key terminology

Table A.1: Definitions of key terminologies ("APA Dictionary of Psychology", 2023).

Term	Definition
preference	act of choosing one alternative over others
orientation	specific physiological or psychological state of arousal that directs an organism's energies toward a goal
motive	individuals general approach, ideology, or viewpoint
need	condition of tension in an organism resulting from deprivation of something required for survival, well-being, or personal fulfillment
interdependence	state in which two or more people, situations, variables, or other entities rely on or react with one another such that one cannot change without affecting the other
leadership	processes involved in leading others, including organizing, directing, coordinating, and motivating their efforts toward achieving certain group or organizational goals
social influence	interpersonal processes that can cause individuals to change their thoughts, feelings, or behaviors
control	authority, power, or influence over events, behaviors, situations, or people
status	reputation or position of an individual or group relative to others, such as an individuals standing in a social group
power	capacity to influence others, even when they try to resist this influence
dominance	exercise of influence or control over others
submission	compliance with or surrender to the requests, demands, or will of others
independence	freedom from the influence or control of other individuals or groups
autonomy	experience of acting from choice, rather than feeling pressured to act
collaboration	interpersonal relationship in which the parties show cooperation and sensitivity to the others needs
affiliation	social relationship in which a person joins or seeks out one or more other individuals, usually on the basis of liking or a personal attachment rather than perceived material benefits
achievement	attainment of some goal, or the goal attained

A.1.2 Methodological inference

The third decade of the 21st century saw an information revolution thanks to the Internet. With this in mind, the standards for writing scientific papers in social sciences, which were developed in the twentieth century, require modification.

At Professor Wieczorkowska's doctoral seminar we therefore adopted a paradigm that identifies the following guidelines for literature review, data collection and analysis[236].

Adopted paradigm

1) The availability of representative random samples of the population is very limited in social sciences. Not only is randomization costly, but people can only be drawn, but not forced to participate in research. Therefore, most studies are conducted with available samples consisting of people who have agreed to participate in the research. We increase the external validity by replicating studies on different available samples. This means that we should **test the same hypotheses on different data sets and with different operationalizations**.
2) Terminology: All data obtained by asking questions to employees are called **surveys.** All respondents, regardless of whether they participated in surveys, experiments, or interviews, are called **respondents**, because the object of the analysis is their reactions (responses).
3) A survey is a form of cooperative conversation. The respondent should understand not only what is being asked, **but why** s/he is being asked. When collecting data, we need to ensure psychological realism, which determines the level of respondent's involvement. Where possible, we should take care of the **internal validity** of the research by **using manipulations of independent variables in the survey**, that is, to conduct experimental research by assigning volunteers **randomly** to different experimental conditions.
4) Where possible, in both questionnaires and interviews, we introduce **target descriptions** of the objects whose evaluation we want to know. Example 1: In interviews, we can ask respondents to rate the descriptions of situational dilemmas provided by the researcher. Example 2: Instead of asking respondents to evaluate objects whose characteristics cannot be obtained in an objectivized way, e.g., the degree of dominance of the respondent's boss, we can ask them

[236] Wieczorkowska-Wierzbińska (2021)

to evaluate stimulus descriptions of different bosses that highlight features that are explanatory variables in the theoretical model that forms the basis of the research.

5) Standard measurement tools used in research should be checked for psychometric properties / adapted to the studied group of respondents.
6) Before the analysis, the data sets should be carefully cleaned from "fake" respondents who, e.g., carelessly clicked through the questionnaire.

Editorial guidelines

Due to the exponential growth of scientific publications on any topic, the literature review is limited to items relevant to the research problem. Citations are organized in the following order.

1) **What** and **How** (type of study) was demonstrated? On what sample? (year of study, country, characteristic features of the sample). The lack of information about the type of study means that these are the most common correlational studies, threatened by their very nature with low internal validity, resulting in the possibility of obtaining apparent correlations. Unfortunately, at this level of development of management science, experimental studies are rare. From the point of view of synthesizing knowledge, the names of research authors are the least important information, so instead of being placed in parentheses - as the 20th century APA standard requires - they are placed in footnotes. This way of cross-referencing shortens the text by about 20% and makes it easier to concentrate on synthesizing results instead of on the history of research, the analysis of which we leave to historians of science.
2) The volume of the first two parts of the dissertation should not exceed 100 pages. To make the content easier to perceive, the most important concepts are highlighted by using CAPITALS or **boldface**. New threads are separated in American style by leaving blank lines instead of using uniform interlineation with indentation.
3) We do not avoid repeating the same words - scientific terms - do not use synonyms - remembering that the dissertation is a scientific text and precision of language is important.
4) We do not include in the text the values of statistics and significance levels - if they are included in tables. We do not include mean values in the text, even if they are presented in figures, because the purpose of figures is to illustrate relationships, so they may exaggerate differences.

A.2 Leadership

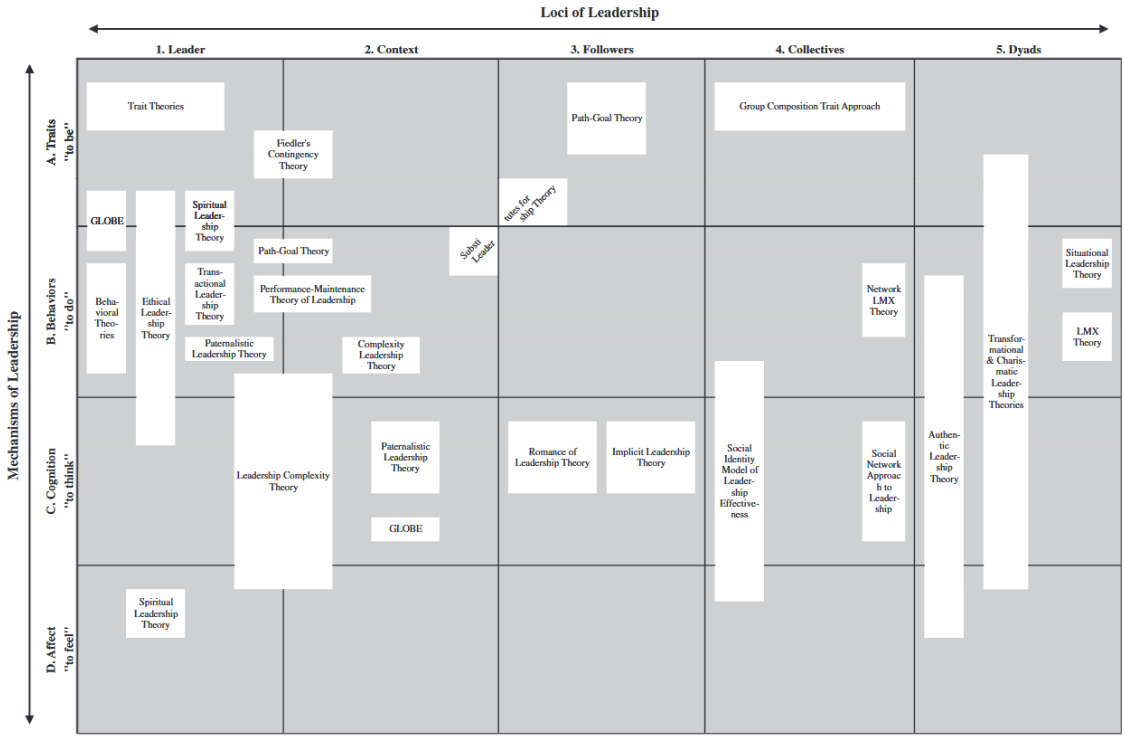

Figure A.1: Two-dimensional framework of leadership theories Hernandez et al. (2011), (Note from the authors: 'The order of the loci and mechanisms and the size and distribution of the theories' boxes were chosen to maximize graphical clarity. Please note that some theories are represented by two separate boxes').

A.3 Methodology

A.3.1 Operationalizations of leadership structures

Team A: Immagine you would start a new position in a new company. The first day you start in your new team, one of the team members takes you to the side and explains you some basic pillars of the team environment. This colleague explains you that here each member of the team helps to frame the vision and participates in establishing goals for the team and the organization as a whole. Everyone shares the responsibility for the outcomes of the team and helps in guiding others. All team members collaborate with one another in making decisions that affect the organization. If a problem arises everyone takes a shares in deciding on the best course of action and help to identify, diagnose, and resolve it. Work flows are organized through collaboration of all team members. If it comes to deciding how resources are allocated in regard to the team's priorities all of the members have a say. Everyone chips in (even if it is outside the area of personal responsibility) to insure the team fulfills its obligations, so each member is evaluated by and is accountable to all other members of the team.

Team B: Immagine you would start a new position in a new company. The first day you start in your new team, the team leader takes you to the side and explains you some basic pillars of the team environment. This team leader explains you that he/she framed a vision and established some goals for the team which he introduces immediately. He/she tells you that he/she is responsibility for the outcomes of the team and therefor tries to guide each of the team. If there is any decision to make that affects the organization you shall let him/her make that decision. Problem arises every time and in order for him/her to decide on the best course of action he/she tries to identify, diagnose, and resolve it. All the work flows are organized by this team leader. If it comes to deciding how resources are allocated in regard to the team's priorities it is done by him/her. To insure the team fulfills its obligations he/she accountable to and evaluates all members of the team.

Figure A.2: Vignettes - first phase (own elaboration).

Leadership activities / dimensions
Vision framing: for the organization
Goal establishment: for the organization
Outcome responsibility: for the organization
Ensure: work is well organized
Ensure: obligation fulfillment of the organization
Evaluation: by and accountability: to
Decision making: affecting organization
Decision making: about resource allocation acc. organization priorities
Decision making: when facing problems, of the best course of action
Problem handling: identify, diagnose and resolve problems that face the organization

		You will be presented with some brief situations in the following. If you were these personas, how would you feel about each of these situations?		
		Scenario	Stress Factor (optional)	Question
Vision framing: for the organization	S	John's general manager outlines in the current communication meeting that the organization is about to change drastically.	Without a clear picture of the future, the organizations survival is on stake.	If you were John, how would you feel that John and his colleagues shall frame the vision instead of the general manager?
	F			If you were John, how would you feel that the general manager frames the vision instead of John and his colleagues?
Goal establishment: for the organization	S	Margarete's organization currently sets new goals for the coming year.	These goals have to be clear and well aligned throughout the entire organiazation.	If you were Margarete, how would you feel that Margarete and her colleagues establish these goals instead of her boss?
	F			If you were Margarete, how would you feel that her boss establishes these goals instead of Margarete and her colleagues?
Outcome responsibility: for the organization	S	Peter's organization commited it's stakeholders to finish one of their core projects ealier as planned.	Not keeping this promis would lead in loosing some critical founds from these stakeholders.	If you were Peter, how would you feel that Peter and his colleagues need to take all responsibilities for this instead of the head of projects?
	F			If you were Peter, how would you feel that the head of projects takes on all responsibilities for this instead of Peter and his colleagues?
Ensure: work is well		Liane's organization just started to implement a new	Failtures within that process would	If you were Liane, how would you feel that Liane and her

Figure A.3: Vignettes - second phase (own elaboration).

TEAM X

I work in a team with 8 other colleagues. We have no team leader.

Normally, when our team gets a task to perform, all of us meet and think how to complete it and how to share the workload and responsibilities between us.

It's a tough time right now. Due to the market crisis we had to double our efforts.

The whole team came together and prepared a plan on what and when to do, and set several deadlines throughout the year.

We decided on the goals for each of us, the completion of which we will evaluate later.

Everybody knows that individual salaries depend on reaching these goals.

We will probably see the fruits of our efforts soon.

TEAM X

I work in a team with 8 other colleagues and our team leader.

Normally, when our team gets a task to perform, our leader thinks about how to complete it and distributes the workload and responsibilities between us.

It's a tough time right now. Due to the market crisis we had to double our efforts.

My team leader prepared a plan on what and when to do, and set several deadlines throughout the year.

He set goals for each one of us, the completion of which he will evaluate later.

Everybody knows that individual salaries depend on reaching these goals.

We will probably see the fruits of our efforts soon.

Figure A.4: Vignettes - final phase: video and text based experimental manipulation (own elaboration).

A.3.2 Operationalizations of predictor variables

Table A.2: Control Preferences - items (Grzelak, 2001).

Sub scale	Items
Collaboration	
	I like being in a group in which everyone has an influence on what happens
	I like being in a group in which everyone has something to say
	It is best to solve a problem together with others
	I like being in a group in which everyone makes decision together
	I like working in a team
Dominance	
	I like making decisions for others
	I like leading others
	I think I have leadership tendencies
	I like to have influence on what others do
	I like to wield power
Submissiveness	
	I like it when someone directs me in various things
	I am readily subordinate to others on a day to day basis
	I like it when someone makes decisions for me
	I like it when someone is responsible for me
Proactive Autonomy	
	I like to take care of my own business
	I like controlling my own life
	I like choosing goals for myself
	I like taking care of myself
Reactive Autonomy	
	I don't like it when someone interferes in my life
	I don't like it when someone rules over me
	I don't like it when someone makes decisions about my business
	I don't like it when someone forces their opinion on me
	I don't like it when someone butt into what I am doing
Respect for Autonomy	
	I like people who lead their own lifes
	I like people who are masters of their own lifes
	It would be good if everyone were responsible for their own business
	I like people who are autonomous, independent from others
	I like it when other people can think for themselves

Table A.3: Brief HEXACO - items (de Vries, 2013).

Sub scale	Items
Honesty-Humility	
	I find it difficult to lie.
	I would like to know how to make lots of money in a dishonest manner. (Reversed)
	I want to be famous. (Reversed)
	I am entitled to special treatment. (Reversed)
Emotionality	
	I am afraid of feeling pain.
	I worry less than others. (Reversed)
	I can easily overcome difficulties on my own. (Reversed)
	I have to cry during sad or romantic movies.
eXtraversion	
	Nobody likes talking with me. (Reversed)
	I easily approach strangers.
	I like to talk with others.
	I am seldom cheerful. (Reversed)
Agreeableness	
	I remain unfriendly to someone who was mean to me. (Reversed)
	I often express criticism. (Reversed)
	I tend to quickly agree with others.
	Even when I'm treated badly, I remain calm.
Conscientiousness	
	I make sure that things are in the right spot.
	I postpone complicated tasks as long as possible. (Reversed)
	I work very precisely.
	I often do things without really thinking. (Reversed)
Openness to Experience	
	I can look at a painting for a long time.
	I think science is boring. (Reversed)
	I have a lot of imagination.
	I like people with strange ideas.

Table A.4: Social motives - scales included in SSA, after: Nowak and Mahari (2019).

Sub scale	Items
power	
	When working in a team, it is easier for person A when somebody else is responsible for the task. Person B prefers to be the one responsible for the task.
	Person A prefers to let someone else be responsible for planning and decisions. Person B prefers to plan and decide for others.
	Person A likes when someone else decides for him or her. Person B feels irritated when someone else decides for him or her.
	Person A usually plays the role of group leader. Person B shuns the responsibility associated with being a leader.
	When taking part in group activities, person A feels good in a leadership role. Person B does not feel comfortable deciding how his or her team performs its tasks.
achievement	
	Person A often works until collapse, or tries to do more than he or she can. Person B avoids overworking him or herself.
	Person A is more demanding of him or herself because he or she tries to live the most efficient life possible. B does not want to overwork himself or herself.
	Person A could probably achieve more but does not see a reason to work more than necessary. Person B works more than other people.
	Person B does not want to work more than he or she is being paid for. Person A has a tendency to fully engage in work that he or she is working on without regard to the amount of money he or she is being paid.
	Person A feels bad when he or she does not have a lot to do at work. Person B prefers work that does not require his or her full engagement.
affiliation	
	People say that person A is an individualist that always worries about his or her own interest. Person B tries to take other peoples' best interest into account when doing things.
	Person A does not like it when others come to him or her with their problems. Friends of person B always know they can count on him or her when they have issues.
	Person A likes tasks in which he or she can compete with others. Person B prefers situations that require cooperation.
	Before person A makes a decision, he or she tries to imagine what others think. Person B does not care about the point of view of other people.
	Person A does not understand why he or she has to think of other people's feelings. Person B thinks of other's point of view before he or she decides how to act.

A.3.3 Study 2a. Methodological experimental study

		Gender	Age	leadership structure perception (standardized)	Team structure	Presentation format
N	Valid	51	51	51	51	51
	Missing	0	0	0	0	0
Mean		1.39	37.04	.0000000	1.65	1.45
Std. Error of Mean		.069	1.599	.14002801	.068	.070
Median		1.00	33.00	.4118056	2.00	1.00
Mode		1	28[a]	.41181	2	1
Std. Deviation		.493	11.416	1.00000000	.483	.503
Variance		.243	130.318	1.000	.233	.253
Skewness		.455	1.193	.278	-.634	.203
Std. Error of Skewness		.333	.333	.333	.333	.333
Kurtosis		-1.868	.392	.999	-1.665	-2.040
Std. Error of Kurtosis		.656	.656	.656	.656	.656
Range		1	43	4.97418	1	1
Minimum		1	22	-2.35163	1	1
Maximum		2	65	2.62255	2	2
Sum		71	1889	.00000	84	74

a. Multiple modes exist. The smallest value is shown

Figure A.5: Study 2a: SPSS output - descriptive statistics for all involved variables.

Dependent Variable: leadership structure perception (standardized)

Team structure	Presentation format	Mean	Std. Deviation	N
Focused	Video	.4118056	.00000000	9
	Text	1.2715402	.96170277	9
	Total	.8416729	.79428561	18
Shared	Video	-.4026798	.69833231	19
	Text	-.5356570	.90500939	14
	Total	-.4590943	.78198676	33
Total	Video	-.1408809	.68932120	28
	Text	.1715072	1.27810787	23
	Total	.0000000	1.00000000	51

Figure A.6: Study 2a: SPSS output - descriptive statistics for the ANOVA on perceptions towards leadership structure by experimental groups.

A.4 Results

A.4.1 Study 1. Employees' Control Orientations

		preference for focused leadership in contrast to shared leadership (standardized)	gender	age	dominance	submission	collaboration	autonomy
N	Valid	175	180	180	180	180	180	180
	Missing	5	0	0	0	0	0	0
Mean		.0000000	1.37	33.30	3.1467	2.7778	3.6622	3.9655
Std. Error of Mean		.07559289	.036	.770	.06602	.06673	.05754	.04454
Median		.1591638	1.00	30.00	3.2000	2.7500	3.8000	4.0000
Mode		.41123	1	27	3.20	3.00	4.00	3.93[a]
Std. Deviation		1.00000000	.483	10.335	.88579	.89532	.77193	.59759
Variance		1.000	.234	106.803	.785	.802	.596	.357
Skewness		-.059	.558	1.511	-.067	.161	-.521	-.431
Std. Error of Skewness		.184	.181	.181	.181	.181	.181	.181
Kurtosis		.464	-1.708	2.052	-.418	-.401	.027	-.025
Std. Error of Kurtosis		.365	.360	.360	.360	.360	.360	.360
Range		5.04139	1	51	4.00	4.00	3.60	2.79
Minimum		-2.10946	1	20	1.00	1.00	1.40	2.21
Maximum		2.93193	2	71	5.00	5.00	5.00	5.00
Sum		.00000	246	5994	566.40	500.00	659.20	713.79

a. Multiple modes exist. The smallest value is shown

Figure A.7: Study 1: SPSS output - descriptive statistics for main variables involved.

		political orientation	honesty	emotionality	extraversion	agreeableness	conscientiousness	oppeness
N	Valid	172	177	176	177	176	177	177
	Missing	8	3	4	3	4	3	3
Mean		3.6483	3.5494	2.7803	3.3371	3.134	3.4944	3.6271
Std. Error of Mean		.12748	.06852	.05896	.06526	.0642	.05341	.05677
Median		4.0000	3.5000	2.6667	3.3333	3.000	3.5000	3.5000
Mode		4.00	3.75	2.67	3.33	3.00	3.00	3.50
Std. Deviation		1.67187	.91159	.78216	.86820	.8523	.71059	.75525
Variance		2.795	.831	.612	.754	.726	.505	.570
Skewness		.240	-.330	-.103	-.280	.031	-.028	-.212
Std. Error of Skewness		.185	.183	.183	.183	.183	.183	.183
Kurtosis		-.773	-.387	.087	.075	.024	-.245	-.032
Std. Error of Kurtosis		.368	.363	.364	.363	.364	.363	.363
Range		6.00	4.00	4.00	4.00	4.00	3.50	4.00
Minimum		1.00	1.00	1.00	1.00	1.00	1.50	1.00
Maximum		7.00	5.00	5.00	5.00	5.00	5.00	5.00
Sum		627.50	628.25	489.33	590.67	551.5	618.50	642.00

Figure A.8: Study 1: SPSS output - descriptive statistics for additionally involved variables.

A.4.2 Study 2. Employees' Social Motives

		perception towards imaginary leadership structure (standardized)	experimental condition	gender	age	Are you formally supervising other employees in your current occupation?
N	Valid	178	178	178	178	157
	Missing	0	0	0	0	21
Mean		.0000	1.5000	1.48	39.74	1.41
Std. Error of Mean		.07121	.03758	.038	.862	.039
Median		.1643	1.5000	1.00	37.50	1.00
Mode		1.50	1.00[a]	1	28	1
Std. Deviation		.95002	.50141	.501	11.504	.494
Variance		.903	.251	.251	132.340	.244
Skewness		-.654	.000	.068	.733	.353
Std. Error of Skewness		.182	.182	.182	.182	.194
Kurtosis		-.114	-2.023	-2.018	-.164	-1.900
Std. Error of Kurtosis		.362	.362	.362	.362	.385
Range		4.40	1.00	1	49	1
Minimum		-2.90	1.00	1	22	1
Maximum		1.50	2.00	2	71	2
Sum		.00	267.00	264	7074	222

a. Multiple modes exist. The smallest value is shown

Figure A.9: Study 2: SPSS output - descriptive statistics for all involved variables except social motives.

		power	achievement	affiliation	power (2-tile)	achievement (2-tile)	affiliation (2-tile)
N	Valid	178	178	178	178	178	178
	Missing	0	0	0	0	0	0
Mean		2.978	3.1952	3.7303	1.46	1.50	1.50
Std. Error of Mean		.0877	.07570	.06520	.037	.038	.038
Median		3.000	3.1250	3.8750	1.00	1.50	1.50
Mode		3.00	3.00	4.00	1	1[a]	1[a]
Std. Deviation		1.170	1.00992	.86987	.500	.501	.501
Variance		1.370	1.020	.757	.250	.251	.251
Skewness		.044	-.205	-.467	.159	.000	.000
Std. Error of Skewness		.182	.182	.182	.182	.182	.182
Kurtosis		-.838	-.590	-.375	-1.997	-2.023	-2.023
Std. Error of Kurtosis		.362	.362	.362	.362	.362	.362
Range		4.00	4.00	4.00	1	1	1
Minimum		1.00	1.00	1.00	1	1	1
Maximum		5.00	5.00	5.00	2	2	2
Sum		530.0	568.75	664.00	260	267	267

a. Multiple modes exist. The smallest value is shown

Figure A.10: Study 2: SPSS output - descriptive statistics for social motives.

Dependent Variable: acceptance for leadership structure (standardized)

Experimental Group	Mean	Std. Deviation	N
Focused Leadership	-.1706	.97897	89
Shared Leadership	.1706	.89336	89
Total	.0000	.95002	178

Figure A.11: Study 2: SPSS output - descriptive statistics for the ANOVA on acceptance for the leadership structure by experimental group.

Dependent Variable: acceptance for leadership structure (standardized)

power motive	Experimental Group	Mean	Std. Deviation	N
low	Focused Leadership	-.3871	.98120	48
	Shared Leadership	.1196	.83694	48
	Total	-.1337	.94219	96
high	Focused Leadership	.0828	.92473	41
	Shared Leadership	.2302	.96228	41
	Total	.1565	.94078	82

Figure A.12: Study 2: SPSS output - descriptive statistics for the ANOVA on acceptance for the leadership structure by experimental group and power motive.

Dependent Variable: acceptance for leadership structure (standardized)

achievement motive	Experimental Group	Mean	Std. Deviation	N
low	Focused Leadership	-.3015	.93405	47
	Shared Leadership	.1080	.89954	42
	Total	-.1083	.93558	89
high	Focused Leadership	-.0240	1.01810	42
	Shared Leadership	.2266	.89374	47
	Total	.1083	.95723	89

Figure A.13: Study 2: SPSS output - descriptive statistics for the ANOVA on acceptance for the leadership structure by experimental group and achievement motive.

Dependent Variable: acceptance for leadership structure (standardized)

affiliation motive	Experimental Group	Mean	Std. Deviation	N
low	Focused Leadership	-.2632	.91349	45
	Shared Leadership	.0724	.91222	44
	Total	-.0973	.92321	89
high	Focused Leadership	-.0759	1.04370	44
	Shared Leadership	.2666	.87399	45
	Total	.0973	.97152	89

Figure A.14: Study 2: SPSS output - descriptive statistics for the ANOVA on acceptance for the leadership structure by experimental group and affiliation motive.

Dependent Variable: acceptance for leadership structure (standardized)

Beeing a supervisor.	Experimental Group	Mean	Std. Deviation	N
No	Focused Leadership	-.2831	.98022	50
	Shared Leadership	.2347	.90604	42
	Total	-.0467	.97697	92
Yes	Focused Leadership	-.0145	.97476	29
	Shared Leadership	.0715	.93564	36
	Total	.0331	.94673	65

Figure A.15: Study 2: SPSS output - descriptive statistics for the ANOVA on acceptance for the leadership structure by experimental group and supervision.

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List of Figures

List of Tables