

# Instrumental Leadership and Organizational Change:

A Three-Study Investigation on the Influence of Instrumental Leadership on  
Employees' Change Reactions within the Framework of the Extended Full-  
Range of Leadership Model

## **Dissertation**

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In loving memory to my Mum,  
my perfect *leader* through all times of change.

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## Summary

Change processes are omnipresent in organizations. Driven by a global competitive pressure, which is increasing in its speed and transparency due to digitalization, organizations are forced to continuously adapt to the evolving market conditions and to implement changes. Hence, there exists a great interest in science and practice to investigate how changes can be successfully implemented in organizations. The importance of the influence of leadership is often discussed and investigated in this context, but there is little consensus among individual research lines. Change management literature focuses on the investigation of strategic top management decisions and their impact at the organizational level. Change researchers in organizational psychology are increasingly concerned with the reactions of employees to change processes at the individual level. With the awareness that the reactions of employees are decisive for the success of change processes, the influence of leadership behavior on the reaction of employees has thus been increasingly investigated. In particular, the leadership concept of transformational leadership proved to be suitable for positively influencing employees' reactions to change. However, strategic leadership behavior, which is regarded in change management literature as an essential core competence in dealing with change, has been largely ignored at the individual level. This also applied to leadership research, where the most frequently investigated leadership model, the full-range of leadership model, was criticized, among other things, for not considering relevant leadership behavior such as task-oriented and strategic leadership. Researchers extended the existing model - consisting of transformational, transactional and laissez-faire leadership - to an extended full-range of leadership model and added the concept of instrumental leadership. Instrumental leadership encompasses strategic and task-oriented leadership and allows linking the organizational level more closely with the individual level. So far, however, the concept of instrumental leadership has not been examined in the context of organizational change. The present dissertation therefore investigates in three empirical studies within a framework model the impact of instrumental leadership on the cognitive and behavioral change reactions of employees with the aim of closing the aforementioned research gaps. In addition, the approach to examine instrumental leadership as part of the extended full-range of leadership model allows existing criticisms of transformational leadership to be addressed.

The aim of the first study was therefore to analyze instrumental leadership within the extended full-range of leadership model and to test whether the theoretical assumption, that inspiring transformational behaviors are reinforced by functional instrumental behaviors, is

valid. For this purpose, a field study and an experimental vignette study were carried out, in which the interaction between transformational and instrumental leadership was examined in its effect on the change support of employees. In the field study, 405 employees were surveyed at two points in time in an online survey about the leadership behavior of their superiors and their reactions to change. A stepwise regression analysis under control of laissez-faire and transactional leadership revealed a significant interaction effect between transformational and instrumental leadership. Simple slope analyses showed that transformational leadership only positively influences change support when instrumental leadership is highly developed. In the vignette study, instrumental and transformational leadership behavior was manipulated with the use of fictitious scenarios of an organizational change situation. A pretest was carried out to test whether the manipulation of leadership styles was successful at both high and low levels. 772 participants took part in the main investigation, who were randomly assigned to one of four scenarios and who assessed the described leadership behavior and their reactions to change following the scenario. The results of a 2x2 ANCOVA showed that instrumental leadership influences the mean values of the change reactions of employees more strongly than transformational leadership. However, the interaction was not found for the manipulated leadership styles. The results thus question the change-promoting effect of transformational leadership and expand literature by confirming the integrative view of the extended full-range of leadership model in times of change.

Based on the results of the first study, Study 2 was intended to provide more detailed insights into the mechanisms and conditions through which instrumental leadership positively influences the employees' reactions to change. Based on the assumption that instrumental leadership has an indirect effect on employees' performance through strategic behavior and a direct effect on their performance through task-oriented behavior, the team change success and individual change support were examined as relevant change criteria. Drawing on the uncertainty reduction theory and the social exchange theory, a multi-level moderated mediation model was developed in which the cognitive change attitude of the leader was used as a moderator. Employees' cognitive change attitude served as the central mechanism to explain the influence of instrumental leadership. The model was examined using a sample of 125 teams, each consisting of one leader, at least two employees (375 in total) and the leader's superior. The results show that instrumental leadership has a positive effect on team change success and individual change support through cognitive attitudes in the team. The indirect effects are reinforced by the cognitive attitude of the leader. The study underlines the



importance of instrumental leadership in change and illustrates the influence of leaders' attitudes towards change, which has received little attention in empirical studies so far.

Study 3 concluded with the design and evaluation of a change-oriented training program for the development of instrumental and transformational leadership behavior. Building on the previous results, the aim was to demonstrate the trainability of instrumental and transformational leadership behavior within a two-day training program. In addition, a nonlinear developmental process of leadership behavior, based on the previous knowledge of the training participants, was examined. To evaluate the training, a multilevel growth curve model was calculated, which takes into account the nonlinearity of the development. Additionally, the effect of the training was tested within a moderated mediation model in order to assess whether changes in leadership behavior caused by the training lead to alterations in employees' change reactions. A total of 59 leaders, assessed by 387 employees, participated in the training. The control group consisted of 54 leaders who did not participate in any training and who were assessed by 188 employees. Both groups were surveyed before and three months after the training. Firstly, the results show that three months after the training, instrumental and transformational leadership behavior developed among the training participants, while leadership behavior in the control group remained unchanged or declined. Secondly, it was found that transformational leadership behavior developed on the basis of previous knowledge in reverse u-shape. This means that participants with average transformational leadership behavior were able to develop the most through training. Thirdly, it became apparent that the positive development of leadership behavior caused by the training led to a variation in employees' change reactions.

The dissertation extends leadership research by the analysis of instrumental leadership as part of the extended full-range of leadership model in the context of organizational change processes. Within a framework model that links leadership behavior with differentiated change reactions, the three empirical studies contribute to a deeper understanding of the mechanisms and conditions of the leadership style during change. The simultaneous testing of leadership styles, in particular instrumental and transformational leadership, avoids previous methodological weaknesses in existing literature and allows for a more realistic assessment of transformational leadership in change. In addition, this dissertation demonstrates the potential of instrumental leadership in change, which has so far received little attention, and strengthens its theoretical and empirical relevance within the framework of the extended full-range leadership model. Ultimately, the development and evaluation of leadership training in

instrumental leadership met an existing need for a training concept of the leadership style and expanded literature to include nonlinearity in leadership development.

## **Zusammenfassung**

Veränderungsprozesse sind in Organisationen allgegenwärtig. Angetrieben von einem globalen Wettbewerbsdruck, der sich durch die Digitalisierung in seiner Geschwindigkeit und Transparenz noch erhöht, sind Organisationen gezwungen, sich kontinuierlich an die sich verändernden Marktbedingungen anzupassen und Veränderungen umzusetzen. In der Wissenschaft und Praxis besteht daher ein großes Interesse daran zu untersuchen, wie Veränderungen in Unternehmen erfolgreich umgesetzt werden können. Die Bedeutung des Einflusses von Führung wird in diesem Zusammenhang häufig diskutiert und untersucht, jedoch besteht wenig Konsens zwischen einzelnen Forschungssträngen. Change-Management Studien fokussieren auf strategische Topmanagement-Entscheidungen und deren Auswirkungen auf organisationaler Ebene. Hingegen untersucht die Arbeits- und Organisationspsychologie Führungsverhalten und Veränderungsreaktionen auf Individualebene. Hier zeigte sich, dass insbesondere das Führungskonzept der transformationalen Führung geeignet ist, um die Veränderungsreaktionen der Mitarbeiter positiv zu beeinflussen. Strategisches Führungsverhalten, welches in der Change-Management Literatur als wesentliche Kernkompetenz im Umgang mit Veränderungen betrachtet wird, wurde jedoch auf der Individualebene weitestgehend nicht berücksichtigt. Dies traf auch auf die Führungsforschung zu, wo das am häufigsten untersuchte Führungsmodell, das Full-Range of Leadership Modell, unter anderem deshalb kritisiert wurde relevantes Führungsverhalten, wie aufgabenorientierte und eben strategische Führung, nicht zu berücksichtigen. Forscher erweiterten deshalb das Modell - bestehend aus transformationaler, transaktionaler und laissez-faire Führung - zum extended Full-Range of Leadership Modell und fügten das Konzept der instrumentellen Führung hinzu. Die instrumentelle Führung umfasst strategische und aufgabenorientierte Führung und ermöglicht es die organisationale Ebene stärker mit der Individualebene zu verbinden. Bisher wurde das Konzept der instrumentellen Führung aber nicht im Kontext organisationaler Veränderungen untersucht. Die vorliegende Dissertation erforscht daher in drei empirischen Studien innerhalb eines Rahmenmodells die Wirkungsweise der instrumentellen Führung auf die kognitiven und verhaltensbezogenen Veränderungsreaktionen der Mitarbeiter mit dem Ziel die benannten Forschungslücken zu schließen. Darüber hinaus ermöglicht der Ansatz, die instrumentelle Führung als Teil des extended Full-Range of Leadership Modells zu untersuchen, die Auseinandersetzung mit bestehenden Kritikpunkten an der transformationalen Führung.

Das Ziel der ersten Studie war es daher, die instrumentelle Führung im Rahmen des extended Full-Range of Leadership Modells zu analysieren und zu testen, ob die theoretische Annahme, dass inspirierende transformationale Verhaltensweisen durch funktionale instrumentelle Verhaltensweisen bestärkt werden, zutrifft. Dazu wurden eine Feldstudie und eine experimentelle Vignettenstudie durchgeführt, in denen die Interaktion zwischen den beiden Führungsstilen in ihrer Wirkung auf die Veränderungsunterstützung der Mitarbeiter untersucht wurde. In der Feldstudie wurden 405 Mitarbeiter zu zwei Messzeitpunkten in einer Onlinebefragung zu dem Führungsverhalten ihres Vorgesetzten und ihren Veränderungsreaktionen befragt. Mittels einer stufenweisen Regressionsanalyse unter Kontrolle der laissez-fairen und transaktionalen Führung zeigte sich ein signifikanter Interaktionseffekt zwischen der transformationalen und instrumentellen Führung. Simple-Slope-Analysen bestätigten, dass die transformationale Führung nur bei hoher Ausprägung der instrumentellen Führung die Veränderungsunterstützung positiv beeinflusst. In der anschließenden Vignettenstudie wurde das instrumentelle und transformationale Führungsverhalten manipuliert, indem das Führungsverhalten jeweils in einer hohen und niedrigen Ausprägung innerhalb von fiktiven Veränderungsszenarien beschrieben wurde. Anhand eines Pretests wurde getestet, ob die Manipulation der Führungsstile erfolgreich war. An der Hauptuntersuchung nahmen 772 Probanden teil, die zufällig einem der vier Szenarien zugeteilt wurden. Im Anschluss an das Szenario schätzten die Probanden das darin beschriebene Führungsverhalten ein und bewerteten ihre Veränderungsreaktionen. Die Ergebnisse einer 2x2 ANCOVA zeigten, dass die instrumentelle Führung die Mittelwerte der Veränderungsreaktionen der Mitarbeiter stärker beeinflusst als die transformationale Führung. Die Interaktion zeigte sich jedoch nicht für die manipulierten Führungsstile. Die Ergebnisse stellen damit die veränderungsfördernde Wirkung der transformationalen Führung in Frage und erweitern die Literatur, indem sie die integrative Sichtweise des extended Full-Range of Leadership Modells im Wandel bestätigen.

Aufbauend auf den Ergebnissen der ersten Studie sollte Studie 2 genauere Einblicke liefern, über welche Wirkmechanismen und -bedingungen die instrumentelle Führung die Veränderungsreaktionen der Mitarbeiter positiv beeinflusst. Hinsichtlich der Wirkungsweise der instrumentellen Führung wird angenommen, dass sie die Leistung von Mitarbeitern indirekt über strategische Verhaltensweisen beeinflusst und direkt über aufgabenorientiertes Verhalten. Um diese Wirkungsweisen abbilden zu können, wurden als erfolgsrelevante Veränderungskriterien der Teamveränderungserfolg, eingeschätzt durch den Vorgesetzten der Führungskraft, und die individuelle Veränderungsunterstützung untersucht. Aufbauend auf der

Uncertainty Reduction Theorie und der sozialen Austauschtheorie wurde ein mehrstufiges moderiertes Mediationsmodell entwickelt, indem die kognitive Einstellung der Führungskraft zur Veränderung als Moderator herangezogen wurde. Die kognitive Einstellung der Mitarbeiter zur Veränderung diente als der zentrale Mechanismus, um den Einfluss der instrumentellen Führung zu erklären. Das Modell wurde anhand einer Stichprobe von 125 Teams, die sich jeweils aus Führungskraft, mindestens zwei Mitarbeitern (insgesamt 375) und dem Vorgesetzten der Führungskraft zusammensetzten, überprüft. Die Ergebnisse zeigten, dass die instrumentelle Führung positiv auf den Team-Veränderungserfolg und die individuelle Veränderungsunterstützung vermittelt durch die kognitive Einstellung im Team wirkt. Die indirekten Effekte wurden durch die kognitive Einstellung der Führungskraft verstärkt. Die Studie unterstreicht damit die Bedeutung der instrumentellen Führung im Wandel und veranschaulicht den Einfluss der Einstellungen der Führungskraft zur Veränderung, welche bisher wenig Beachtung innerhalb empirischer Studien fand.

In Studie 3 wurde abschließend ein veränderungsorientiertes Training zur Entwicklung des instrumentellen und transformationalen Führungsverhaltens konzipiert und evaluiert. Die ersten beiden Studien konnten zeigen, dass die instrumentelle Führung eine theoretisch und empirisch sinnvolle Ergänzung des Full-Range of Leadership Modells im Wandel ist, sodass in Studie 3 der Praxistransfer im Fokus stand. Ziel war es daher, die Trainierbarkeit von instrumentellem sowie transformationalem Führungsverhalten innerhalb eines zweitägigen Trainings darzustellen. Zudem wurde ein nichtlinearer Entwicklungsverlauf des Führungsverhaltens ausgehend vom Vorwissen der Trainingsteilnehmer untersucht. Zur Evaluation des Trainings wurde ein Mehrebenen-Wachstumskurvenmodell berechnet, das die Nichtlinearität der Entwicklung berücksichtigt. Darüber hinaus wurde die Wirkung des Trainings innerhalb eines moderierten Meditationsmodells überprüft. Hierbei wurde getestet, ob Veränderungen im Führungsverhalten, die durch das Training verursacht wurden, zu Veränderungen in den Reaktionen der Mitarbeiter gegenüber Veränderungen führen. Insgesamt nahmen 59 Führungskräfte, die von 387 Mitarbeitern eingeschätzt wurden, am Training teil. Die Kontrollgruppe bestand aus 54 Führungskräften, die an keiner Trainingsmaßnahme teilnahmen und von 188 Mitarbeitern eingeschätzt wurden. Beide Gruppen wurden jeweils vor und drei Monate nach dem Training befragt. Die Ergebnisse zeigten erstens, dass sich drei Monate nach dem Training instrumentelles und transformationales Führungsverhalten bei den Trainingsteilnehmern entwickelt hat, während das Führungsverhalten in der Kontrollgruppe unverändert geblieben oder zurückgegangen ist. Zweitens konnte festgestellt werden, dass sich das transformationale Führungsverhalten auf der Grundlage des Vorwissens umgekehrt u-

förmig entwickelt. Das heißt, Teilnehmer mit durchschnittlich eingeschätztem transformationalen Führungsverhalten konnten sich am stärksten durch das Training entwickeln. Drittens wurde ersichtlich, dass die durch das Training verursachte positive Entwicklung des Führungsverhaltens zu einer Veränderung der veränderungsrelevanten Kriterien führte.

Die Dissertation erweitert somit die Führungsforschung um die Analyse der instrumentellen Führung als Teil des extended Full-Range of Leadership Modells im Kontext organisationaler Veränderungsprozesse. Innerhalb eines Rahmenmodells, das Führungsverhalten mit differenzierten Veränderungsreaktionen verknüpft, tragen die drei empirischen Studien zum tieferen Verständnis der Wirkmechanismen und -bedingungen des Führungsstils im Wandel bei. Durch die gleichzeitige Testung der Führungsstile, insbesondere der instrumentellen und transformationalen Führung, werden bisherige methodische Schwächen in der Literatur vermieden und eine realistischere Einschätzung der transformationalen Führung im Wandel ermöglicht. Zudem zeigt die Dissertation das Potential der bisher wenig beachteten instrumentellen Führung im Wandel auf und untermauert seine theoretische und empirische Bedeutung im Rahmen des extended Full-Range of Leadership Modells. Letztlich wurde durch die Entwicklung und Evaluation eines Führungskräfte Trainings in instrumenteller Führung einem bestehenden Bedarf an einem Trainingskonzept des Führungsstils nachgekommen und die Literatur zudem um die Berücksichtigung der Nichtlinearität bei der Führungskräfteentwicklung erweitert.

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## List of Abbreviations

$\alpha$	Cronbach's alpha
AIC	Akaike's information criterion
AN(C)OVA	analysis of (co)variance
$\beta$	beta-coefficient
BFI-K	short version Big Five Inventory
cf.	confer
CFA	confirmatory factor analysis
CFI	comparative fit index
CG	control group
CI	confidence interval
Coef.	coefficient
Consc.	conscientiousness
$\Delta$	delta
df	degrees of freedom
$d_{ppc}$	Cohen's d, effect size for pretest-posttest control group designs
e.g.	exempli gratia
et al.	et alii
EFA	exploratory factor analysis
EG	experimental group
F	statistic for significance of multivariate model
$\gamma$	gamma-coefficient
G-WTS	German Workplace Trust Survey
$\eta^2$	eta square, effect size for analysis of variance
ICC	intraclass correlation coefficient
i.e.	id est
IL	instrumental leadership
M	mean
MLR	maximum likelihood robust
N	sample size
Neuro.	neuroticism
ns	not significant
OCB	organizational citizenship behavior
Openn.	openness for experience

p	level of significance
p.	page
R <sup>2</sup>	squared multiple correlation coefficient
RM ANOVA	repeated measurement analysis of variance
RMSEA	root mean square error of approximation
RQ	research question
r <sub>wgj</sub>	index of interrater agreement
SD	standard deviation
SE	standard error
SfC	support for change
SRMR	root mean square residual
t	test statistic for student-t-distributed data
T1	first measurement point
T2	second measurement point
TLI	Transformational Leadership Inventory
TLI	Tucker-Lewis-Index
UTAUT	unified theory of acceptance and use of technology model
$\chi^2$	chi square coefficient
z	test statistic for standardized normal distributed data

## 1. Introduction

“Leading change is one of the most important and difficult leadership responsibilities.” (Yukl, 2006, p. 284).

The *importance* of the responsibility becomes evident through the fact that the successful implementation of change is a necessary factor for organizations to survive in a globalised, competitive and increasingly digital market. Researchers agree that organizations must change permanently if they are to remain competitive (Burke, 2017; Kotter, 2014). Organizational change should therefore not be reactive, as it was the case in the 1980s when interest in organizational change increased and organizations had to change fundamentally due to structural changes in the market (Yukl, 2010). The strategic foresight and proactive exploitation of opportunities arising from market developments must be recognized and implemented well in advance in order to secure a position in the market (Kotter, 2014). The developments in individual sectors illustrate the significance of current changes. For example, the automotive industry is on the verge of a radical change to convert its existing products to electro mobility. As a result, manufacturers and suppliers are facing a significant strategic upheaval and are under pressure to keep pace with American competitors who recognized the opportunity of electric mobility at an early stage (Bormann et al., 2018).

Leadership must therefore be strategically superior and be able to correctly assess opportunities and risks. Although there is broad research interest in organizational change and leadership, there is little consensus in empirical research on this issue due to the fragmentation of research (Oreg & Berson, 2019). On the one hand, organizational change is investigated in different academic fields, such as leadership, strategy, organizational behavior, and psychology (Oreg, Michel, & By, 2013) and on the other hand it is analysed at different levels (Jacobs, van Witteloostuijn, & Christe-Zeyse, 2013). Management-oriented studies usually deal with organizational change at the macro level and focus on the strategic implementation of change by top management (Oreg et al., 2013). Organizational behavior research focuses on the micro level in order to take into account the insight that the reactions of employees as change recipients are of central importance for the success of change (Armenakis & Harris, 2009; Fugate, Prussia, & Kinicki, 2012; Oreg, Vakola, & Armenakis, 2011). This point shows the *difficulty* of successfully leading change processes.

It is known from research that the reactions of employees are decisive for the success or failure of organisational changes, as they have to implement the change operationally and to adapt to the changed conditions (Armenakis & Harris, 2009; Ghitulescu, 2013; Oreg et al., 2011). Accordingly, the support of change among employees is a central construct for predicting the success of change (Herscovitch & Meyer, 2002; Meyer & Hamilton, 2013). The extent to which change is accepted and supported by employees, however, depends on the behavior of leaders (Armenakis & Harris, 2009). Nevertheless, the difficulty of implementing change in organisations becomes clear when one looks at the numbers of failed change initiatives. For years it has been estimated that about two thirds of all change initiatives fail because they do not lead to the desired result (Beer & Nohria, 2000; Burke, 2017; Meaney & Pung, 2008). A recent survey of 368 managers and employees from various German companies came to a similar conclusion, with only 23 % of the changes rated as successful (Schmidt & Sackmann, 2018).

Hence, there is still a great need for optimization in the implementation of change processes and, consequently, in leading through change processes. However, research results to date leave many questions about effective leadership to promote employees' reactions to change unanswered. Accordingly, Ford and Ford (2012) summarized in their review about leading changes that while it is known that leadership behavior promotes employees' reactions, it is not known which leadership behavior exactly influences employees' reactions to change and how. A recent review (Oreg & Berson, 2019) on the topic of leading changes with the aim of consolidating the fragmented research lines illustrates the relevance of this approach. The review showed that the effects of strategic decisions have not yet been examined at the individual level. It therefore remains to be seen how such relevant strategic leadership behavior will affect the reactions of employees towards change. Leadership research at the individual level, on the other hand, concentrated among others on the concept of transformational leadership behavior, which so far has proven to be a suitable leadership style for positively influencing employees' reactions (Herold, Fedor, Caldwell, & Liu, 2008; Nemanich & Keller, 2007; Seo et al., 2012; Shin, Taylor, & Seo, 2012). Oreg and Berson (2019) concluded that visionary, supportive and participative leadership behavior is particularly important in change.

However, researchers from various disciplines emphasize the relevance of strategic leadership in times of exponentially increasing change, in order to recognize opportunities at an early stage and to be able to use given opportunities (Antonakis and House, 2014; Burke, 2017; Kotter, 2014; Rowold, 2014). Such strategic leadership behaviors have been largely neglected in leadership research. The currently most examined leadership model (Lord, Day,

Zaccaro, Avolio, & Eagly, 2017; Zhu, Song, Zhu, & Johnson, 2019), which includes also transformational leadership, the full-range of leadership model (Avolio & Bass, 1991), has been criticized that it does not cover relevant leadership behaviors like strategic and task-oriented behaviors (Yukl, 1999; 2008). Therefore, Antonakis and House (2002; 2004) supplemented the theory with strategic and task-oriented behaviors to the extended full-range of leadership model and introduced the concept of instrumental leadership.

Instrumental leadership thus encompasses the leadership behavior required in change, and it bears therefore a great potential to understand how this strategically oriented leadership behavior affects the reactions of employees in times of change. This dissertation addresses the hitherto little investigated leadership construct of instrumental leadership as part of the extended full-range of leadership model in its effects on differentiated reactions of employees towards change. Consequently, due to the importance and difficulty of leading employees through change, a change-oriented training in instrumental and transformational leadership will be developed to support leaders in this challenge. The investigation of instrumental leadership and its effects on employees' change reactions makes it possible to link the research lines of strategy-oriented and organizational behavior research and thus bridge the micro- and macro-perspectives of organizational change more closely.

## **1.1 Goals of the Dissertation and Research Questions**

The fundamental goal of the dissertation is to explore the potential of instrumental leadership as an extension of the full-range of leadership model (Antonakis & House, 2014) to foster employees' positive reactions towards organizational change. Therefore, I aim to analyze whether instrumental leadership is a theoretically and empirically meaningful addition to the full-range of leadership behaviors, also in times of change, by investigating interdependencies among the leadership behaviors of the model and their change-related consequences. In addition, I would like to investigate in more detail how and under which conditions instrumental leadership promotes the change reactions of employees in order to finally test whether instrumental and transformational leadership behaviors can be improved through a change-oriented training intervention. For these reasons, I have conducted three empirical, multi-modal studies to answer five research questions, which will be explained in the following.

Investigating the potential of instrumental leadership in change is of interest mainly from two different perspectives: Strategic change management research and leadership or organizational behavior research. From the point of view of change researchers, leadership

behavior is an important adjusting screw for driving and implementing organizational change (Burke, 2017; Kotter, 2014; Oreg et al., 2011). Failure rates of change initiatives around 70% illustrate the fact that there is still great potential for optimizing the implementation of change (Beer & Nohria, 2000; Meaney & Pung, 2008). Kotter (2008) sees a lack of a strategy for implementation as one of the main reasons for failure, indicating that strategic leadership still holds potential for optimization in the implementation of changes. Up to now, however, strategic leadership has mostly been regarded and examined as a leadership style of the top management (Oreg & Berson, 2019; Simsek, Jansen, Minichilli, & Escriba-Esteve, 2015). So far, the focus has been on the macro level, i.e. how strategic decisions at company level influence the performance of the organization. The team or individual level (micro level), and questions on how strategic decisions can improve the situation of the team or how strategic explanations help employees to understand the change have so far been given very little consideration. A current review (Oreg & Berson, 2019) could not identify empirical research connecting strategic decisions and employees' reactions to change.

From the perspective of leadership research, the leadership behaviors that characterize instrumental leadership, namely strategic and task-oriented leadership, were for some time out of the focus of leadership research (Judge, Piccolo, & Ilies, 2004). Antonakis and House (2002; 2004) reemphasized them in their significance through the integration of instrumental leadership into the full-range of leadership model. To date, the full-range of leadership model has been criticized as incomplete, since instrumental leadership behaviors that contribute to the variance elucidation of organizational criteria were disregarded, although the claim of the theory was to map the complete range of leadership behavior (Yukl, 1999; 2008). In addition to the theoretical approach of extending the theory, this also serves the methodological purpose of avoiding an overestimation of the individual effects of the full-range factors, which can occur if relevant variables are not considered - bias of omitted variables (Antonakis, Bendahan, Jacquart, & Lalive, 2014a). So far, there are only individual studies that have examined the complete extended full-range of leadership model and none of them has examined change outcomes. Therefore, by bringing together the two perspectives of change management and leadership research, the first goal of this dissertation is to examine whether instrumental leadership can contribute to the clarification of change reactions, taking into account the other full-range factors. This leads to the following research question in Study 1 of the dissertation:

*Research question 1: Can instrumental leadership make an additional contribution to the other full-range of leadership factors for predicting the change reactions of employees?*

The second research question of the dissertation deals with the interdependencies among the leadership styles of the extended full-range of leadership model. The focus lies on the interaction between transformational and instrumental leadership, since transformational leadership is considered effective in the context of change (Bass & Riggio, 2006), which has already been empirically confirmed (Bommer, Rich, & Rubin, 2005; Nohe & Michaelis, 2016; Nohe, Michaelis, Menges, Zhang, & Sonntag, 2013; Seo et al., 2012). Based on the theoretical assumptions of Antonakis and House (2004; 2014), it can be assumed that instrumental leadership promotes the effectiveness of transformational leadership by making abstract behaviors of transformational leadership more tangible and realizable for employees through pragmatic behaviors of instrumental leadership. Furthermore, against the background of the omitted variable bias, the question arises as to whether the previously identified effects of transformational leadership regarding change outcomes may have led to an overestimation because instrumental leadership was not taken into account. The second research question therefore serves the purpose of investigating the interactions of leadership behaviors within the model:

*Research question 2: How do the leadership styles of the extended full-range of leadership model, in particular transformational and instrumental leadership, interact in their effect on the change reactions of employees?*

The third research question is intended to examine the effect of instrumental leadership in change more closely. Study 2 will clarify how and under which conditions instrumental leadership can promote successful change. The employees' affective change commitment is used as a mediating element, since it is regarded as the link between leadership behavior and successful change (Herold et al., 2008; Meyer & Hamilton, 2013). The central question here is whether the instrumental leader can convince employees of the benefits of the change through strategic guidance and explanations and support them in the task-related implementation of the change. It is also important to consider the leader's own attitude towards change and whether his or her own affective change commitment contributes to a change-promoting behavior, which has a credible and convincing effect on employees.

In addition, the different influencing processes of instrumental leadership on the performance of employees should be considered. Antonakis and House (2002; 2004) argue that instrumental leadership indirectly affects employee performance through strategic leadership,

while task-oriented leadership has a direct effect on performance. In order to be able to map these two influences, change-relevant success criteria are examined at individual level and at team level, assessed by the leader's superior. The consideration of the analysis levels makes it possible to examine the indirect and direct effect of instrumental leadership and thus also of strategic leadership more closely and gives a deeper understanding of the effect of the leadership style on the micro level. Research question 3 serves therefore to examine instrumental leadership for team change success and individual change support.

*Research question 3: How and under which conditions does instrumental leadership affect employees' change reactions at the individual and team level?*

In relation to the high practical relevance of successfully implementing change processes in organizations, the fourth research question deals with the trainability of instrumental and transformational leadership within the framework of change-oriented training. Based on the results of the first and second study, I assume that a leadership training in instrumental and transformational leadership supports leaders to lead employees more successfully through change. Thus, the fourth research question is of particular practical relevance and aims at investigating whether leadership training can promote these two leader behaviors. Experimental studies could show that transformational leadership, as a behavior-based concept, increased in the perception of followers after a training intervention (Abrell, Rowold, Weibler, & Moenninghoff, 2011; Barling, Weber, & Kelloway, 1996; Dvir, Eden, Avolio, & Shamir, 2002; Kelloway, Barling, & Helleur, 2000). On this basis, I assume that instrumental leadership can also be developed as a behavior-based concept through a change-oriented training intervention. In this way, I follow the call of previous studies which have already expressed the need for a training concept and evaluation of instrumental leadership (Antonakis & House, 2014; Rowold, 2014; Rowold, Diebig, & Heinitz, 2017).

In order to evaluate the training intervention, change-oriented outcomes are used and it is examined whether the changes in leadership behavior lead to alterations in the change reactions of the employees. The postulated indirect connections between instrumental as well as transformational leadership and the change reactions from the third research question are replicated in an experimental design. This results in the fourth research question:



*Research question 4: Can instrumental and transformational leadership behavior be developed through a change-oriented leader training intervention and do these developments cause changes in the change reactions of the employees?*

The fifth and final research question deals with the course of the development of transformational and instrumental leadership behavior. Training evaluation studies are generally based on linear developmental processes of leadership behavior. Current meta-analyses also confirm the effectiveness of leadership trainings (Lacerenza, Reyes, Marlow, Joseph, & Salas, 2017), but large differences can be observed between the measured effect sizes. In addition, one training study on transformational leadership showed a decreasing effect among training participants in their development of transformational behavior (Mason, Griffin, & Parker, 2014). I therefore doubt the linear course of development and question whether a nonlinear course of leadership development (Boyatzis, 2008), based on the status quo of leadership behavior, is possible according to the declining effects along the learning curve.

Consequently, I assume that leaders who have demonstrated an average level of transformational and instrumental leadership prior to training can improve most through training based on a solid knowledge base. Accordingly, they develop more strongly than low developed leaders with rudimentary prior knowledge or highly developed leaders, who were already on a shallow or decreasing section of the learning curve (Hirst, Mann, Bain, Pirola-Merlo, & Richver, 2004).

*Research question 5: Do leaders develop nonlinearly in their instrumental and transformational leadership behavior?*

In order to investigate the research questions raised, three multimodal studies were developed which examine whether, how and under which conditions instrumental leadership, within the framework of the extended full-range of leadership model, influences the reactions of employees to change and how instrumental leadership can be developed.

The first study serves to answer research questions 1 and 2 and therefore investigates how instrumental leadership interacts with transformational leadership under control of the other full-range of leadership factors to predict employees' change support. For this purpose, a

field study with a convenience sample at two measurement points and an experimental vignette study on the manipulation of instrumental and transformational leadership within the framework of a fictitious change scenario were carried out. By combining the two studies, the methodological weaknesses were to be compensated by each other (internal vs. external validity) in order to be able to achieve meaningful results regarding the effectiveness of instrumental leadership in change. The second study focuses on the processes and conditions of instrumental leadership and thus addresses the third research question. In order to be able to map the effects of leadership behavior at different levels, data was collected from 125 teams with three different assessment sources. This made it possible to predict both individual change support and team change success. Based on the results of the previous two studies, in particular the first study, a change-oriented leadership training to promote instrumental and transformational leadership was designed and evaluated in the third study. The third study thus serves to answer the fourth and fifth research question. A total of 59 leaders, assessed by 387 followers, participated in the two-day training intervention. The control group comprised 54 leaders who were assessed by 188 followers.

The three studies represent a comprehensive investigation of instrumental leadership within the framework of the extended full-range of leadership model in the context of organizational change. The studies provide insights into the moderating and mediating processes as well as the effectiveness and the development of instrumental leadership in the change context.

## **1.2 Outline of the Dissertation**

This dissertation is divided into six main chapters, which are presented in Table 1. The first chapter provides an introduction into the topic and structure of the dissertation. It includes the introduction, the goals as well as the research questions and presents the outline of the dissertation. Chapter 2 presents the theoretical background to the research questions posed and summarizes the current state of research on the individual research constructs. The focus here lies on instrumental leadership behavior, which is characterized within the extended full-range of leadership model alongside transformational, transactional and laissez-faire leadership. Furthermore, the change reactions of employees are described and the influence of leadership is explained. At the end of the second chapter, the underlying research model of the dissertation is presented and interrelationships between variables and linkages among the three studies are illustrated. Chapters 3 to 5 present the three empirical studies that provide answers to the previously formulated research questions. Each study is structured as follows: first an

introduction, then a description of the theory, followed by a presentation of the method including data collection and evaluation, afterwards a presentation of the results, which are finally subject of the discussion.

The last chapter, Chapter 6, presents the general discussion of the dissertation and summarizes the core results of the three studies. The results are embedded in the previous theory and contributions to research are highlighted. In addition, the limitations of the studies are pointed out and implications for future research are derived. Finally, practical implications are extracted from the results and Chapter 6 ends with a conclusion of the dissertation.

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<b>Chapter</b>	<b>Content</b>
<b>1</b>	Introduction, research questions, goals, and outline of the dissertation
<b>2</b>	Theoretical background
<b>3</b>	Study 1: <i>How transformational and instrumental leadership relate to employees' change reactions: A two-study investigation on interactional effects</i>
<b>4</b>	Study 2: <i>Multilevel investigation on the effect of instrumental leadership on team change success and individual change support</i>
<b>5</b>	Study 3: <i>Developing like U: Considering the nonlinearity in the evaluation of a change-oriented training in instrumental and transformational leadership</i>
<b>6</b>	Overall discussion, summarization, contribution, limitations, and implications

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*Table 1.* Overview of the chapter structure.

## 2. Theoretical Background

Leadership is one of the most studied phenomena in social research and is generally regarded as vital for the functioning of organizations and societies (Antonakis & Day, 2017). Due to the broad research interest, there are many different definitions of leadership in literature. Yukl (2010) summarizes the underlying core assumption of definitions by describing leadership as a process in which one person intends to influence another in order to lead, structure and promote activities and relationships in a group or organization. Leadership thus influences the link between individual effectiveness and organizational performance (Yukl, 2010).

Leadership research began as early as the 1930s and gradually evolved from trait theories through behavioral approaches in the 1950s towards situational and contingency approaches in the 1970s to neo-charismatic or new leadership theories (Bass, 1985; Conger & Kanungo, 1987; Sashkin, 1988). New leadership theories (Bryman, 1992) have been increasingly explored since the 1980s, when the research interest shifted to emotional and inspirational effects of the leader on followers (Antonakis & Day, 2017). The main focus here was to explain how managers can persuade employees to put their own interests behind those of the organization. From this research direction, Bass's (1985) theory of transformational and transactional leadership was developed representing the precursor of the full-range of leadership model (Bass & Avolio, 1997; 1994), which is today one of the most frequently investigated leadership models (Lord et al., 2017; Zhu et al., 2019). At approximately the same time during the 1980s, the interest in how changes can be implemented in organizations increased as companies were forced to find new ways of leadership to handle change triggered by economic recession and increasing competition from East Asia (Yukl, 2006). The new leadership theories have therefore also emerged against the background of how to adapt to changes in organizational environments (Yukl, 2010). Hence, Bass (1985) describes transformational leaders as agents of change who transform the attitudes of employees, which was originally intended to motivate employees to change.

Due to persistent criticism of the full-range of leadership model, that it did not reflect the complete range of leadership behavior as intended (Yukl, 1999; 2008), the model was expanded to the extended full-range of leadership model and supplemented by instrumental leadership (Antonakis & House, 2002; 2004). In the following, the extended full-range of leadership model will be presented and one focal point will be on transformational and instrumental leadership, as they are of particular interest in connection with leadership in change. Afterwards, leadership research will be brought together with change research and the

focus will be on the reactions of employees to change. Subsequently, it will be presented how leadership behavior influences employees' change reactions. Finally, the research questions are transformed into a comprehensive research model based on the research constructs presented in the following.

## **2.1 The Extended Full-Range of Leadership Behaviors**

The full-range of leadership model (Bass & Avolio, 1997; 1994) comprises the three broad leadership behaviors laissez-faire, transactional and transformational leadership, and is considered one of the most influential and studied leadership models in the last three decades (Antonakis, Bastardo, Liu, & Schriesheim, 2014b; Lord et al., 2017; Zhu et al., 2019). The conceptualization of the model consists of nine independent factors, five of which measure transformational leadership, three transactional leadership and one laissez-faire leadership (Avolio & Bass, 1991). Criticism of the factor structure and high intercorrelations of the transformational factors (Yukl, 1999) led to the adaptation of conceptualization (Heinitz & Rowold, 2007; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). The adapted version conceptualizes transformational leadership with six factors and transactional leadership with only one factor, contingent reward, and is proved as a valid conceptualization (Krüger, Rowold, Borgmann, Staufienbiel, & Heinitz, 2011).

The behaviors of the full-range of leadership model differ in the activity of the leader and can be arranged on the basis of a continuum from very effective to ineffective leadership (Antonakis & House, 2002). It can be assumed that the more active the leader is, the more effective is the leadership. Laissez-faire leadership can be classified as the most passive leadership behavior, since it represents the absence of leadership. Transactional leadership behavior in the sense of contingent reward can be regarded as an active form of leadership behavior in which goals are set and task accomplishment is controlled. Transformational leadership is a highly active form of leadership in which employees are inspired and motivated to change their attitudes and values and to perform at a higher level (Bass, 1985). Empirical findings confirm this classification of leadership styles and identify transformational leadership to be the most effective form of leadership, while transactional leadership is less effective and laissez-faire leadership can be classified as ineffective (Judge & Piccolo, 2004; Wang, Oh, Courtright, & Colbert, 2011).

However, the full-range of leadership model was criticized for not reflecting the full range of relevant leadership behaviors, in particular for lacking initiating structure behaviors

and strategic leadership (Antonakis & House, 2002; Yukl, 1999; 2008). In order to compensate for this weakness, Antonakis and House (2002; 2004) expanded the existing model into an extended full-range of leadership model and added the missing behaviors by introducing instrumental leadership. Instrumental leadership is considered being a highly active leadership behavior and can be classified as an effective leadership style (Antonakis & House, 2014; Rowold, 2014).

In order to investigate the potential of instrumental leadership in change, I examine the leadership style in the first study in the light of all full-range factors. Due to their subordinate role in change, laissez-faire and transactional leadership serve exclusively as control variables and are only briefly outlined theoretically at this point.

Laissez-faire leadership represents a passive form of leadership and is understood as the absence of leadership or non-leadership (Judge & Piccolo, 2004). The laissez-faire leader avoids making decisions and does not assume leadership responsibility (Bass, 1990). This passive leadership behavior correlates negatively with the active leadership behaviors of the extended full-range of leadership model and negatively influences organizational criteria (Skogstad, Hetland, Glasø, & Einarsen, 2014). It thus leads to a reduction in employees' productivity and a decrease in job satisfaction and satisfaction with management (Judge & Piccolo, 2004).

Transactional leadership describes an active form of leadership in the sense of contingent reward and is based on a clearly defined exchange between the employee's performance and the executive's reward (Bass, 1999). The exchange is to be understood as a quid pro quo process (Antonakis & House, 2013) and can be economic or emotional in nature (Bass, 1985). The aim is to clarify role requirements and reward the desired results. This form of leadership promotes employees' motivation, but only up to a certain point as required. Transactional leadership thus increases employees' performance (Wang et al., 2011), job satisfaction (Judge & Piccolo, 2004) and organizational commitment (Jackson, Meyer, & Wang, 2013). In contrast to transformational leadership, transactional leadership is characterized as task-oriented and primarily satisfies basic employees' needs (Bass & Avolio, 1997), but it does not influence employees' attitudes (Yukl, 2010). The motivation of the employees is therefore exclusively extrinsic and results from the expected performance reward. Hence, the influence of transactional leadership is limited to employees' behavior that meets expectations. In the context of organizational change, transactional leadership thus only leads to the required support, i.e. employees behave in accordance with the change and do not support

it beyond that. Studies on the impact of transactional leadership in change therefore show no significant direct influence (Kool & van Dierendonck, 2012) or even a negative influence (Conway & Monks, 2008) on the affective change commitment of employees. In addition, there was a negative influence of transactional leadership on innovation behavior (Pieterse, van Knippenberg, Schippers, & Stam, 2010) and employees' change appraisal (Holten & Brenner, 2015).

### **2.1.1 Transformational Leadership**

According to Bass (1985), transformational leadership essentially consists of transforming the attitudes and values of employees to change their self-interests for the benefit of the organization or group. It makes employees aware of the importance of their work by contributing to the overall result and activates their growth needs (Yukl, 2010). In this way, transformational leadership manages to motivate employees intrinsically and to increase their self-value. As a result, employees are more confident than they thought and perform better than expected (Bass, 1985). In contrast to transactional leadership, transformational leadership leads beyond conformal behavior to enthusiasm and commitment (Yukl, 2010).

Bass (1985) originally described transformational leadership on the basis of three central behaviors and a fourth was added later after a revision of conceptualization (Bass, 1990). These four behaviors are: *idealized influence*, *intellectual stimulation*, *individualized consideration*, and *inspirational motivation*. Idealized influence is an exemplary behavior of the executive that generates strong emotions and identification with the executive. Intellectual stimulation means a behavior that draws employees' attention to the scrutiny and encourages them to look at themselves from a new perspective. Individualized consideration stands for the emotional support and encouragement of employees and their personal development. The final behavior, inspirational motivation, involves demonstrating an attractive vision and using symbols to present desired behavior to employees.

Due to criticism of the four-dimensional conceptualization, the concept of transformational leadership was further differentiated and divided into six dimensions by Podsakoff and colleagues (Podsakoff et al., 1990; Podsakoff, MacKenzie, & Bommer, 1996). This six-dimensional conceptualization is used in this dissertation as the basic definition of transformational leadership. According to Podsakoff et al. (1990), the following six behaviors characterize transformational leadership: *articulating a vision*, *providing an appropriate role model*, *individualized support*, *fostering the acceptance of group goals*, *intellectual stimulation*,

and *high performance expectations* (Podsakoff et al., 1990; Podsakoff et al., 1996). Identifying and articulating a vision describes the behavior of a leader to find new approaches for a working group or organization, to develop new ideas and possibilities from them and to present them in an appealing vision of the future. The leader tries to inspire the employees for this vision of the future by building it on shared values of all team members. Providing an appropriate role model stands for the fact that the manager acts in an exemplary manner and that his or her behavior corresponds to the values for which he or she stands. Fostering the acceptance of group goals means a leadership behavior in which the leader strives to support employees in their collaboration and to motivate them to align their work with a common goal. High performance expectations mean that the leader expresses with his or her behavior that he or she has high demands and high expectations with regard to the quality and performance of the employees. At the same time, this behavior expresses confidence that the employees will be able to achieve this high level of performance. Providing individualized support means that the leader respects his or her employees and their personal feelings and considers their needs at work. Intellectual stimulation is a challenging leadership behavior that encourages employees to question previous assumptions and procedures and to develop new approaches to solving problems.

Due to the abundance of studies conducted on transformational leadership, results on different subjective and objective outcomes are available, which were investigated in experimental (Barling et al., 1996; Dvir et al., 2002; Kirkpatrick & Locke, 1996) or correlative studies. In summary, it can be meta-analytically supported that transformational leadership positively influences the engagement of employees (Jackson et al., 2013), as well as their job satisfaction, leadership satisfaction, motivation (Judge & Piccolo, 2004) and performance (Wang et al., 2011). The results also show that transformational leadership is the most effective leadership style and that the augmentation hypothesis posed by Bass (1985), which assumes that transformational leadership exceeds the effect of transactional leadership, can be confirmed (Wang et al., 2011).

It is assumed that transformational leadership is more effective in dynamic and unstable contexts due to its conception of transformation (Bass, 1985). In literature, transformational leadership behavior is therefore described and categorized as change-oriented (Bass & Riggio, 2006; Eisenbach, Watson, & Pillai, 1999; Yukl, Gordon, & Taber, 2002). Empirical evidence showed that transformational leadership led to greater acceptance of a fusion (Nemanich & Keller, 2007), while openness to change (Groves, 2005) and commitment to change



increased (Abrell-Vogel & Rowold, 2014; Herold et al., 2008; Nohe et al., 2013; Seo et al., 2012; Shin et al., 2012) and the cynicism towards change decreased (Wu, Neubert, & Yi, 2007).

### **2.1.2 Instrumental Leadership**

Instrumental leadership is based on leaders' expertise (Antonakis & Atwater, 2002) to ensure the strategic functioning and to facilitate the fulfillment of employees' tasks. It is defined as "the application of leading expert knowledge to monitor the environment and performance and to implement strategic and tactical solutions" (Antonakis & House, 2014, p. 749). The construct was introduced into the full-range of leadership model by Antonakis and House (2002; 2004) after criticism that the theory did not reflect the full spectrum of leadership behavior as intended (Yukl, 1999).

Antonakis and House (2002; 2004) then contrasted the nine factors of the existing model with three other neo-charismatic leadership theories (Conger & Kanungo, 1987; Sashkin, 1988; Shamir, House, & Arthur, 1993) and found that the model lacked environmental consideration and adaptation, strategic leadership, and task-oriented behaviors. Subsequently, they conceived instrumental leadership with two focal points, *strategic leadership* and *follower-work facilitation*. In developing strategic leadership, Antonakis and House (2002) took up the aspect of environmental consideration from the concepts of charismatic leadership (Conger & Kanungo, 1987; Shamir et al., 1993), while strategic leadership stems from the theoretical framework of visionary leadership (Sashkin, 1988). House's path-goal theory of leadership (House, 1971) and the construct initiating structure (Fleishman, 1953), which was originated from research on behavioral leadership approaches, served as the theoretical basis for the development of follower-work facilitation. Theoretical parallels exist between instrumental leadership and the functional leadership approach (Morgeson, DeRue, & Karam, 2010) as well as pragmatic leadership (Mumford, 2006).

According to Antonakis and House (2002; 2004; 2014), instrumental leadership is characterized by four behaviors, and each focal point consists of two behavioral facets. The focal point strategic leadership focuses on leadership behaviors, which indirectly influence corporate performance through decisions and actions taken by the leader. It is divided into the facets of *environmental monitoring*, which stands for monitoring the internal and external environment and gathering information on potential opportunities and risks, and the facet of *strategy formulation*. Strategy formulation means that the leader uses the information gained from environmental monitoring to develop goals for the mission implementation of the team.

The follower-work facilitation part is designed to directly improve employees' performance through the leader's expertise and practical support (Rowold, 2014). This dimension includes the facet of *path-goal facilitation*, where the leader supports the employee by providing the necessary resources and removing obstacles to ensure the fulfillment of tasks, and the facet *outcome monitoring*. The fourth facet outcome monitoring means that the leader gives constructive feedback during the work process and helps employees learning from their mistakes.

Antonakis and House (2014) emphasize that instrumental leadership is to be distinguished from transformational leadership because it is not idealistic or inspiring, and from transactional leadership because it is not conditional.

Based on the conceptualization of Antonakis and House (2002; 2004), there are currently six studies that have investigated instrumental leadership. There are two validation studies conducted by Antonakis and House (2014) and Rowold (2014) that have proven instrumental leadership to be a valid leadership construct. Antonakis and House (2014) were able to show that instrumental leadership predicted the leadership effectiveness beyond transformational leadership and employees' job satisfaction as strongly as transformational leadership. In addition, Rowold (2014) found a positive connection to objective performance and to job satisfaction and affective organizational commitment. Furthermore, a study by Rowold et al. (2017) showed that instrumental leadership has a stress-reducing effect, by quantifying stress with a subjective and objective (hair cortisol) measure. Antonakis et al. (2017) investigated instrumental leadership as a form of prototypically effective leadership to test how the intelligence of the leader can predict perceived leadership behavior. It was shown that instrumental leadership represents a prototypically effective leadership behavior and was positively predicted by intelligence. The relation between intelligence and instrumental leadership (strategy formulation and path-goal facilitation) indicated a curvilinear course. McKee, Lee, Atwater, and Antonakis (2018) used instrumental leadership to investigate how gender and personality traits influence self-other agreement in the perception of leadership behavior. A current study by Chammas and Hernandez (2019) compared instrumental and transformational leadership in their influence on the subjective performance of employees and objective organizational performance in startups. It was found that both leadership styles only have a positive impact on performance measures when examined separately. When both leadership styles were tested simultaneously, only a positive influence of transformational leadership on the performance measures was found.

The results show that instrumental leadership is an effective leadership style that, in some cases, even exceeds the effects of transformational leadership. Antonakis and House (2014) emphasize that the effects of the other full-range of leadership factors, especially transformational leadership, would be overestimated due to an omitted variable bias, if instrumental leadership was not considered. Instrumental leadership thus theoretically and methodologically represents a meaningful extension of the full-range of leadership model (Antonakis & House, 2014; Bormann & Rowold, 2018; Rowold, 2014). Additionally, Antonakis and House (2004) assumed that instrumental leadership can facilitate the effect of transformational leadership. Since charismatic behavior such as recognizing deficits in the status quo and demonstrating a positive vision of the future, is only possible through strategic abilities. Strategic abilities allows recognizing these deficits also in the external environment, to use them, and to translate them into clear goals.

Especially the strategic behaviors of instrumental leadership, such as recognizing opportunities in the external environment, deriving strategic benefits from these opportunities and supporting employees in implementing the opportunities, are described by change researchers as relevant behaviors in the context of change (Burke, 2017; Kotter, 2014). Antonakis and House (2014) and Rowold (2014) also point out that in a time characterized by a rapidly changing environment, instrumental leadership represents an elementary leadership behavior in order to recognize and realize opportunities. Instrumental leadership therefore seems to be necessary in order to identify and implement changes in organizations. So far, however, this connection has not been empirically investigated, so that it is not yet known whether and how instrumental leadership behavior works in the context of change.

## **2.2 Leadership and Organizational Change**

This section addresses the relationship between leadership behavior and organizational change. In change literature exists consensus about the relevance of the attitudinal and behavioral reactions of employees for the successful implementation of a change (Fugate & Soenen, 2018; Oreg et al., 2011; Shin et al., 2012) and the influence of leadership regarding this issue (Herold et al., 2008; Oreg & Berson, 2019).

When investigating leadership behavior in the context of organizational change, the focus is shifted to the employee level, the micro-level, in order to find out how their reactions to planned changes can be improved through instrumental leadership behavior. In this dissertation, the term organizational change is thus applied to a broad concept of change as it is

frequently used in the investigation of psychological processes in change (Oreg, Michel, & By, 2013; Venus, Stam, & van Knippenberg, 2019). Consequently, the term *change* refers to all changes that have "... the potential to influence the organization's stakeholders' physical or psychological experience" (Oreg et al., 2013, p. 4). These can range from small changes, such as adjustments to individual processes or the introduction of new programs, to new corporate strategies or mergers and acquisitions.

### **2.2.1 Change Recipients' Reactions to Organizational Change**

Organizational change was first frequently examined at the organizational level, where organizational processes, context conditions and top management leadership were taken into account (Armenakis & Bedeian, 1999). In recent years, the reactions of employees have increasingly been examined, as the literature has shown a consensus that employees play a key role in implementing change and that their reactions are decisive for whether a change is successfully implemented or not (Armenakis, Harris, & Mossholder, 1993; Oreg et al., 2011). Subsequently, numerous reactions from change recipients were examined, which Oreg et al. (2011) summarized in a review and categorized in their model of change recipients' reactions to organizational change. In their review, the authors examined 79 studies, distinguishing between antecedents, explicit reactions and change consequences. They categorized the change reactions into affective, cognitive and behavioral reactions based on the classification of Piderit (2000). Affective reactions are defined as feelings of employees about and during a change, such as stress (Bordia, Hobman, Jones, Gallois, & Callan, 2003) or pleasure (Bartunek, Rousseau, Rudolph, & DePalma, 2006). In a current circumplex model on the affective responses of change recipients to change, Oreg et al. (2018) also distinguish between valence (positive - negative) and activation (high - low). Cognitive reactions describe what employees think about change and include change belief or evaluation, openness to change (Wanberg & Banas, 2000) and affective change commitment (Conway & Monks, 2008; Cunningham, 2006; Herscovitch & Meyer, 2002; Michaelis, Stegmaier, & Sonntag, 2009; Seo et al., 2012; Shin, Seo, Shapiro, & Taylor, 2015). Oreg et al. (2011) also point out that reactions are incorrectly described in literature as affective, like affective change commitment, but actually measure a belief and conviction of change and are thus cognitive. Therefore, in this dissertation, affective change commitment is understood to follow the model as a cognitive reaction to change. Under behavioral reactions, Oreg et al. (2011) summarize the behavioral intentions of employees in response to change. These include coping behavior (Cunningham, 2006; Judge et al, 1999), change readiness (Armenakis et al., 1993), intention to resist the change (Shapiro & Kirkman,

1999), and employee support for change (Herold, Fedor, & Caldwell, 2007; Herscovitch & Meyer, 2002; Seo et al., 2012; Shin et al., 2012; Shin et al., 2015; Venus et al., 2019).

In this dissertation, the focus is on the cognitive and behavioral reactions to examine the effects of instrumental leadership. Reasons for this are on the one hand, that affective change commitment as a cognitive reaction represents a link between leadership and change (Meyer & Hamilton, 2013). Accordingly, it is strongly influenced by leadership behavior (Herold et al., 2008). On the other hand, the behavioral reactions to change are proximal predictors for the success of the change and therefore suitable to explore the effective function of leadership in the change context. Additionally, affective change commitment turned out to be a decisive predictor of the strongest form of change support, namely championing support (Herscovitch & Meyer, 2002; Meyer, Srinivas, Lal, & Topolnytsky, 2007; Seo et al., 2012; Shin et al., 2015). The close relation between affective change commitment and change support could be meta-analytically supported based on the theory of planned behavior (Ajzen, 1991; Bouckenooghe, Schwarz, & Minbashian, 2015). The relation between the two reactions thus represents a stable foundation to analyze differentiated effects of a relatively new leadership behavior, which has not been examined in the change context yet.

Affective change commitment is one component of the three-dimensional construct change commitment, which is generally defined "... as a force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative" (Herscovitch & Meyer, 2002, p. 475). Herscovitch and Meyer (2002) conceptualized change commitment based on the general three-dimensional commitment model (Meyer & Herscovitch, 2001), which is in line with the conceptualization of organizational commitment according to Allen and Meyer (1990). Accordingly, Herscovitch and Meyer (2002) distinguish between an affective, normative and continuance component in change commitment. The affective change commitment is characterized by a "... mind-set that binds an individual to a course of action ..." reflecting "... a desire to provide support for the change based on a belief in its inherent benefits " (Herscovitch & Meyer, 2002, p. 475). The cognitive core element of affective change commitment thus represents the belief in the benefits of change. It arises, according to Jaros (2010), from the perception of a momentary discrepancy between the company's situation and its aspired goals after the successful implementation of the change.

Studies have shown that affective change commitment, in addition to promoting change support (Herscovitch & Meyer, 2002; Meyer et al., 2007; Michaelis, Stegmaier, & Sonntag, 2010; Seo et al., 2012; Shin et al., 2012; Shin et al., 2015; Sonenshein & Dholakia, 2012), is

positively related to job satisfaction (Rafferty & Restubog, 2010) and negatively related to the intention to quit (Cunningham, 2006; Neves & Caetano, 2009). As antecedents of the change commitment were found trust in management (Michaelis et al., 2009; Neves & Caetano, 2006), organizational commitment (Herscovitch & Meyer, 2002; Meyer et al., 2007; Neubert & Cady, 2001), self-efficacy (Herold et al., 2007), and dispositional resistance (Oreg, 2003). In addition, it was found that transformational leadership behavior has a positive impact on affective change commitment (Abrell-Vogel & Rowold, 2014; Bommer et al., 2005; Herold et al., 2008; Michaelis et al., 2009; Nohe et al., 2013; Seo et al., 2012), while transactional leadership has a negative impact (Conway & Monks, 2008).

The behavioral reaction of change support was developed by Herscovitch and Meyer (2002) to predict the outcomes of change commitment as an indication for its influence on change success. According to the theory of planned behavior (Ajzen, 1991), change commitment represents an attitude that, by definition, entails a behavioral intention. Thus change commitment is a proximal predictor for change support, because it represents the behavioral intention to engage in change (Bouckenoghe et al., 2015; Herscovitch & Meyer, 2002). Meyer and Herscovitch (2001) distinguished among three distinctly strong forms of change support. They distinguished among compliance, cooperation and championing support for change, defining compliance as behavior that is conform to obligations (focal behavior) and the other two as discretionary behavior. Discretionary support comprises several actions that are not specifically geared to the binding objective of the commitment, but more generally relate to the maintenance of the commitment. It can thus also be understood as extra role behavior in change. Herscovitch and Meyer (2002) described the strongest form of change support as championing support for change. It is characterized by an extreme willingness to change and is expressed in such a way that the employees go beyond the formal requirements for successful implementation of the change and even praise the change to other people (Herscovitch & Meyer, 2002). According to Kim et al. (2011), only championing support is a truly active form of change support with facilitating behaviors. The two weaker forms, compliance and cooperation, can be classified as passive behaviors and cannot be distinguished empirically as different factors (Kim et al., 2011). Therefore, this dissertation examines exclusively championing support for change.

Empirical studies on change support were mostly conducted with affective change commitment as a predictor (Herscovitch & Meyer, 2002; Meyer et al., 2007) or as a mediating element. This revealed indirect effects of transformational leadership (Michaelis et al., 2010;

Seo et al., 2012; Shin et al., 2012) and strategic worldview (Sonenshein & Dholakia, 2012) on change support. In addition, organizational commitment turned out to be a distal predictor for change support (Herscovitch & Meyer, 2002). Individual studies examined other factors that provoke change support, such as communicating a vision (Venus et al., 2019) or the interaction between former and newer transformational leadership (Zhao, Seibert, Taylor, Lee, & Lam, 2016).

### **2.2.2 Leadership and Employees' Reactions to Change**

Leadership and organizational change are often brought together in literature in terms of content but have not yet been systematically researched. There are gaps between the research directions - especially strategy and organizational behavior -, the methodological approach quantitative or qualitative - and the level of analysis - organizational or individual (Oreg & Berson, 2019). In strategic research, the focus of attention is on organizational outcomes and top management decisions. As a theoretical basis, the upper echelon theory (Hambrick, 2007; Hambrick & Mason, 1984) is primarily used here to explain the influence of the CEO on strategic decisions based on personal characteristics that influence organizational outcomes. In the research line concerning organizational behavior, the reactions of the change recipients are in the foreground and the role of the leader is subordinated.

Oreg and Berson (2019) tried to systematize the different research stages in a current review and distinguished two fundamental aspects: leader's key role, which they divided into strategic choices and behavior, and key path of leader's influence. In the latter, they distinguished between the influence on organizational outcomes (macro-level) and the reactions of change recipients (micro-level; Oreg et al., 2011). The strategic choices mostly refer to top management and their decisions at the organizational level, such as investment or mergers and acquisitions (Crossland & Hambrick, 2011; Hambrick & Mason, 1984). Leadership behavior includes leadership theories such as transformational and charismatic leadership (Bass, 1985; Conger & Kanungo, 1987), leader-member-exchange (Graen & Uhl-Bien, 1995), authentic leadership or the concept of sensegiving, which refers to leadership behavior that influences employees to find sense in corporate reality (Gioia & Chittipeddi, 1991). In contrast to strategic decisions, leadership behavior is understood as unspecific to the situation.

A large part of the studies dealt with leadership behavior and the effects on employees' change reactions. In particular, transformational or charismatic and change-oriented leadership (whereby, according to Herold et al., 2008, it is also situation-specific) proved to be effective

in change. The change-promoting effect of transformational or charismatic leadership can be explained by its influence on employees' emotions (Seo et al., 2012) and attitudes (Herold et al., 2008; Shin et al., 2012). Emotions are positively influenced by affecting the self-concept and a trusting relationship between leader and employee (Howell & Shamir, 2005; Shamir et al., 1993). Attitudes towards change and in particular change commitment (in addition to cynicism and openness) are positively influenced not only by transformational leadership but also by ethical leadership, leader-member exchange, change-related leadership and the communication behavior of the leader (Bormann & Rowold, 2016; Cotton, Stevenson, & Bartunek, 2017; Helpap, 2016; Lee, Scandura, & Sharif, 2014; Nohe et al., 2013). The mechanisms of influence examined included empathy and mutual commitment (van Dam, Oreg, & Schyns, 2008), value of the change (Herold et al., 2008) and reducing ambiguity (Helpap, 2016). In addition, transformational and supportive leadership, as well as leader-member exchange, were found to promote change support (Furst & Cable, 2008; Jones & van de Ven, 2016; Nemanich & Keller, 2007; Oreg & Berson, 2011).

A remarkable result of the review (Oreg & Berson, 2019) was that there existed no study that explicitly dealt with the strategic decisions of leaders and the effects on employee reactions towards change. Oreg and Berson (2019) see the influence of the strategic decision on the reactions as decisive for the long-term change success and the success of the company and identify a need for further research.

So far, organizational behavior-guided change research has focused on transformational leadership and its impact on employees' change responses. This is not surprising, since the concept is regarded as change-oriented (Eisenbach et al., 1999; Yukl et al., 2002). The results of previous studies confirm the effectiveness of leadership style in change. However, there is increasing criticism of the construct of transformational leadership in terms of content and methodology, questioning its validity (van Knippenberg & Sitkin, 2013). In addition, the extended full-range of leadership model argues that the effects of transformational leadership may have been overestimated due to the omitted variable bias (Antonakis et al., 2014a). Antonakis and House (2014) therefore argue that instrumental leadership should be taken into account when examining transformational leadership. Moreover, theoretical reasons suggest that instrumental leadership in change has a positive effect on employee reactions. It includes strategic behaviors, such as the recognition of opportunities and risks, which arise in the changing environment, and the ability to derive strategic benefit from them. Furthermore, a strategy for implementing the change is formulated so that employees know which individual



steps they will have to take and how they can integrate the change into their work. So far, however, there are no empirical results on the impact of instrumental leadership in change. Alternative instrumental approaches (Kesting, Ulhøi, Song, & Niu, 2016), which can be distinguished from instrumental leadership because of a more transactional approach, have not yet been examined with regard to the reactions of employees to change. Strategic decisions by top management, however, show positive effects at the organizational level (Oreg & Berson, 2019).

### 2.3 Research Model of the Dissertation

The research model of this dissertation exemplifies the assumed relationships between leadership behavior and employees' change reactions. It draws on Oreg et al.'s (2011) model of change recipients' reactions, which was explained in section 2.1, and integrates leader behavior with differentiated change reactions. According to Oreg et al. (2011), the reactions of employees are grouped, among others, into four categories: cognitive and behavioral reactions, and pre-change antecedents and change consequences. These four categories serve as a basis for analyzing the differentiated effects and mechanisms of instrumental leadership in change. The main focus of the dissertation, as presented in Figure 1, addresses the relationship between instrumental leadership and affective change commitment as a cognitive reaction and change support as a behavioral reaction. This relationship is tested in all three studies and thus at different levels (individual and team level) and in different designs (experimental and ex-post facto). This allows causal conclusions to be drawn about the interrelationships within the model. In addition, transformational leadership will also be considered in the third study to develop leaders both instrumentally and transformationally in a change-oriented training. Overall, the research model shown in Figure 2 thus represents a comprehensive framework that depicts the core relations at different levels and in different modes and makes it possible to examine the research questions posed.

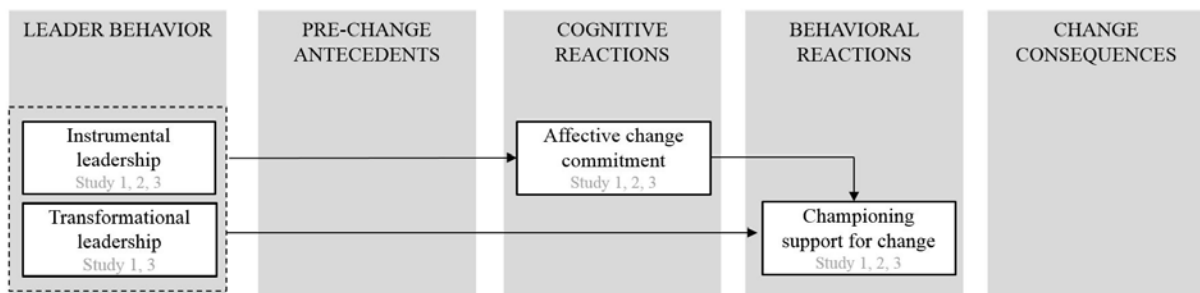


Figure 1. Underlying core relations of the research model.

Instrumental leadership was developed as part of the extended full-range of leadership model and supplements laissez-faire, transactional and transformational leadership with strategic and task-oriented behaviors. The importance of strategic leadership in change has already been explained and it has been stressed that there exist no empirical results on the impact of strategic decisions at the employee level (Oreg & Berson, 2019). From different disciplines, however, it is emphasized how important strategic leadership is in providing employees with orientation for and understanding of change. As a theoretical basis for the investigation of leadership styles in change, the theory of social exchange (Blau, 1964) is used to explain that precisely the active leadership styles of the model, transformational and instrumental leadership, promote through supportive behavior and due to the reciprocal relationship with the employees, employees' support for change. Moreover, by examining all leadership styles of the extended full-range of leadership model in the first study, an overestimation of individual factors by an omitted variable bias is avoided (Antonakis et al., 2014a). This also allows calculating a more realistic influence of transformational leadership in change, as no comprehensive analysis of all four factors in the change context has been conducted so far. It is therefore the concern of the first study to investigate whether instrumental leadership, as part of the extended full-range leadership model, can contribute in predicting the change support of employees and thereby obtain realistic effects of all factors. Thus, Study 1 should provide an answer to the first research question: *Can instrumental leadership make an additional contribution to the other full-range of leadership factors for predicting the change reactions of employees?*

According to Antonakis and House (2004), instrumental leadership is a facilitator of transformational leadership, since it is the expertise of an instrumental leader about future events that makes transformational behaviors, such as articulating a vision, possible. This assumed interaction of leadership styles has not yet been tested empirically. It is therefore not clear whether and how the two leadership styles interact and in which way the change-promoting effect of transformational leadership is reinforced. In order to test this influence in the first study, the theory of planned behavior (Ajzen, 1991) is used to illustrate how the two different leadership behavior patterns affect the reactions of employees and influence their behavior. To be able to verify the individual theoretical assumptions based on the theory of planned behavior and the social exchange theory affective change commitment and trust in the leader were also examined as outcomes. Affective change commitment represents the attitude according to the theory of planned behavior to predict championing support. Trust in the leader builds the basis for a social exchange relationship and explains how leadership fosters support

for change. According to Antonakis and Atwater (2002), trust in the leader is positively influenced by the instrumental leader's domain-relevant expertise. It is considered a pre-change antecedent in the research model and has proven to be an important mediator between leadership and employees' change reactions (Michaelis et al., 2009). However, empirical results are still lacking information on the extent to which instrumental leadership can promote trust. In this way, Study 1 will answer the second research question within the framework of a field study and an experimental vignette study with manipulated instrumental and transformational leadership behavior: *How do the leadership styles of the extended full-range of leadership model, in particular transformational and instrumental leadership, interact in their effect on the change reactions of employees?*

Antonakis and House (2002; 2004; 2014) and Rowold (2014) argue that instrumental leadership affects employees' performance indirectly through strategic behaviors and directly through task-oriented behaviors. To be able to map this mode of action in change, change support is used at the individual level and team change success is used as a performance measure at the team level. Team change success represents a result of change reactions and can therefore be classified as a change consequence according to Oreg et al. (2011). Based on the uncertainty reduction (Berger & Calabrese, 1975) and the social exchange theory (Blau, 1964), it is assumed that affective change commitment - measured at team level - acts as a link between instrumental leadership and change outcomes. Instrumental leadership takes away the uncertainties of employees arising from change by specialist knowledge and technical information and thus creates the prerequisite for a social exchange relationship. As a result, employees are convinced of the change and are committed to it. Based on the theory of planned behavior, commitment enhances the supportive change behavior on both levels. In addition, change literature often assumes that the leader is a proponent of change. For this reason, the attitude of leaders towards change have received little attention (Abrell-Vogel & Rowold, 2014; Oreg & Berson, 2011). However, it is known from literature that, for example, inauthentic transformational leadership behavior (Bass & Steidlmeier, 1999) has a negative effect on employees' attitudes. The second study therefore considers this issue and assumes that the positive effect of instrumental leadership on team affective change commitment is reinforced by a highly pronounced affective change commitment of the leader. The second study therefore clarifies the third research question: *How and under which conditions does instrumental leadership affect employees' change reactions at the individual and team level?*

In view of the high failure rate of organizational change processes in practice, there is great interest in developing leaders in their behavior and thus improving their ability to implement change.

Intervention studies showed that transformational leadership could be actively enhanced through training (Abrell et al., 2011; Barling et al., 1996; Dvir et al., 2002). Thus, given that both leadership styles are behavioral based concepts, it can be assumed that instrumental leadership behavior can also be actively improved through training. Based on the results of the first two studies, I thus intend to investigate in the third study whether instrumental and transformational leadership behavior can be actively improved in a change-oriented training. To evaluate the training, I assume that the alterations in leadership behavior caused by the training result in changed employees' reactions. To investigate this, I use the difference values that resulted from the assessments before and after the training. In other words, the indirect core relationship of the dissertation is examined in Study 3 in terms of difference scores of the constructs and the training participation serves as a moderator. Study 3 is accordingly intended to answer the fourth research question: *Can instrumental and transformational leadership behavior be developed through a change-oriented leader training intervention and do these developments cause changes in the change reactions of the employees?*

In intervention studies it is generally assumed that the development of leaders proceeds linearly (Abrell et al., 2011; Barling et al., 1996; Dvir et al., 2002), i.e. more training means improved leadership. A problem here is also - from a methodological point of view - that highly developed leaders achieve the positive pole of a scale at some point and cannot improve further. This phenomenon is discussed in literature as a ceiling effect (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009; Lacerenza et al., 2017). However, in an intervention study (Mason et al., 2014) not only a stagnating, but also a declining development of leadership behavior after an intervention was found. This effect cannot be explained by ceiling effects alone. Following Boyatzis (2008), the question therefore arises whether the development of leaders is more dynamical than previously assumed and whether a nonlinear development is feasible. Analogous to the learning curve, I therefore suppose that there are also decreasing marginal effects when learning leadership behavior, so that highly developed managers in particular cannot benefit longer from training as less developed managers do. In addition, I assume that due to interactive training, particularly highly developed leaders may be demotivated, as they may benefit less from the input of lower-developed participants manifesting in diminishing

effects. With Study 3, I would therefore like to answer the fifth research question: *Do leaders develop nonlinearly in their instrumental and transformational leadership behavior?*

The dissertation contributes to the existing literature mainly in three ways. First, it examines instrumental leadership together with all factors of the extended full-range of leadership model in the context of change. Thus, the leadership literature will be expanded by investigating instrumental leadership as the least considered but relevant leadership behavior so far. In addition, the change-promoting effects of transformational leadership are assessed more realistically. Second, the change literature will be expanded by the investigation of strategic leadership behavior patterns of the direct leader and their effects on the change reactions of employees. So far, strategic leadership behavior has only been investigated at the organizational level. The dissertation offers a first approach to bridging the gap between studies on leadership and organizational change as well as connecting the macro and the micro levels more strongly. In addition, the influence of instrumental leadership regarding how and when this leadership style promotes change reactions is analyzed in more detail. Third, leadership development literature is extended by the development of leadership training in instrumental leadership and by the consideration of nonlinear development, thus providing not only theoretical but also important practical implications. The results support practitioners to design effective leadership development measures considering different development stages in order to support the successful change implementation.

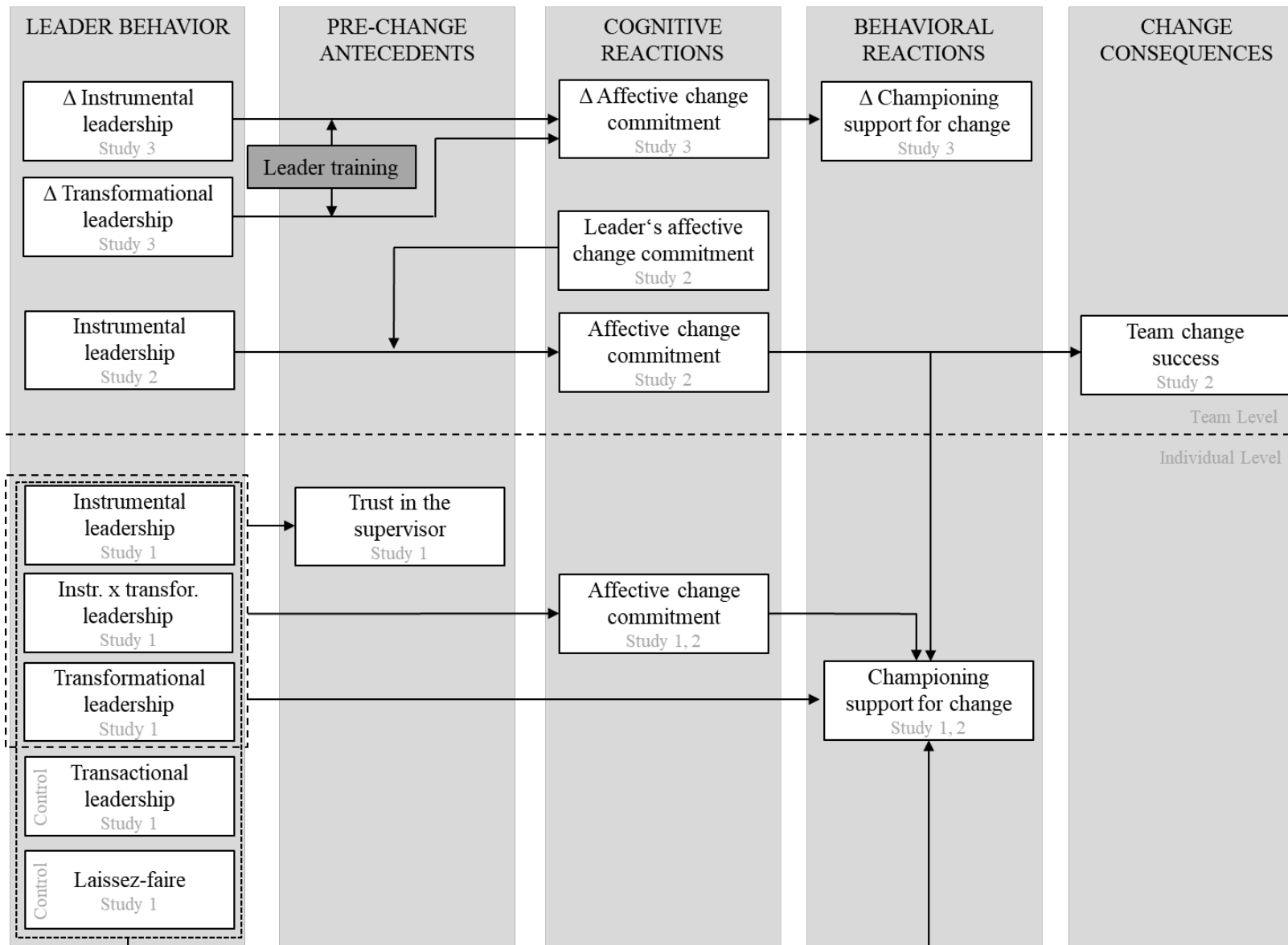


Figure 2. Research model of the dissertation.

### **3. Study 1 - How Transformational and Instrumental Leadership Relate to Employees' Change Reactions: A Two-Study Investigation on Interactional Effects**

#### **3.1 Introduction**

The increase in change dynamics in the external environment makes it necessary for organizations to continuously initiate change processes. There is consensus among change researchers that organizations must constantly change to remain competitive (Burke, 2017; Kotter, 2014). Leading the change is therefore one of the core challenges of today's leaders. However, Ford and Ford (2012) summarized in their review about leadership of change that all ways of leading have an influence on followers, but it is not clear, what leader actions or interactions are responsible for this influence. In leadership research, transformational leadership, whose core idea is the transformation of norms and values of employees, is considered to be particularly appropriate to master organizational change (Bass & Riggio, 2006; Herold et al., 2008; Nemanich & Keller, 2007).

Although empirical results show that transformational leadership has a positive impact on employees' attitudes towards change and promotes innovation (Wang et al., 2011), the emotion-based leadership style does not seem to be sufficient to successfully implement change processes. It is estimated that two-thirds of all initiated change processes fail (Beer & Nohria, 2000; Meaney & Pung, 2008) mainly due to managerial mistakes. However, there is less a lack of transformational behavior and more of a lack of clear strategic implementation (Kotter, 2008). Accordingly, it seems to be important for the successful implementation of change that not only transformational, but also strategic and task facilitating leadership is provided (Nadler & Tushman, 1990). Nevertheless, these strategic and task-oriented behaviors have been largely neglected in the leadership research, although they share an additional part of variance in relevant outcomes (Judge et al., 2004). For this reason, the full range of leadership theory, which is currently one of the most frequently studied leadership theories (Antonakis et al., 2014b) and consists of transformational, transactional and laissez-faire leadership, has been criticized (Yukl, 1999; 2008). Thus, Antonakis and House (2002; 2004) supplemented the theory to the extended full-range of leadership theory by introducing the construct instrumental leadership. Instrumental leadership encompasses the omitted behaviors strategic leadership and work-follower facilitation (Antonakis & House, 2002; 2004). Antonakis and House (2004) argue that the pragmatic instrumental leadership behaviors promote the effect of the inspirational

transformational leadership behaviors, because they complement each other. For example, an abstract vision of change becomes more tangible and realizable for employees by formulating a strategy that explains how the change goals expressed in the vision will be achieved. Furthermore, Antonakis and House (2014) argue from a methodological perspective that disregarding instrumental leadership as a relevant leadership behavior can lead to an omitted variable bias that overestimates the effects of individual leadership behaviors (Antonakis et al., 2014a). Therefore, in order to reduce this bias, it is important also from a methodological point of view that transformational leadership is not isolated, but investigated together with relevant leadership behaviors, which, in the context of change, instrumental leadership seems to represent in particular. However, most previous change studies have not considered this bias, resulting in a potential tendency to overestimate the effects of transformational leadership in change.

The present study addresses this issue and examines the effects of transformational together with instrumental leadership and their interdependencies in two studies, a field and a vignette study. Additionally, in Study 1.1, I control for the other full-range of leadership behaviors, thus avoiding the effect of omitted variables and possible overestimation of individual leadership styles in the change context (Antonakis et al., 2014a; Antonakis & House, 2014). In the first study, the influence of leadership behavior on the prediction of change support will be examined step by step. I assume that the effect of the change-oriented transformational leadership (Yukl et al., 2002) is independent of laissez-faire or transactional leadership, while it is reinforced by instrumental leadership. Accordingly, the inspiring behavior of transformational leadership is meaningfully complemented by the functional behavior of instrumental leadership, which makes the implementation of the change initiative concrete and more tangible for the employees. In a second experimental vignette study, the interaction between transformational and instrumental leadership will be replicated. Both leadership behaviors will be manipulated in a 2x2 factorial design and investigated in connection with change-relevant outcomes: affective change commitment, support for change and trust in the leader.

This study contributes to leadership and change management literature in three ways. Firstly, by examining all four leadership styles of the extended full-range of leadership model, the complete model is examined for the first time in the context of change. Therefore, the possibility of endogeneity caused by omitted variable bias, which can lead to the overestimation of one leadership construct (Antonakis et al., 2014a; Antonakis & House, 2014), will be avoided. Secondly, in previous studies the main effects of the leadership behaviors were almost



exclusively analyzed, with very few exceptions (Herold et al., 2008). Therefore, the examination of the dynamics and interdependencies within the model (Bormann & Rowold, 2018; DeRue, Nahrgang, Wellman, & Humprey, 2011; Rowold & Borgmann, 2013; Yukl, 1999) through interactions among transformational and instrumental leadership enlarge the understanding of how and under which conditions the leadership behaviors influence employees' change reactions (Ford & Ford, 2012). Thirdly, by an experimental manipulation of transformational and instrumental leadership within a change scenario, the study enables a causal understanding of the modes of action and interdependencies of leadership styles in change.

## **3.2 Theory**

### **3.2.1 The Extended Full-Range of Leadership Model**

The full-range of leadership model consists of transformational, transactional and laissez-faire leadership (Bass & Avolio, 1997) and is the most frequently investigated model in leadership research in the last three decades (Lord et al., 2017; Zhu et al., 2019). The focus of leadership research lies in particular on transformational leadership, which is regarded as the most effective and active leadership behavior within the model rather than transactional and inactive laissez-faire leadership (Antonakis & House, 2002). However, the full-range of leadership model is criticized because it ignores important leadership behaviors such as task-related and strategic leadership (Yukl, 1999; 2008). The validity of transformational leadership was also criticized (van Knippenberg & Sitkin, 2013). Antonakis and House (2002; 2004) therefore extended the model by adding the missing behaviors through the introduction of instrumental leadership to the extended full-range of leadership model.

Transformational leadership is defined as a leadership behavior that transforms the norms and values of employees from individual goals to organizational goals that serve the common good. Employees are thus more motivated to perform beyond expectations (Bass, 1985; Yukl, 1989). Six central behaviors characterize transformational leadership, such as the articulation of a vision, being an appropriate role model, individualized support, fostering the acceptance of group goals, intellectual stimulation, and high performance expectations (Podsakoff et al., 1990; Podsakoff et al., 1996). The positive impact of transformational leadership on employees' commitment (Jackson et al., 2013), as well as on their job satisfaction, leader satisfaction, motivation (Judge & Piccolo, 2004) and performance (Wang et al., 2011) can be meta-analytically supported.

Transactional leadership, on the other hand, is based on a clearly defined exchange between the employees' performance and the executive's reward (Bass, 1999; Yukl, 1999). This conditional reward can be material or immaterial and motivates employees only up to a certain point, which is augmented by transformational leadership (Bass, 1985). Transactional leadership increases employee performance (Wang et al., 2011), job satisfaction (Judge & Piccolo, 2004) and organizational commitment (Jackson et al., 2013).

Laissez-faire leadership is understood as the absence of leadership. The leader avoids making decisions and assumes no leadership responsibility (Bass, 1990). The avoidance of leadership behavior leads to a reduction in the productivity of employees and a decline in satisfaction with work and management (Judge & Piccolo, 2004).

Instrumental leadership stands out due to manners based on the leader's expertise to facilitate employees' task performance and is therefore required for organizational performance (Antonakis & House, 2014). Instrumental leadership consists of the two sub-classes strategic leadership and follower-work facilitation. Strategic leadership consists of environmental monitoring, which means that the leader observes the external and internal environment and discovers opportunities and risks for the team at an early stage. The other component of strategic leadership is the formulation of a strategy. The leader derives strategic decisions from the environmental monitoring and ensures that the employees understand and implement the leader's mission by formulating goals, measures and framework conditions. The follower-work facilitation consists of the path-goal facilitation, which aims to support the employees to reach their goals by providing resources and removing obstacles, as well as the outcome monitoring, which means constructive feedback given by the leader to employees during task accomplishment. In contrast to transactional and transformational leadership, instrumental leadership is neither conditional nor idealistic (Antonakis & House, 2014), but functionally supports employees in their task accomplishment. So far, instrumental leadership has only been investigated in individual studies. It has been shown that instrumental leadership has a positive effect on the job satisfaction of employees when the other full-range of leadership factors are controlled and that it promotes objective performance and affective organizational commitment (Rowold, 2014) while reducing employees' stress (Rowold et al., 2017).

### **3.2.2 The Extended Full-Range of Leadership Model and Organizational Change**

The behavior of the leader plays a central role in change as it influences the extent to which employees accept and support change (Armenakis & Harris, 2009). Because of its conception to essentially deal with transformation, transformational leadership is understood as

change-oriented (Bass & Riggio, 2006; Eisenbach et al., 1999). According to the self-concept-based motivational theory of leadership by Shamir et al. (1993) transformational leaders motivate their employees to perform above expectations by identifying with the group and internalizing group values. If the change is regarded as a group goal, employees should be more committed to achieve the change goals. Empirical evidence shows that transformational leadership results in a greater acceptance of a merger (Nemanich & Keller, 2007), while openness to change (Groves, 2005), change commitment increase (Abrell-Vogel & Rowold, 2014; Herold et al., 2008; Nohe et al., 2013; Seo et al., 2012; Shin et al., 2012; Shin et al., 2015) and change cynicism decreases (Wu et al., 2007).

In addition to task-related behavior, instrumental leadership also includes strategic leadership, which is seen as crucial in a changing environment. In particular, the timely recognition of opportunities in the market, the strategic use and implementation of such opportunities as well as the support of employees in implementing changes in everyday working life are described as necessary leadership behavior to implement change (Burke, 2017; Kotter, 2014). So far, however, there are no empirical results on the effectiveness of instrumental leadership in change.

### **3.2.3 Overview of the Studies**

This research is carried out in two studies: a field study (Study 1.1) and an experimental vignette study (Study 1.2). First, in Study 1.1 I examine the effect of all leadership behaviors of the extended full-range of leadership model and their interdependencies on the prediction of change support in a current change context. In order to map the causal process between the variables, I replicate the results in the second study. The focus here is on the interaction between transformational and instrumental leadership to predict change-relevant outcomes. The triangulation – the combination of more than one method in one study - allows me to balance the weaknesses of one method with the strengths of the other (low internal validity versus high external validity; Scandura & Williams, 2000). This approach has been successfully applied in leadership studies to date (Giessner & van Knippenberg, 2008; Venus et al., 2019).

## **3.3 Study 1.1**

### **3.3.1 Theory**

Study 1.1 examines the effect of the extended full-range of leadership constructs on employee change support. Change support represents a behavioral reaction to change and is an

important predictor for the successful implementation of a change process (Oreg et al., 2011). Championing support stands for the highest form of change support and is defined as enthusiastic support for change, advertising change to other people and going beyond formal requirements (Herscovitch & Meyer, 2002). Accordingly, championing support can be understood as employees' extra role behavior in the change context, which is positively influenced by transformational leadership behavior (Carter, Armenakis, Feild, & Mossholder, 2013; Podsakoff et al., 1990). It was shown that the relationship between transformational leadership and extra role behavior can be explained by the social relationship between leader and employee. Therefore, the leader-member exchange, trust in the leader, job satisfaction or the quality of the relationship between leader and employee during a change process were identified as mediating variables (Carter et al., 2013; Podsakoff et al., 1990; Wang, Law, Hackett, Wang, & Chen, 2005). Based on these findings, the relationship between transformational leadership and extra role behavior can be explained by the theory of social exchange (Carter et al., 2013; Michaelis et al., 2010), which states that the relationship between two parties is based on the reciprocal exchange of resources (Blau, 1964). Accordingly, transformational leadership promotes a relationship based on trust by responding to the needs of employees, inspiring them to new approaches and promoting common goals. Following the theory of social exchange, employees respond to the leader's support by trusting the leader and being more committed to common goals (see hypotheses in Study 1.2). If the common goal now represents the successful implementation of a change, it can be assumed that the above-average engagement leads to a championing support of this change.

In addition, I assume that instrumental leaders promote the extra role behavior of employees in change. As a functional leadership style, however, instrumental leadership has less effect on employee's behavior via the emotional relationship than transformational leadership does. Instrumental leaders act in a task-oriented manner by providing employees with all the resources they need to support change. This includes leaders explaining why which change goals should be achieved and formulating a plan for implementation. For the goal implementation, leaders provide employees with necessary resources, information and also their own specialist knowledge, which enables their employees to achieve their goals in the best possible way. In addition, instrumental leaders provide constructive feedback in order to resolve problems in time and support employees in their daily activities. In this way, the instrumental leader contributes to employees' job satisfaction (Rowold, 2014): This was found to be a mediating effect between leadership and extra role behavior. In addition, the instrumental leader provides orientation and reduces uncertainty when employees are confronted with a change

situation, by clearly formulating a strategy for implementing the change. This stress-reducing feature of instrumental leadership has been empirically confirmed (Rowold et al., 2017). Accordingly, the instrumental leader promotes a trusting relationship with employees through functional support and uncertainty reduction. In return, employees are more willing to support change, because they understand why the change is necessary for the company and feel able to implement it.

Therefore, I assume that transformational and instrumental leadership foster the employees' behavioral change reaction and hypothesize the following:

*Hypothesis 1:* Transformational leadership positively predicts the championing support for change by the followers.

*Hypothesis 2:* Instrumental leadership positively predicts the championing support for change by the followers.

As previously assumed transformational and instrumental leadership promote the change support of employees in different ways. The transformational leader emotionally supports and inspires, while the instrumental leader provides professional support and certainty. Due to the reciprocal exchange of resources, the employees return the support of the leader through increased engagement. In addition, it can be assumed that the leadership styles influence each other in their effect on employee reactions. Antonakis and House (2004) argue that the two leadership styles complement each other and that instrumental leadership promotes the effectiveness of transformational leadership. While transformational leaders can intrinsically motivate employees by integrating change into an attractive vision of the future and by responding to the needs and fears of employees, the instrumental leader concretizes the vision and breaks it down into individual measures for employees (Antonakis & House, 2014; Rowold, 2014). Nadler and Tushman (1990) already claimed that charismatic leadership, which is part of the transformational leadership concept, is not enough to motivate employees to support an ongoing change process. They argued that charismatic behaviors, like demonstrating a vision, tend to foster commitment but not compliance or even stronger support like championing behavior, and explained further, that instrumental leadership is needed to frame charismatic behaviors and to lead the raised motivation into the desired behaviors to support a change (Nadler & Tushman, 1990). In addition to the emotion-based, transformational leadership approach, instrumental leadership can compensate for weaknesses of transformational leadership in times of change, such as unrealistic expectations, lack of expectations or dependencies of the leader (Nadler & Tushman, 1990). Antonakis and House

(2014) emphasize that instrumental leadership behavior is an essential behavior to formulate a viable strategy and to ensure that the direction outlined in the vision is actually the right one. Therefore, I suppose that instrumental leadership is a useful extension to transformational leadership in times of change in order to generate supportive behaviors that go beyond commitment and ensure the change implementation.

This behavior-related effect can be explained by the theory of planned behavior (Ajzen, 1991). A certain behavior is demonstrated if the intention to show this behavior is highly pronounced. The behavioral intention is influenced by three independent determinants: the person's attitude towards the behavior, the subjective norm and perceived behavioral control. According to the theory, the attitude stands for a general evaluation to perform a certain behavior. The subjective norm reflects perceived social pressure to show a certain behavior or not. The third determination, perceived behavioral control, expresses the extent to which the behavior is perceived as controllable (Jimmieson, Peach, & White, 2008). Perceived behavioral control has – together with the indirect effect via intention – a direct influence on behavior (Ajzen, 1991). Based on the theory, transformational leadership promotes the attitude towards change support (affective change commitment; Herold et al., 2008; Seo et al., 2012; Shin et al., 2012) and influences the subjective norm by formulating a vision and group goals and expresses high performance expectations, which indicate appropriate behavior and social pressure to employees. Instrumental leadership also promotes the attitude, because the leader can explain which functional benefits change has and therefore positively influences the evaluation of the change support. The subjective norm is influenced by a clear strategy formulation, which provides goals to implement change. Accordingly, employees know which goals they have to reach in order to implement change and that the leader wants them to perform adequately. As the perceived behavioral control is partly a function of the beliefs whether resources and opportunities are available (Jimmieson, White, & Zajdlewicz, 2009), it is strongly influenced by the facilitating behaviors of instrumental leadership, because the instrumental leader provides necessary resources, removes obstacles and gives constructive feedback in order to help employees to achieve the change goals. Therefore, instrumental leadership complements the influence of transformational leadership through perceived behavioral control and thus has a direct influence on championing support for change. Consequently, instrumental leadership turns the intention increased by transformational leadership into behavior.

The transferability of the theory of planned behavior into a change context could be supported in empirical studies (Jimmieson et al., 2008; Jimmieson et al., 2009). I therefore

assume that the positive effect of transformational leadership on change support is enhanced by instrumental leadership and hypothesize:

*Hypothesis 3:* The relation between transformational leadership and championing support for change is moderated by instrumental leadership, such that the relation is only significant in the high instrumental leadership condition.

### **3.3.2 Method**

#### **Sample and Procedure**

The sample size consists of  $N = 405$  employees from different organizations in Germany, who were recruited via students through direct e-mail approach or via internet platforms. Student-recruited samples have proven to be representative data sets (Demerouti & Rispens, 2014; Wheeler, Shanine, Leon, & Whitman, 2014) and were applied in previous leadership studies (Wang, Demerouti, & Le Blanc, 2017). The participants were instructed to follow a link to a secure website and to complete the survey. To ensure accurate responses and avoid social desirability, the anonymity and voluntariness of the study were made clear. In order to avoid common method bias, the data were collected at two times with an interval of two weeks. At the first time, respondents rated their direct supervisors' leadership behavior and controls. During the second inquiry, the participants were asked to rate their own support for change and change-related controls. In order to make sure that all respondents were able to relate to a specific change process during the survey, it was a prerequisite for participation in the study that a change process was currently taking place in the respondents' work environment or had only recently been completed.

Fifty-one percent of the participants were male and worked full-time (57 %) with a mean age of 33 years ( $SD = 11.06$ ). Forty-five percent of the participants had less than three years of work experience in mainly profit-oriented (76 %) organizations. The largest part of the respondents worked in organizations with a firm size of more than 250 employees (49 %) from different industries. The rated leaders were mainly men (68 %) and belonged to the middle or upper management level (together 75 %). Sixty-four percent of the participants had less than six hours per week of direct contact with their leaders. The rated change processes were to 48 % not completed and were classified as organizational (43 %) - exclusive change of management (18 %) - technical (19 %) and procedural (14 %) changes, among others (6 %).

#### **Measures**

**Transformational leadership.** Transformational leadership was measured using the Transformational Leadership Inventory (TLI; Podsakoff et al., 1990) in its German translation (Heinitz & Rowold, 2007). The construct validity of the German TLI version could be demonstrated (Krüger et al., 2011). The TLI consists of 26 items of which 22 are measuring the six dimensions of transformational leadership and four are measuring the transactional leadership scale. In this study the items for transformational leadership were used as an overall scale and rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). All items start with “My direct leader...” and sample items are “...behaves in a manner thoughtful of my personal needs” ( $\alpha = .92$ ) for transformational leadership.

**Instrumental leadership.** The items for the assessment of instrumental leadership were originally developed by Antonakis and House (2004). In this study the German version of these sixteen items - four items for each dimension of instrumental leadership - translated and validated by Rowold (2014), was utilized. All items begin with “My supervisor...” and they are measured on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items were “...understands the constraints of our organization” ( $\alpha = .95$ ).

**Championing support for change.** For the assessment of respondent’s championing behavior towards an ongoing change process, I used six items from Herscovitch and Meyer’s (2002) questionnaire for the measurement of behavioral support for change in a German translation. The translation was implemented by using the translation-back-translation procedure (Brislin, 1980). The original questionnaire consists of three scales describing the three different stages of behavioral support for change from compliance (three items) via cooperation (eight items) up to championing. Due to the scale, which is validated only to a limited extent in replication studies, I approved the factorial validity especially for the championing scale by conducting an exploratory factor analysis (EFA). As expected, the extracted factor explained 61 % of the variance. A sample item was “I speak positively about the change to outsiders” ( $\alpha = .83$ ). Responses were made on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Control variables.** I controlled for the organizational change impact with a single item, ranging from 1 (*not at all affected*) to 5 (*very strongly affected*). Previous studies found an influencing effect of change impact on employees’ change commitment (Fedor, Caldwell, & Herold, 2006; Herscovitch & Meyer, 2002) and an effect on the relation between leadership and commitment to change (Herold et al., 2008; Herold, Fedor, & Caldwell, 2007). Second, I controlled for employees’ organizational tenure (Furst & Cable, 2008; Seo et al., 2012; van



Dam, Oreg, & Schyns, 2008). Third, I also controlled for leader's managerial level, because previous studies showed an influence of the managerial level on the attitude of the leader, like a reduced uncertainty because of a higher involvement (Coyle-Shapiro, 1999).

Fourth, I added laissez-faire and transactional leadership to control for the overlapping effects regarding the whole extended full-range of leadership model. In contrast to transformational leadership, transactional leadership is characterized as task-oriented and satisfies lower employees' needs (Bass & Avolio, 1997). Due to their extrinsic motivation, which results from the expected reward for performance, transactionally led employees behave in line with expectations. Accordingly, they support change only to a minimal expected extent. Empirical results reflected this effect identifying no significant direct influence (Kool & van Dierendonck, 2012) or even negative influence (Conway & Monks, 2008) of transactional leadership on employees' affective change commitment. Additionally, a negative effect on innovative behavior (Pieterse et al., 2010) or employees' change appraisal (Holten & Brenner, 2015) was found for transactional leadership. Transactional leadership was measured using four items from the German translation (Heinitz & Rowold, 2007) of the Transformational Leadership Inventory (TLI; Podsakoff et al., 1990), rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). One sample item was "My direct leader provides me with positive feedback if I perform well" ( $\alpha = .85$ ).

Because of its negative effect on employees' outcomes, laissez-faire has not been examined in the context of change and is therefore only included as a control variable in the first study. To assess laissez-faire, a four-item scale developed by Rowold (2011) was used and the items were rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "My supervisor is absent when needed for help or decisions" ( $\alpha = .88$ ).

### **3.3.3 Results**

#### **Confirmatory Factor Analysis, Descriptive Statistics and Reliability**

Prior to examining the hypotheses, I conducted confirmatory factor analyses to assess the discriminant and convergent validity of the constructs used in the research model. For each construct measured with more than three items, I applied two parcels as indicators (Landis, Beal, & Tesluk, 2000). For the assessment of transformational leadership I devised six parcels of items according to the dimensional structure of Podsakoff et al. (1990). All items were loading on their intended latent factor. As shown in Table 2, the expected five-factor model (instrumental, transformational, transactional and laissez-faire leadership and championing)

yielded a significantly better fit ( $CFI = .92$ ,  $TLI = .90$ ,  $RMSEA = .09$ ,  $SRMR = .05$ ,  $\chi^2 = 450.39$ ,  $df = 94$ ) in comparison to the four-factor (combined instrumental and transformational leadership as one factor), three-factor (combined instrumental, transformational and transactional leadership as one factor), two-factor (combined all full-range of leadership factors to the change outcome) or Harman's single-factor model. In the single-factor model, all items were loading on one factor to test for common method variance (Podsakoff, MacKenzie, & Podsakoff, 2012), because all measures were self-rated by the followers. The chi-square difference test between the five-factor and the four-factor model as the next more complex solution showed that the five-factor model fits the data better:  $\Delta\chi^2 = 51.98$ ,  $\Delta df = 4$ ,  $p < .01$ . The results of the CFA supported the distinctiveness of the leadership scales. For testing the hypotheses, I built construct scales on the average of their items.

*Table 2.* Study 1.1: Indices of model fit for different factor solutions.

	$\chi^2 (df)$	$\Delta\chi^2$	$\Delta df$	AIC	RMSEA	SRMR	CFI	TLI
1-Factor Solution	1252.88 (104)	802.49**	10	14313.32	.17	.09	.75	.71
2-Factor Solution	966.83 (103)	516.44**	9	14029.27	.14	.07	.81	.78
3-Factor Solution	659.18 (101)	208.79**	7	13725.62	.12	.05	.88	.86
4-Factor Solution	502.37 (98)	51.98**	4	13574.81	.10	.05	.91	.89
5-Factor Solution	450.39 (94)			13530.83	.09	.05	.92	.90

*Note.*  $N = 405$ . All alternative models were compared to a hypothesized 5-factor model. AIC = Akaike's information criterion; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual; CFI = comparative fit index; TLI = Tucker-Lewis index.

\*\*  $p < .01$ .

Descriptive statistics, reliabilities and correlations for all study variables are presented in Table 3. The reliabilities show high internal consistency of the constructs. The leadership constructs correlate positively with championing support, except for laissez-faire, which is negatively related.

Table 3. Study 1.1: Means, standard deviations, reliabilities, and correlations.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Leaders' hierarchical level	2.07	0.76	-							
2. Tenure	7.72	8.88	.03	-						
3. Change impact	3.28	1.08	.11*	.13*	-					
4. Laissez faire	2.11	1.00	-.01	.08	-.02	(.88)				
5. Transactional leadership	3.48	1.03	-.01	-.12*	-.01	-.43**	(.85)			
6. Transformational leadership	3.33	0.72	-.01	-.17**	.03	-.53**	.70**	(.92)		
7. Instrumental leadership	3.46	0.83	.02	-.18**	.04	-.56**	.70**	.85**	(.95)	
8. Championing support	3.42	0.81	.20**	.03	.03	-.16**	.17**	.27**	.26**	(.83)

Note. *N* = 405. Cronbach's alphas are indicated on the diagonal.

\*  $p < .05$ ; \*\*  $p < .01$ .

## Tests of Hypotheses

To test the hypotheses, I conducted a stepwise regression analysis in four steps with controls including laissez-faire and transactional leadership as predictors for championing support for change in step 1. Transformational leadership was added in step 2 and instrumental leadership was added in step 3. In the last step 4, the interaction term between transformational and instrumental leadership was added. The interaction term consisted of the product between the mean-centered variables of transformational and instrumental leadership (Aiken & West, 1991). Hypothesis 1 proposed that transformational leadership would be positively related to championing support for change. The results of the regression analyses are presented in Table 3. Beyond the controls, transformational leadership positively predicted championing support for change ( $\beta = .30, p < .01$ ). The controls laissez-faire and transactional leadership were not related to support for change when transformational leadership was included. Therefore, hypothesis 1 could be corroborated. The direct influence of instrumental leadership on championing support for change was not significant ( $\beta = .11, ns$ ), thus, hypothesis 2 could not be supported.

Table 4. Study 1.1: Results of regression analyses to predict championing support.

	Step 1	Step 2	Step 3	Step 4
<i>Step 1</i>				
Leader hierarchical level	.20**	.20**	.20**	.21**
Tenure	.05	.07	.08	.07
Change impact	-.00	-.01	-.02	-.03
Laissez-faire	-.10	-.02	-.01	-.02
Transactional leadership	.14*	-.03	-.05	-.05
<i>Step 2</i>				
Transformational leadership		.30**	.23*	.23*
<i>Step 3</i>				
Instrumental leadership			.11	.15
<i>Step 4</i>				
Transformational leadership x Instrumental leadership				.12*
<i>Quality Criteria</i>				
$R^2$	.08	.12	.12	.14
$\Delta R^2$	.08**	.04**	.00	.01*

Note.  $N = 405$ .

\*  $p < .05$ ; \*\*  $p < .01$ .

Regarding the influence of instrumental leadership, this was expected to moderate the relationship between transformational leadership and championing support for change (hypothesis 3). As shown in Table 4, the interaction term was significant in the hypothesized direction ( $\beta = .15, p < .05$ ). To indicate the interaction pattern, I plotted the interaction following the procedures of Aiken and West (1991). To interpret the effects, I conducted a simple slope analysis. As Figure 3 demonstrated, transformational leadership had a positive relation with championing support for change only when instrumental leadership is high (one *SD* above the mean;  $\gamma = .32, z = 2.12, p < .05$ ). The relationship was not significant when instrumental leadership is low (one *SD* below the mean;  $\gamma = .13, z = 1.52, ns$ ). Therefore, I could corroborate hypothesis 3.

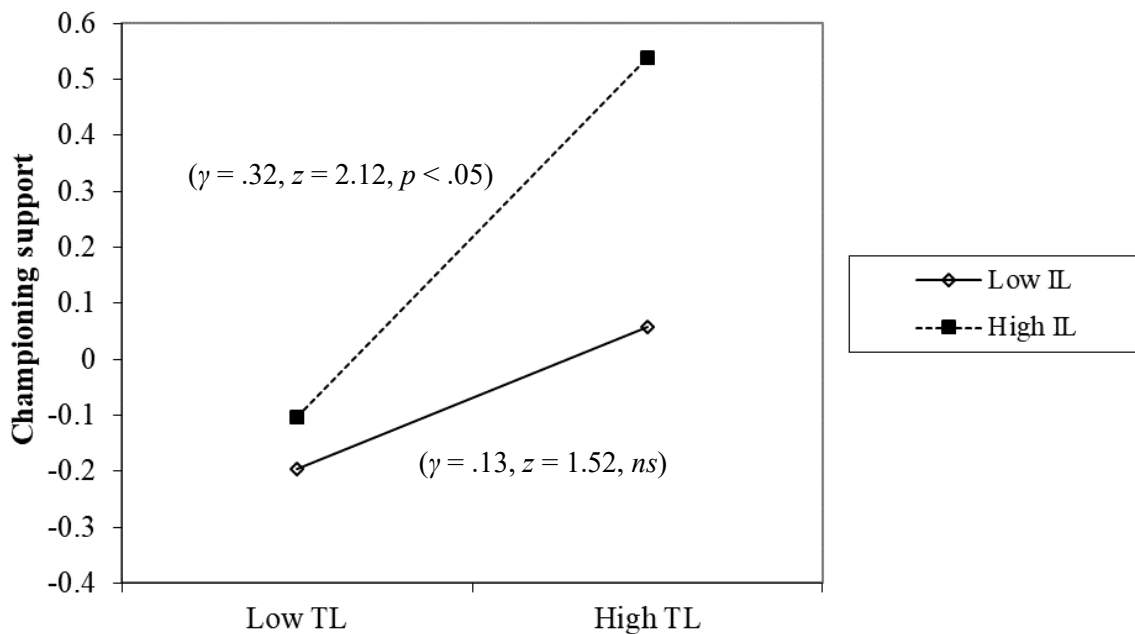


Figure 3. Study 1.1: Interaction effect of transformational and instrumental leadership on championing support for change.

TL = transformational leadership; IL = instrumental leadership.

### 3.3.4 Discussion

The results of the first study show that laissez-faire and transactional leadership had no effect on employees' change support. In accordance with the literature (Michaelis et al., 2010; Seo et al., 2012; Shin et al., 2015), transformational leadership proves to be conducive to

supporting change on the side of employees. The effect of transformational leadership is dependent on instrumental leadership. This means that the change-promoting effect of transformational leadership only exists if instrumental leadership is highly developed. This result underlines the theoretical assumption by Antonakis and House (2004) that even in the change context, instrumental leadership promotes the effectiveness of transformational leadership. The interdependencies between the two leadership styles deepen the understanding under which conditions transformational leadership enhances the employees' change support. From the methodical perspective, the findings show the necessity of the extended full-range of leadership model, since the effect of transformational leadership seems to be overestimated without considering instrumental leadership (Antonakis et al., 2014b; Antonakis & House, 2014). According to this, instrumental leadership is also a sensible and necessary extension of the model in the context of change. Nevertheless, the findings to date are based on cross-sectional data which do not allow causal links to be drawn. Therefore, additional evidence is needed to draw causal conclusions about the relationships between transformational and instrumental leadership in a context of change. Accordingly, Study 1.2 builds on the previous results and uses an experimental design that allows causal relationships to be established.

### **3.4 Study 1.2**

#### **3.4.1 Theory**

In order to be able to empirically verify the theoretical assumptions made in the first study, I use not only championing support for change as change relevant outcomes (Oreg et al., 2011), but also trust in the supervisor and affective change commitment. Trust in the supervisor forms the basis of a social exchange relationship (Blau, 1964), as assumed in hypotheses 1 and 2 of the first study. It served to explain how transformational and instrumental leadership can promote extra role behavior in change, namely championing support (Carter et al., 2013; Michaelis et al., 2010). According to the derivation, trust in the leader thus represented a distal predictor for change support. The affective change commitment is used to support the theoretical assumptions of the third hypothesis, according to which the theory of planned behavior was used to clarify the different modes of impact of transformational and instrumental leadership on change support. The theory represents a cognitive decision-making model according to which the behavior of a person can be predicted by the behavioral intention. Among other things, this behavioral intention is determined by a person's attitude to this behavior. In the case of change support, affective change commitment is the attitude, which by

definition entails a behavioral intention to support change. The affective change commitment therefore represents a proximal predictor of change support, which has already been meta-analytically confirmed (Bouckennooghe et al., 2015).

If the theoretical assumptions on the prediction of change support were brought together, it can be assumed that supportive leadership behavior promotes a trusting relationship between manager and followers that predicts the affective change commitment of employees (Michaelis et al., 2010; Neves & Caetano, 2006) and leads to support for change. Due to the experimental design of this study and the survey of outcomes at one measurement point, only direct and no indirect effects are examined. In this way, the theoretical relationships between the manipulated leadership behavior and the individual outcomes are causally underpinned.

### **Affective Change Commitment and Trust in the Leader**

Affective change commitment is defined as a mindset that binds an individual to a course of action that seems necessary for the successful implementation of a change (Herscovitch & Meyer, 2002). In particular, the affective component is regarded as the binding element between leadership and change support (Herold et al., 2008; Meyer & Hamilton, 2013), since it takes into account whether the management takes the right decision with the change (Herscovitch & Meyer, 2002). It thus stands for a belief in the benefits that change brings and, as described above, it is a predictor of actual change support (Bouckennooghe et al., 2015; Herscovitch & Meyer, 2002; Meyer et al., 2007; Seo et al., 2012; Shin et al., 2012; Shin et al., 2015).

Transformational leadership motivates employees to work towards common goals by strengthening their self-efficacy (Bono & Judge, 2004; Shamir et al., 1993). Employees identify more strongly with the common change goals and are prepared to commit themselves to change (Herold et al., 2008; Michaelis et al., 2010). On the other hand, I assume that instrumental leadership can convince employees of the benefits of change with technical knowledge and information and thus helps employees understand why change is necessary. At the same time, the instrumental leader reduces uncertainty through a concrete strategic change plan and helps to realize it in everyday life by providing resources and feedback.

Trust in the leader plays an important role in change (Armenakis et al., 1993) and forms the basis for a functioning social exchange relationship (Blau, 1964; Cropanzano & Mitchell, 2005). Thus, it became apparent that it is important that the leader, who presents the change initiative to the employees, is perceived as credibly, trustworthy and sincerely in order to

promote the change readiness of employees (Armenakis et al., 1993). The level of trust between leaders and employees is a predictor example for the acceptance of a new evaluation system by the employees (Reinke, 2003). Trust is therefore an important mediator between leadership behavior and reactions to change (Michaelis et al., 2009). If the employees trust the leader, they are more willing to follow the goals of the leader and to take possible risks associated with a change. It has already been empirically demonstrated that transformational leadership behavior promotes trust in managers (Braun, Peus, Weisweiler, & Frey, 2013; Nohe & Michaelis, 2016; Podsakoff et al., 1996).

Instrumental leadership behavior is characterized by the competence and knowledge of the leader (Antonakis & House, 2014). According to the model of Mayer et al. (1995), employees trust their leader when they feel that the leader has a high ability, benevolence and integrity. In addition to the benevolence and integrity of a transformational leader, especially the high ability should be attributed to an instrumental leader. The leader's competence in turn promotes perceived supervisor support (Neves, 2011), which also influences the benevolence and integrity of the instrumental leader in the perception of the followers. Therefore, I assume in line with the hypothesis from Study 1.1 that transformational and instrumental leadership directly promotes the three change variables.

*Hypothesis 4:* Transformational leadership positively predicts the change-relevant criteria affective change commitment (H4a), championing support for change (H4b) and trust in the leader (H4c).

*Hypothesis 5:* Instrumental leadership positively predicts the change-relevant criteria affective change commitment (H5a), championing support for change (H5b) and trust in the leader (H5c).

As explained earlier, transformational leadership motivates employees to work towards a common goal by showing them what part they contribute to that goal and by fostering the identification with it (Shamir et al., 1993). Instrumental leadership convinces employees with technical reasons why change is important. This means that employees are cognitively convinced of the change and uncertainties regarding an unknown future are removed by a clear strategy formulation and facilitating support to adapt. Accordingly, the cognitive explanation by instrumental leadership behavior complements the emotional enthusiasm by transformational leadership behavior and thereby increases the belief of the employees that the change is beneficial.



In terms of strengthening trust in the leader, instrumental leaders can complement a trusting relationship that exists with the transformational leader based on benevolence and integrity with their expertise and competence. In their social interaction, employees can therefore be confident that their leader is acting benevolently towards them and that they can rely on the advice and professional decision-making of the leader.

Consequently, I assume that instrumental leadership will strengthen the positive influence of transformational leadership on the change outcomes.

*Hypothesis 6:* The relations between transformational leadership and the change-relevant criteria affective change commitment (H6a), championing support for change (H6b) and trust in the leader (H6c), are moderated by instrumental leadership, such that the relations are only significant in the high instrumental leadership condition.

### **3.4.2 Method**

#### **Design and Procedure**

In order to test the hypotheses, I conducted an experimental simulation study (Devos, Buelens, & Bouckennooghe, 2007; Scandura & Williams, 2000) in which participants are randomly assigned to one of four scenarios and imagine themselves into the described change situation. The experimental design of vignette studies is particularly suited to ensure the internal validity of outcomes and thus to investigate causal relationships (Aguinis & Bradley, 2014). In contrast to laboratory experiments, they also make it possible to map a change context more realistically and thus combine a cause-and-effect relationship between management research and change management research (Devos et al., 2007). According to the review by Aguinis and Bradley (2014), the use of vignettes is particularly suitable if the scenarios correspond to the objective of the research question. Thus it is possible to control the manipulated antecedence (leadership behavior), the focus of the study lies on the causal relationship between leadership and change outcomes, the outcomes are explicit (affective change commitment, behavioral support and trust) and the topic is sensitive where social desirability is to be expected (changes with high personal involvement; Aguinis & Bradley, 2014; Helpap, 2016).

The focus of this vignette study is on manipulating instrumental and transformational leadership behavior in a change situation. In order to create the change situation, I adapted a change scenario developed by Helpap (2016) and used it as the baseline vignette. This baseline vignette describes a restructuring process of a fictive electronics company, and is used as the initial change situation in all leadership scenarios. I developed a total of four vignettes

(Appendix A) and manipulated the transformational and instrumental leadership behaviors in the low and high condition (2x2) as described under independent variables. Before the main study was carried out, the scenarios were tested in a pretest and a manipulation check was conducted.

## **Participants**

Research assistants recruited participants for the main test through email or via social networks by sending a link to the online survey. As mentioned before, this approach of data collection has been applied in previous leadership studies (Wang et al., 2017) and it could be shown that this approach leads to representative samples (Demerouti & Rispens, 2014; Wheeler et al., 2014). The survey included information on the study, demographic characteristics, the vignette texts (Appendix A) and the questionnaires on the study variables. Seven-hundred seventy-two people participated in the survey, of whom 58 % were female. The mean age was 30.84 years ( $SD = 10.55$ ). Forty-two percent of the respondents had a grammar school education and 38 % had a university education. Of the respondents, 47 % were employees in different industries (17 % industry, 13 % trade) and 34 % students. Sixty-one percent of all respondents had no leadership experience. The mean professional experience was 7.18 years ( $SD = 8.56$ ).

## **Independent Variables**

***Transformational leadership manipulation.*** To manipulate transformational leadership behavior, I developed two scenarios describing a high and a low transformational leader (see Appendix A). I drew upon existing vignettes for transformational leadership (Felfe & Schyns, 2006; Kirkpatrick & Locke, 1996; Powell, Butterfield, & Bartol, 2008) and transferred the described behavior into the change context of the baseline vignette. In order to check whether the manipulation worked out as intended, the validated German translation (Heinitz & Rowold, 2007; Krüger et al., 2011) of the TLI (Podsakoff et al., 1990; Podsakoff et al., 1996) was used with 22 items as in Study 1.1. Cronbach's alpha was .91.

***Instrumental leadership manipulation.*** The scenarios for instrumental leadership have been newly developed, based on the theoretical concept of Antonakis and House (2014). The manipulation consisted of a high and a low instrumental leader description in the context of the change situation (see Appendix A). As in Study 1.1, I used the instrumental leadership scale from Antonakis and House (2004) in the German translation (Rowold, 2014) to assess instrumental leadership. The Cronbach's alpha was .96.

## Dependent Measures

**Affective commitment to change.** Participants' affective commitment to change was measured using Herscovitch and Meyer's (2002) commitment to change scale. The scale was used in a German version, which has been applied and tested in prior studies (Abrell-Vogel & Rowold, 2014). Affective commitment was measured with six items rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "I believe in the value of this change". Cronbach's alpha was .81.

**Championing support for change.** For the assessment of respondents' championing behavior towards an ongoing change process, I used the six items from Herscovitch and Meyer's (2002) questionnaire for the measurement of behavioral support for change in a German translation as in the Study 1.1. Cronbach's alpha was .84.

**Trust in the supervisor.** I measured trust in the supervisor with the German Workplace Trust Survey (G-WTS) by Lehmann-Willenbrock and Kauffeld (2010). Nine items were surveyed on a 6-point Likert scale ranging from 1 (*do not agree at all*) to 6 (*fully agree*). One sample item is "My supervisor behaves fairly and decently". Cronbach's alpha was .92.

## Scenario Pretest

In order to test whether the manipulation of leadership styles was successful, I applied the vignettes in a pretest with a convenience sample. The sample included  $N = 620$  persons with an average age of 33 years ( $SD = 13.15$ ), of whom 326 were female. Forty-eight percent of the respondents were employees in different industries (e.g. 22.90 % industry), 30 % were students. The average work experience was 8.53 years ( $SD = 9.52$ ). I randomly assigned the participants to the four vignettes, and following the scenarios described in Appendix A they completed the questionnaires. The mean values of the two manipulated leadership styles per condition are shown in Table 5.

The results of the ANOVA for the pretest showed that there are significant differences between the four conditions for transformational leadership ( $F(3, 616) = 12.80^{**}$ ,  $\eta^2 = .06$ ) and instrumental leadership ( $F(3, 616) = 18.02^{**}$ ,  $\eta^2 = .08$ ). Post-hoc analyses with Bonferroni correction showed, however, that there is no significant difference between the second and third vignettes with regard to transformational leadership behavior. The indented low transformational leadership condition in the second vignette was not significantly different to the high condition in the first vignette ( $\Delta M = -.12$ ,  $SE = .07$ ,  $p > .05$ ) or third vignette ( $\Delta M = .07$ ,

$SE = 0.7, p > .05$ ), but significantly different to the fourth vignette with the low condition ( $\Delta M = .29, SE = 0.7, p < .05$ ). The same pattern was found for the third vignette. I then revised the vignettes once again to avoid the overlap effect of the two leadership styles, which can arise from primacy and regency effects in the second and third vignettes.

### 3.4.3 Results

The results of the manipulation check in the main investigation showed that significant differences existed between low and high conditions of transformational leadership ( $F(3, 616) = 12.80, p < .01, \eta^2 = .06$ ) and instrumental leadership ( $F(3, 616) = 18.02, p < .01, \eta^2 = .08$ ) in the four vignettes. Table 4 shows the results with mean values, standard errors and effects per condition. Post hoc tests with Bonferroni correction showed that the differences between the four vignettes were also significant in the intended form. There was a significant difference between the high and the low condition of transformational leadership in vignette 2 and 3. The results thus confirm that the manipulation of leadership styles was successful.

In order to test the hypotheses, I performed 2 (transformational leadership high / low) x 2 (instrumental leadership high / low) between subject covariance analyses (ANCOVAs) and controlled for age, gender and educational attainment of the participants. Mean values, standard deviations and confidence intervals of the change-related outcomes under the conditions of transformational and instrumental leadership are shown in Table 6.

For affective change commitment, the results indicated no significant main effect for transformational leadership (H4a),  $F(1, 763) = 1.11, p = .29, \eta^2 = .00$ , but a significant main effect for instrumental leadership (H5a),  $F(1, 763) = 11.57, p < .01, \eta^2 = .02$ . The interaction of the leadership conditions was not significant,  $F(1, 763) = 1.26, p = .26, \eta^2 = .00$  (H6a). Participants were more strongly bound to the change in the high instrumental leadership condition than in the low condition. The influence of transformational leadership behavior made no difference to the participants' change commitment.

The results of ANCOVA showed that neither the main effect of transformational,  $F(1, 759) = .76, p = .38, \eta^2 = .00$  (H4b), nor instrumental leadership had an influence on the change support,  $F(1, 759) = 2.15, p = .14, \eta^2 = .00$  (H5b). The interaction of the leadership styles was therefore not significant,  $F(1, 759) = .44, p = .51, \eta^2 = .00$  (H6b). The change support did not differ between the conditions. The 2x2 ANCOVA showed a significant main effect on trust in the leader for instrumental leadership ( $F(1, 761) = 61.26, p < .00, \eta^2 = .07$ )

Table 5. Study 1.2: Means, standard errors, and confidence intervals per conditions in the main test and pretest of Study 1.2.

	Manipulation check			Manipulation check		
		Main test		Pretest		
	<i>N</i>	<i>M</i> ( <i>SE</i> )	95% CI	<i>N</i>	<i>M</i> ( <i>SE</i> )	95 % CI
1. High transformational & high instrumental leadership	194	3.38 (0.04)	(3.30, 3.45)	161	3.35 (0.05)	(3.25, 3.44)
		3.73 (0.43)	(3.65, 3.82)		3.39 (0.06)	(3.28, 3.50)
2. Low transformational & high instrumental leadership	187	3.03 (0.44)	(2.94, 3.12)	155	3.22 (0.05)	(3.13, 3.32)
		3.72 (0.44)	(3.63, 3.80)		3.33 (0.06)	(3.21, 3.45)
3. High transformational & low instrumental leadership	202	3.35 (0.41)	(3.27, 3.43)	150	3.15 (0.04)	(3.06, 3.24)
		2.71 (0.06)	(2.59, 2.83)		3.00 (0.06)	(2.88, 3.12)
4. Low transformational & low instrumental leadership	189	2.97 (0.43)	(2.88, 3.05)	154	2.94 (0.05)	(2.83, 3.04)
		2.53 (0.06)	(2.41, 2.65)		2.86 (0.07)	(2.72, 2.99)
ANOVA results						
Transformational leadership		$F(3, 768) = 26.07^{**}, \eta^2 = .09$			$F(3, 616) = 12.80^{**}, \eta^2 = .06$	
Instrumental leadership		$F(3, 768) = 148.22^{**}, \eta^2 = .38$			$F(3, 616) = 18.02^{**}, \eta^2 = .08$	

Note.  $N_{main\ test} = 772$ ;  $N_{pretest} = 620$ .

\*\*  $p < .01$ .

Table 6. Study 1.2: Means, standard deviations, and confidence intervals per conditions in the main test.

	<i>N</i>	Affective change commitment		Behavioral support for change		Trust in the supervisor	
		<i>M (SD)</i>	95 % CI	<i>M (SD)</i>	95 % CI	<i>M (SD)</i>	95 % CI
1. High transformational & high instrumental leadership	194	3.88 (0.63)	(3.79, 3.97)	3.58 (0.67)	(3.48, 3.67)	4.41 (.85)	(4.29, 4.53)
2. Low transformational & high instrumental leadership	187	3.78 (0.66)	(3.68, 3.87)	3.58 (0.72)	(3.47, 3.68)	4.32 (.85)	(4.20, 4.45)
3. High transformational & low instrumental leadership	202	3.67 (0.66)	(3.57, 3.75)	3.54 (0.71)	(3.42, 3.62)	3.96 (.93)	(3.83, 4.09)
4. Low transformational & low instrumental leadership	189	3.67 (0.69)	(3.57, 3.77)	3.46 (0.73)	(3.36, 3.57)	3.78 (.87)	(3.66, 3.91)

Note.  $N_{main\ test} = 772$ .

\*\*  $p < .01$ .

(H5c) and transformational leadership ( $F(1, 761) = 4.57, p < .05, \eta^2 = .01$ ) (H4c). The interaction, however, was not significant ( $F(1, 761) = .69, p = .41, \eta^2 = .00$ ) (H6c). Accordingly, the respondents trusted a leader most in the high instrumental and transformational leadership condition. The difference between the low and the high condition of instrumental leadership had a stronger effect on trust than the difference between the high and the low condition of transformational leadership.

### Supplemental Analysis

Additionally, I calculated the ANCOVAs at the scale level of the leadership styles rather than as dummy-coded variables according to the manipulated conditions. The following results were obtained for the outcomes:

There was also a main effect of instrumental leadership on affective change commitment ( $F(93, 770) = 1.63, p < .01, \eta^2 = .62$ ), while the effect of transformational leadership and the interaction of both leadership styles was not significant. The effects on change support now showed a significant main effect for transformational ( $F(110, 766) = 1.87, p < .01, \eta^2 = .67$ ) and instrumental leadership ( $F(93, 766) = 1.74, p < .01, \eta^2 = .64$ ), and a significant interaction between both leadership styles ( $F(464, 766) = 1.46, p < .05, \eta^2 = .88$ ) was indicated. The results of the ANCOVA also revealed significant effects for the main effects of transformational ( $F(111, 768) = 2.58, p < .00, \eta^2 = .76$ ), and instrumental leadership on trust in the leader ( $F(93, 768) = 4.44, p < .00, \eta^2 = .82$ ). The interaction of the two leadership styles was also significant ( $F(466, 768) = 1.41, p < .05, \eta^2 = .88$ ).

### 3.4.4 Discussion

The results of the second study support the findings of the first study that instrumental leadership is crucial for the influence of transformational leadership behavior on participants' reactions to change. The manipulation of transformational leadership made a significant difference only in trust, while there was no difference between the high and low condition in affective commitment and change support. The influence of instrumental leadership on affective change commitment and trust, on the other hand, became apparent. Thus, trust and commitment were significantly higher in the high condition of instrumental leadership than in the low condition. However, the interaction of both leadership styles only became apparent when the variance analysis was carried out at scale level.

### **3.5 General Discussion**

The aim of the study was to examine the effects of transformational and instrumental leadership as part of the extended full-range of leadership model in the context of change. A stepwise regression analysis in Study 1.1 showed that transformational leadership, as hypothesized, had a positive influence on change support, while instrumental leadership could not make an additional contribution to variance clarification of change support. However, the interaction of both leadership behaviors was significant and simple slope analyses revealed that transformational leadership could only positively predict change support in the high instrumental leadership condition. As assumed, transactional and laissez-faire leadership did not contribute to the prediction of change support.

The results of the second study could substantiate the core finding of the first study that instrumental leadership is an essential leadership behavior in change in an experimental design. Accordingly, a significant main effect of the manipulated instrumental leadership on affective change commitment of the employees and their trust in the supervisor was found. However, the interaction effects between the manipulated instrumental and transformational leadership behaviors on the change outcomes were not significant. The main effect of transformational leadership was only apparent on trust in the supervisor. Thus, the results of Study 1.2 could not replicate the results of the first study regarding the outcome championing support. The manipulation of leadership styles showed that the mean values of change outcomes are more strongly influenced by the development of instrumental leadership than by transformational leadership, indicating the importance of instrumental leadership on change-relevant outcomes.

#### **Implications for Leadership and Change Literature**

The comprehensive analysis of all four extended full-range of leadership factors showed that instrumental leadership is an important complement, because without this leadership style, transformational leadership would not have any change-promoting effect. By controlling all four factors, including transactional leadership, which is similar to instrumental leadership, there was no direct effect of instrumental leadership. Nevertheless, the relevance of instrumental leadership in the context of change became clear, which also confirmed the results of the second study.

The rejection of hypotheses 4b, 5b and 6a, 6b, 6c to predict the championing support, however, together with the results of the first study do not show a consistent picture regarding the role of leadership behaviors. One explanation for why the championing support was not



affected by the manipulated leadership behaviors could be that it is easier for the participants to create an attitude than to make assumptions about their behavior within the framework of the fictitious change scenarios. The imagination of showing a certain behavior is more dependent on context factors of the fictitious company and therefore more abstract for the respondents. Due to the more abstract imagination, the different leadership behavior patterns are less strongly associated with the behavior-related reaction than with the cognitive attitude. Accordingly, a positive effect on affective change commitment could be found, which is regarded as a cognitive reaction to a change (Day, 2014; Oreg et al., 2011), but no effect on change support. Therefore, previous vignette studies were preferably conducted with attitude-related change outcomes such as openness to change or change commitment (Devos et al., 2007; Helpap, 2016) and there was also no direct effect, only an indirect effect on behavior-related outcomes such as intentions to resist change (Helpap & Bekmeier-Feuerhahn, 2016).

Moreover, the results question the role of transformational leadership in change situations. Nonetheless, transformational leadership has been one of the best studied leadership constructs in the last three decades (Antonakis et al., 2014b) and is considered a highly effective leadership concept to predict objective (Barling et al., 1996) and subjective organizational outcomes (Antonakis & House, 2013; Jackson et al., 2013; Wang et al., 2011). The results of both studies suggest that the effect of transformational leadership without considering the other full-range of leadership factors, has probably been overestimated in the change literature so far (e.g. Abrell-Vogel & Rowold, 2014; Herold et al., 2008; Oreg & Berson, 2011; Shin et al., 2012; Shin et al., 2015). Especially the consideration of instrumental leadership relativizes the influence of transformational leadership in the change context. The relativization of the influence of transformational leadership is due to distortion by omitted variables. This distortion arises when important leadership constructs are disregarded that could clarify their own part of variance in the outcomes and lead among other things to an overestimation of the other investigated leadership styles (Antonakis et al., 2014a).

In Study 1.2, the role of instrumental leadership even seemed to have greater influence on change outcomes than transformational leadership. However, it should be noted that this effect of instrumental leadership could be stronger due to a regency effect, since the instrumental leadership behavior was described after transformational behavior in the vignette and could therefore have had a stronger influence on the respondents' assessment. The results regarding the effectiveness of instrumental leadership are in line with the results of Antonakis and House (2014), Rowold (2014), and Rowold et al. (2017), who also demonstrated that

instrumental leadership could clarify additional variance in the outcomes effectiveness, satisfaction and stress beyond transformational leadership.

This study is therefore the first one investigating the effect of transformational leadership in the context of change together with instrumental, transactional and laissez-faire leadership, thus avoiding the widespread bias from omitted variables in existing literature (Antonakis & House, 2014). It also takes into account the content-related criticism of transformational leadership regarding the invalidity of the concept and omitted behaviors in the full-range of leadership model (van Knippenberg & Sitkin, 2013; Yukl, 1999). Instrumental leadership therefore represents a justified and necessary extension of the full-range of leadership model even in the context of change, and should be taken into account when investigating transformational leadership in order to calculate realistic effects.

### **Strengths, Limitations, and Future Research**

The strength of the study lies primarily in the combination of two different research methods: a triangulation, which makes it possible to balance the low internal and the high external validity of the field study, combined with a high internal and a low external validity of the experimental vignette study (Scandura & Williams, 2000).

Nevertheless, despite using this methodology, some weaknesses remain. Thus, the problem of common method bias could possibly be present in both studies. In order to reduce a common method bias in Study 1.1, the employees rated the constructs at two points in time and the main effects of the study were examined again in Study 1.2. However, a bias due to single source data remains in Study 1.2, since only self-report data were available in the vignette-study. A distortion due to common method variance usually causes an overestimation of the main effects and an underestimation of the interaction effects (Podsakoff et al., 2012). Since the interaction could not be repeated in the second study, but the main effects are partly significant, a bias by a common method variance cannot be excluded (Podsakoff et al., 2012). On the other hand, supplemental analyses in Study 1.2 showed that there was a significant interaction between instrumental and transformational leadership when the data were used at the scale level and not as dummy-coded variables.

The consideration of all four leadership constructs of the extended full-range of leadership model contributes to the literature as mentioned above but raises at the same time the problem of multicollinearity of the leadership styles. In Study 1.1, the correlation of instrumental and transformational leadership is at .85. Similarly high correlations can be found

in the study of Rowold et al. (2017) of .89 or Rowold (2014) of up to .80 between the instrumental facet path goal facilitation and the transformational facet providing an appropriate role model. Although the cut-off value for redundant constructs is .90 (Shaffer, DeGeest, & Li, 2016), Bormann and Rowold (2018) concluded in their review on construct proliferation in the case of instrumental leadership that it is theoretically and empirically justified to introduce a new leadership construct to avoid the omitted variable bias. The authors thus concur with the results of the two validation studies on instrumental leadership of Antonakis and House (2014) and Rowold (2014).

Accordingly, the problem of multicollinearity seems to be subordinate to that of the omitted variable bias. Nevertheless, future studies should try to keep the correlation of the constructs low by using several measurement points and different rating sources or by trying to control the leadership behaviors through the increased use of experimental design.

Based on the present results it can be assumed that an indirect effect of the leadership behaviors on championing support would exist via the two predictors affective change commitment and trust. The mediating effect via affective change commitment would underline the theoretical assumptions based on the theory of planned behavior. The indirect effect via trust would underpin the theoretical assumed effect chain of the reciprocal relationship (Blau, 1964). So far, only individual, direct relations were tested in this study. It would therefore be interesting for future studies to investigate further the moderated indirect impact chain in order to gain a deeper understanding, in particular of the impact of instrumental leadership in change. Affective change commitment seems to be a suitable mediator insofar as according to Oreg et al. (2011), it is less an emotional than a cognitive reaction to a change. This could be supported by the finding that affective change commitment can be positively influenced by functional behaviors of the instrumental leader.

As mentioned in the reviews of Rosing et al. (2011) and Mainemelis et al. (2015) on leadership and innovation or creativity, it would also be an in-depth insight to consider change as a dynamic process and include the moderator stage in time into the model. This would shed light on how instrumental leadership functions in the different phases of change, since it can be assumed that a controlling leadership behavior, such as that of the transactional leader, serves the later implementation of change rather than the initial generation of ideas. The same may be true for instrumental leadership. However, the results of the vignette study suggest that instrumental leadership is also relevant in the initial phase of a change, since the initial phase was simulated with the announcement of the change. The field study examined all phases of

change, so that the results indicate the importance of instrumental leadership during change regardless of the phase.

Even though no interaction effect in the vignette study was found, the investigation of instrumental and transformational leadership at facet level would also provide a more detailed insight into the mutual influence of the two leadership styles. Thus, it would be interesting to examine whether vision and strategy actually interact and strengthen each other in effect or whether path-goal facilitation sensibly promotes individual support. These insights would also be helpful for the conception of a leadership training in order to develop leaders as change agents.

From the perspective of leadership research, it would also be interesting to consider the aspect of destructive leadership. The extended full-range of leadership model initially seems to reflect all relevant positive leadership behaviors, but the relevance of negative leadership behavior is increasingly emphasized (Schyns & Schilling, 2013) and Rowold and Poethke (2017) already combined destructive leadership with the extended full-range of leadership model. According to their integrative leadership model (Rowold & Poethke, 2017), destructive leadership should also be examined in the context of change in future studies to consider both dark and bright sights of leadership.

### **Practical implications**

The study has important management implications. In the past, it was important to point out a vision (Kotter, 1996) in the sense of transformational leadership and to support employees individually on an emotional level (Herold et al., 2008). It turns out, however, that without a clear strategy and the necessary specialist information for change, these behaviors are not sufficient to achieve change support or affective change commitment on the side of employees. In the sense of instrumental leadership, the leader must therefore strategically guide the employees and support them in accomplishing their tasks. According to the theory of planned behavior (Ajzen, 1991), employees must be given control over change support by providing the necessary resources and showing the regulatory framework for change. In this way, the probability increases that instrumentally led employees actually support a change, since the prerequisites are created for implementation of change in everyday life. Accordingly, managers must be trained in both transformational (Avolio et al., 2009; Barling et al., 1996) and instrumental leadership in order to learn to lead employees successfully in times of change. Antonakis and House (2014) and Rowold (2014) already emphasized the need to develop a training in instrumental leadership. However, since instrumental leadership behavior is strongly

dependent on leadership experience and expertise, Antonakis and House (2014) assumed that this behavior will take time to be developed and adopted by leaders. In this context, a mentoring program could also help and support young leaders in particular to benefit from the expertise of experienced leaders and to develop strategic knowledge faster.

### **3.6 Conclusion**

In summary, the study showed that although transformational leadership had a change-promoting effect, this effect ultimately depended on instrumental leadership. This means that only if instrumental leadership is highly developed, transformational leadership can promote change support. In addition, the development of change-relevant outcomes was shown to be more strongly influenced by instrumental than by transformational leadership. Due to inconsistent results in both studies, no clear causal statements can be made about the main and interaction effects of the leadership behaviors. It is therefore necessary to further investigate the effects of instrumental and transformational leadership in an experimental design to deepen the understanding on how these behaviors interact and influence employees' change reactions.

## **4. Study 2 - Multilevel Investigation on the Effect of Instrumental Leadership on Team Change Success and Individual Change Support**

### **4.1 Introduction**

Change processes are omnipresent in organizations and are becoming increasingly complex and unpredictable due to changing conditions in the external environment (Burke, 2017). For years now, the failure rate of change initiatives has been estimated at around 70 % (Beer & Nohria, 2000; Meaney & Pung, 2008). Managerial mistakes such as an unclear implementation strategy are often mentioned as reasons for failure (Kotter, 2008). It is therefore more than ever a central challenge for leaders to proactively recognize opportunities in the environment and to use them strategically as quickly as possible (Antonakis & House, 2014; Kotter, 2014; Morgeson et al., 2010; Rowold, 2014). Leaders have to integrate the strategic changes into the day-to-day work of their followers while providing them with a seamless workflow. This means that leaders have to remove obstacles and help the followers to adapt quickly to new challenges while doing their daily tasks (Burke, 2017; Kanfer & Ackerman, 1989). Such important leadership behaviors in times of change, however, have been largely neglected in leadership research (Judge et al., 2004; Yukl, 2009) until Antonakis and House (2002; 2004) developed the construct of instrumental leadership. Instrumental leadership encompasses these behaviors and consists of strategic leadership - including the consideration of the external environment - and work follower facilitation (Antonakis & House, 2002).

Instrumental leaders therefore seem to have the potential to meet the challenges of a changing work environment and to recognize and implement changes in a timely manner. However, instrumental leadership has not been examined in the context of change yet, but first empirical results indicated its relevance in the organizational context. Thus a positive influence of instrumental leadership was supported on relevant outcome criteria and even its incremental validity beyond transformational leadership regarding effectiveness and job satisfaction (Antonakis & House, 2014; Rowold, 2014). A consensus exists in change literature about the relevance of the attitudinal and behavioral reactions of employees for the successful implementation of a change (Fugate & Soenen, 2018; Oreg et al., 2011; Shin et al., 2012) and the influence of leadership regarding this issue. In particular, employees' commitment to change plays a central role in this context, because it is considered the sense-making mechanism between leadership and change success criteria, like behavioral change support (Meyer & Hamilton, 2013). The question therefore arises as to whether and how instrumental

leadership can promote the change reactions of employees in order to ensure the implementation and increase the success of change initiatives.

In order to answer this question this study investigates the influence and sense-making mechanism of instrumental leadership on the team change success and employees' individual support for change via team affective change commitment. According to Antonakis and House (2002), instrumental leadership affects organizational performance both indirectly through strategic leadership with actions and decisions and directly through work-follower facilitation in a hands-on supportive manner. In order to examine these two pathways in the change context, I would like to capture the impact on the change response in the day-to-day work of the employees at an individual level, as well as the success impact at team level, in which the leader's superior evaluates change success within the team. Based on the uncertainty reduction (Berger & Calabrese, 1975) and social exchange theory (Blau, 1964), I suppose that instrumental leaders enhance the change reactions in the teams in two respects. Firstly, based on the uncertainty reduction theory, team members seek information when they are unsecure about upcoming situations to better predict the future and reduce their uncertainty. Instrumental leaders reduce uncertainty about the change by providing the team members with necessary and important information as to why the change is important for the team and set the direction and goals as to how the change should be implemented. Additionally, instrumental leaders help the team members to cope with increased work demands and to achieve their goals related to the change by supporting them with their expertise. With this uncertainty reduction, instrumental leaders create the prerequisite for a social exchange relation (Berger, 1987). Thus, secondly, instrumental leaders can convince the team members of the benefits of the change for the team and strengthen their belief in the change (team affective change commitment). Because of the social exchange, the supportive behavior of leaders creates a sense of reciprocity among the team members and they follow the strategic goals of the leaders and support the change.

Furthermore, in the context of the uncertainty reduction theory, I assume that team members can more easily follow highly affective committed leaders since the leaders' positive attitude and belief in change appear authentic and credible. This makes their behavior more predictable for team members and gives them certainty, unlike leaders who do not believe in the benefits of change. I therefore suppose that the affective change commitment of the leaders strengthens the connection between instrumental leadership and the team affective change commitment on team level. The research model (see Figure 4) thus represents a multilevel moderated mediation that measures the effect of instrumental leadership in the perception of the team on change outcomes at both the team and the individual level.

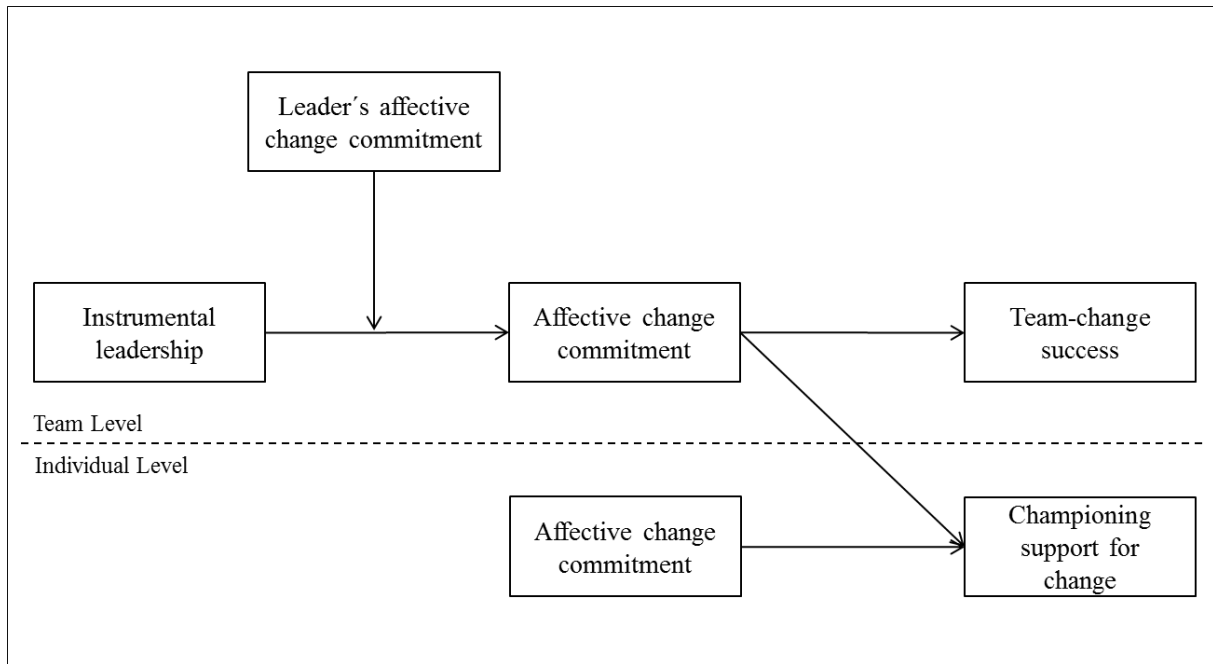


Figure 4. Study 2: Research model.

This study contributes to the leadership and change management literature in three ways. Firstly, I explore the potential of instrumental leadership in the context of change and analyze the mechanisms behind how instrumental leadership improves the affective change commitment in the team and thus influences team change success and individual change support. This expands existing findings on instrumental leadership and reinforces its relevance in the leadership and change management literature. Secondly, the evaluation of change-related results on two levels reflects the indirect and direct influence on organizational performance assumed by Antonakis and House (2002). Thirdly, I consider the dynamic interplay between the leaders' instrumental behavior and the leaders' affective change commitment. This interplay gives a deeper understanding on how the task-oriented behavior is fostered through a change-convincing belief in its influence on the change reactions of the employees, especially the team affective change commitment as the sense-making mechanism.

## 4.2 Theory

### 4.2.1 Instrumental Leadership

Instrumental leadership stands out due to manners based on the leader's expertise to facilitate employee's task performance (Antonakis & Atwater, 2002) and is defined '... as the application of leader expert knowledge on monitoring of the environment and of performance, and the implementation of strategic and tactical solutions' (Antonakis & House, 2014, p. 749).



The construct was introduced into the full range of leadership theory by Antonakis and House (2002; 2004) following existing criticism, that the theory does not reflect the complete range of leadership behavior as intended (Yukl, 1999).

Antonakis and House (2002; 2004) see strategic leadership as a focus of leadership behavior that indirectly influences organizational performance through decisions and actions. Strategic leadership includes the facets of environmental monitoring, which stands for monitoring the internal and external environment and gathering information about possible opportunities and risks, and the facet of strategy formulation, in which the information gained from environmental monitoring is used to develop goals for the team to implement the mission. In addition, the dimension work follower facilitation is aimed at directly improving the performance of employees by supporting them with expertise and hands on support (Rowold, 2014). This dimension includes the facet of path-goal facilitation, in which the leader supports the employees by providing the necessary resources and removing obstacles to the accomplishment of tasks. The fourth facet outcome monitoring stands for constructive feedback during the work process and intends to learn from mistakes.

Antonakis and House (2014) stress that instrumental leadership must be distinguished both from transformational leadership since it is not idealistic or inspiring, and from transactional leadership because it is not conditional. First empirical studies (Antonakis & House, 2014; Rowold, 2014) showed a positive influence of instrumental leadership on affective organizational commitment and objective performance. Additionally, instrumental leadership could even clarify additional variance on job performance and effectiveness beyond transformational leadership (Rowold, 2014).

#### **4.2.2 Instrumental Leadership and Affective Change Commitment at the Team Level**

To examine the effect of instrumental leadership at the team level, I also look at the connection with affective change commitment at the team level. As Klein and Kozlowski (2000) argue, individuals are subject to the same stimuli through their team affiliation, as the same leader and the same organizational events and processes. The influences of instrumental leadership behavior and organizational change processes are therefore stimuli that are shared in their perception by the team members, so that individual perceptions of the team members can be aggregated at the team level.

With regard to leadership behavior, there is agreement that the study of leadership is multi-level in nature (Bliese, Halverson, & Schriesheim, 2002). Regarding organizational change processes, there is already evidence that team members have a shared perception of

important aspects of a change process (Caldwell, Herold, & Fedor, 2004; Fedor, Caldwell, & Herold, 2006; Herold et al., 2008; Rafferty & Jimmieson, 2010; Whelan-Berry, Gordon, & Hinings, 2003). Thus, Rafferty and Jimmieson (2010) assume that a team develops a shared perception of a change climate by sharing the quality and quantity of information about the change process. Whelan-Berry et al. (2003) argue that, among other aspects, a group-level implementation plan must be developed to realize a change. The team members therefore share change-related perceptions and activities, which can be attributed to the fact that team members spend much of their time discussing and speculating about a change process to understand the change (Isabella, 1990). According to the uncertainty reduction theory (Berger & Calabrese, 1975), when confronted with change as an unknown situation, employees are looking for information and orientation to reduce their uncertainty. Therefore, the team members exchange information about the change, how their work will be affected by the change and how management has implemented the change (Bordia et al., 2003) to reduce their uncertainty and to better control the future. This exchange results in a shared belief about change in the team (Rafferty & Jimmieson, 2010). Accordingly, I adopt the affective change commitment to the team level.

Change commitment is originally developed on the individual level and defined ‘... as a force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative’ (Herscovitch & Meyer, 2002, p. 475). In accordance with the general three-dimensional commitment model of Meyer and Herscovitch (2001), Herscovitch and Meyer (2002) also distinguish between an affective, normative and calculatory component in change commitment. The affective change commitment is characterized by a mind-set that reflects a desire to support the change, believing in its inherent benefits (Herscovitch & Meyer, 2002). According to Jaros (2010), the belief in the change benefits exists, because it remedied a momentary discrepancy between the situation of the enterprise and its aspired goals after the successful implementation of the change.

Transferring this conviction to the team level, the affective change commitment stands for a positive change climate in which team members have a shared perception of the benefits of a change that arise for the team or the organization, and the belief that the change is the right decision the management is developing (Herscovitch & Meyer, 2002). Accordingly, the affective component of change commitment is most strongly influenced by leadership behavior (Herold et al., 2008) and I assume team affective change commitment is a suitable variable to analyse the effect of instrumental leadership on the team level.

The instrumental leaders influence the team affective change commitment as follows: They discover discrepancies between market conditions and the status quo of the organization at an early stage, because of proactive scanning of the environment and the knowledge about the organizational system (Antonakis & House, 2014). This enables strategic conclusions to be drawn from the observations as to how the team must adapt and change (Argyris, 1964). These strategic goals and plans of how to implement the change in the team, are formulated and communicated to the team (Antonakis & House, 2014). In line with the uncertainty reduction theory (Berger & Calabrese, 1975), the instrumental leaders reduce the uncertainty in their teams, because they are able to correctly assess the situation of the teams and to provide the information and background why the change is necessary. Additionally, the instrumental leaders give a clear direction on how the teams should adapt and develop in the future (Argyris, 1964). Moreover, instrumental leaders support employees with their expertise in accomplishing their tasks. If new demands are asked from employees as a result of change, the leaders support them in achieving their goals despite increased effort by providing all the necessary resources and removing any obstacles that have arisen. This behavior satisfies the employees (Rowold, 2014) and strengthens their self-efficacy to deal with the challenges of change (Antonakis & House, 2014). In addition, the self-efficacy of the employees is strengthened by a learning-promoting feedback with which the instrumental leaders monitor the achievement of objectives by the employees (Antonakis, 2006; Antonakis & House, 2014).

These leadership behaviors motivate the employees to see the change as a benefit for the team and reduce their uncertainty, because the change appears to be manageable for them (Rafferty & Griffin, 2006). Reducing employees' uncertainty creates the conditions for social exchange (Berger, 1987). This means, based on the social exchange theory (Blau, 1964), that by supporting the team members with their expertise and resources, the leaders establish a trusting relationship, which fosters the affective change commitment in the team (Oreg, 2006; Spreitzer & Mishra, 2002). On this basis employees are motivated by a norm of social reciprocity (Gouldner, 1960) to view the change as positive in return and to commit themselves to its implementation.

Since instrumental leadership has not yet been examined in the context of change, no direct empirical results on change outcomes exist. However, the study by Rowold (2014) showed that instrumental leadership has a positive influence on affective organizational commitment, which is a predictor of affective change commitment due to its effect on the well-being of the organization (Herold et al., 2008; Herscovitch & Meyer, 2002). Furthermore, with regard to the relationship between leadership and affective change commitment, it became

apparent that the perceived competence of the leader and the perceived leader support strengthens the affective change commitment of the employees (Neves, 2011). The employees should therefore perceive the instrumental leader, who is distinguished by specialist knowledge, professional support and who appears like a resource for them, as competent, which enhances their affective change commitment. Additionally, the stress reducing influence of instrumental leadership for employees could be shown in a recent study (Rowold et al., 2017) and indicates the uncertainty reducing influence of an instrumental leader, because uncertainty is a major source of stress in times of change (Ashford, 1988). Therefore, I assume instrumental leadership to foster the team affective change commitment and make the employees aware of the benefits of a change:

*Hypothesis 1:* Instrumental leadership is positively linked to team affective change commitment.

#### **4.2.3 Team Affective Change Commitment, Individual Support for Change and Team Change Success**

Individual support for change was conceived by Herscovitch and Meyer (2002) as part of the development of the construct change commitment in order to illustrate its behavioral consequence. Since change commitment is an attitude that entails the behavioral intention to support change (Ajzen, 1991), it is a proximal predictor of change support (Bouckenooghe et al., 2015; Herscovitch & Meyer, 2002). Meyer and Herscovitch (2001) distinguished between focal (compliance) and discretionary (cooperation and championing) behavior with regard to the behavioral consequence of change commitment. Focal behavior is an action to which a person is bound because of his or her perceived commitment. Discretionary behavior, on the other hand, comprises several actions that are not specifically directed at the binding goal of the commitment, but that are related to it and the maintenance of the commitment.

In the context of a change process, Herscovitch and Meyer (2002) defined the strongest form of discretionary change support as championing support for change. It is characterized by extreme enthusiasm for change and is expressed in such a way that the employee goes beyond the formal requirements of successfully implementing the change and advertises the change to others (Herscovitch & Meyer, 2002). According to Kim et al. (2011), only championing refers to active support for change, while cooperation and compliance are more passive and empirical distinctiveness between these factors was not given. In particular, the affective component of change commitment, meaning that employees *want* to support the change, therefore results in

a championing support for change (Herscovitch & Meyer, 2002). Considering a cross-level effect, I suppose that the positive change climate even fosters the behavioral intention of an employee to show championing support for a change commonly perceived as beneficial.

Empirically, the predictive value of affective change commitment to championing support could be shown in a number of studies (Herscovitch & Meyer, 2002; Meyer et al., 2007; Seo et al., 2012) and was even meta-analytically confirmed by Bouckennooghe et al. (2015) as the strongest predictor out of the three commitment dimensions.

Focusing on the team level, I consider the team change success rated by the leaders' supervisor to be enhanced through the team affective change commitment. In order to measure the success of a change, individual success indicators are usually used, which are presented in the framework model of Oreg et al. (2011) as consequences of change. At the team level, very few indicators have been examined so far. According to Oreg et al. (2011), the affective organizational commitment (Allen & Meyer, 1990) is an indicator for the success of change and indicates whether employees continue to enjoy working for the company after the change. Vice versa, the intention to quit is one indicator for the failure of the change (Cunningham, 2006). Change goal attainment is a second performance related consequence to measure the change success, which is often used in practical oriented studies (Meaney & Pung, 2008). These organizational outcomes provide an overview of performance-related criteria rather than the socio-emotional criteria in the teams that are affected by a change.

I assume that an affectively committed team sees the change as an improvement and thus supports the change and works for change goal attainment based on a team goal-striving process (Chen & Kanfer, 2006). This process yields higher team motivation, which in turn enhances the team performance (Nohe et al., 2013). When the change is going to be successfully implemented in the team, employees should recognize improvements during their work, thus fostering their satisfaction and organizational commitment (Herscovitch & Meyer, 2002; Meyer et al., 2007; Meyer & Hamilton, 2013; Oreg et al., 2011). This, in turn, has a negative relation to intention to quit (Cunningham, 2006).

As a result, team affective change commitment should lead to a higher perception of the team change success.

*Hypothesis 2:* Team affective change commitment is positively linked to (a) individual championing support for change and (b) team change success.

#### **4.2.4 Moderating Effect of Leader's Affective Change Commitment**

Following the uncertainty reduction theory, people are anxious to reduce their uncertainty about a person or situation before they act (Berger & Calabrese, 1975). Before employees evaluate a change as positive and support it, they look for information that takes away their uncertainty and helps them to better predict the future. Leaders have a central role as salient persons in the direct social environment of employees in the social information process (Salancik & Pfeffer, 1978). The way in which leaders act or communicate is influenced by their own attitude and affects the way in which employees receive information. Accordingly, I assume that the relation between the leader's instrumental behavior and team affective change commitment will be enhanced when the leader itself is highly committed to the change and presents the benefits of the change in an authentic and confident manner.

During the interaction with a highly affective committed leader, the employees perceive positive information about the change in accordance with the positive attitude of the leader to the change, which makes them aware of the behavioral intention of the leader (Dasborough, Ashkanasy, Tee, & Tse, 2009) and it becomes comprehensible that he or she really wants to support the change. Therefore the behavior of the instrumental leader becomes more predictable for the employees, thus reduces their uncertainty (Berger & Calabrese, 1975). Consequently, it is easier to follow the leaders' strategic plan, because the leader presents reliable that the change is beneficial for the team. When followers seek for information, they want to reduce their uncertainty (Berger & Calabrese, 1975), which implies that they seek for information which provides certainty about their situation and makes the future more controllable. Therefore, a committed leader fits better to the need to reduce the uncertainty regarding the change than a leader who itself is uncertain about what the change brings for the team. In this way the employees become more certain about the change and are able to repay the instrumental leader's support with a higher affective change commitment.

Empirically it could be shown that not only leaders' behavior, also leaders' attributes and attitudes play a central role in shaping the followers' reaction to change (Abrell-Vogel & Rowold, 2014; Oreg & Berson, 2011). So Abrell-Vogel and Rowold (2014) found support for the moderating influence of the leader's affective change commitment on the relation between transformational leadership and the affective change commitment of the employees. They found a positive relation between the transformational leadership behavior, specifically the facet providing appropriate role model, and employees' affective change commitment in the high leaders' affective change commitment condition. Therefore, I hypothesize:

*Hypothesis 3:* Leaders' affective change commitment moderates the relation between instrumental leadership and followers' affective change commitment.

#### **4.2.5 Integrative Research Model of Instrumental Leadership and Change Success**

##### **Criteria**

In the previous sections, I have assumed, based on the uncertainty reduction and social exchange theory, that the instrumental leader influences the affective change commitment of the team (hypothesis 1). This is done by reducing uncertainty and giving orientation through a tangible strategy and helping the employees to achieve their goals related to the change by supporting them with resources and promoting them through feedback. Following on from this, the reduction of uncertainty lays the foundation for social exchange (Berger, 1987; Berger & Calabrese, 1975; Blau, 1964), whereby the employees respond towards the received resources with commitment towards the change. In addition, I assumed that this relationship is reinforced by the leader's affective commitment to change (hypothesis 3), because team members follow a leader more easily if the leader can present the benefits of change in a credible and authentic manner, thus demonstrating his or her intention and removing team members' uncertainty about the change. I also supposed that the team affective change commitment acts as a predictor for individual change support and team change success, based on the behavioral intention associated with the affective change commitment (hypothesis 2).

In order to transform these assumptions into an integrative research model, I hypothesize that instrumental leadership affects the individual change support and team change success via the team affective change commitment as the sense-making element, depending on the extent of the leader's affective change commitment. Based on the social exchange between the instrumental leader and the followers, the followers will not only reciprocate the engagement of the leader with a positive attitude towards the change, but they will even go the extra mile and support the change (Michaelis et al., 2010; Seo et al., 2012). Following the uncertainty reduction theory, their intention to support the change is even higher when the leader believes in the change and his or her conviction becomes visible when he or she shares information about the change. Consequently, the team members become aware of the leader's intention to support the change (hypothesis 3), which reduces their uncertainty about the change and makes them believe more in the benefits of the change presented by the leader. If, on the other hand, the leader does not believe in the benefits of the change and does not consider the change to be the right decision, the leader will not be able to reduce the uncertainty of the team members and cannot build a social exchange relation regarding the change process. In this case instrumental

leadership behavior will not lead to an enhanced team affective change commitment as well as the support and success of the change.

Accordingly, I assume a first-stage moderated mediation under the premise that the indirect effect is contingent on the level of the moderator (Preacher, Rucker, & Hayes, 2007).

*Hypothesis 4:* Leaders' affective change commitment moderates the indirect relation of instrumental leadership with (a) team change success and (b) individual championing support for change through team affective change commitment. The relation between instrumental leadership and team affective change commitment is stronger when leaders' affective change commitment is high than when it is low, thus strengthening the indirect effects.

## **4.3 Method**

### **4.3.1 Sample and Procedure**

The data for this study were collected in different organizations in Germany and based on 125 teams, who were mostly acquired through personal contact or e-mail approach. The teams consist of one leader, a minimum of two and a maximum of six employees ( $N = 375$ ) and the leader's supervisor. The team members were informed about the research project and data collection through an information sheet that explained the purpose of the study and which highlighted the anonymity and voluntariness of the participation. To ensure that all team members could refer to a current change process in the organization during the survey, the leader had to define the change process to be measured and to tell the other members to which change process they have to refer to. Therefore, it was a condition of participation that the change process be not yet or completed only recently at the time of the survey. The benefit of the participation for the leaders was the possibility to receive a comprehensive feedback report regarding their leadership style. The survey could be completed via online- or via paper-pencil questionnaires. The employees were asked to rate their leader's instrumental leadership behavior and their own affective change commitment and support for change. The leaders rated their own affective change commitment and the leaders' supervisors assessed the change success of the ongoing change process in the team.

Most of the employees were female (54 %) and worked full-time (69 %) with a mean age of 35 years ( $SD = 11.60$ ). The mean tenure of the employees with their mainly profit-oriented (82 %) organizations was 7 years ( $SD = 7.47$ ). The respondents mostly worked in organizations with a firm size of more than 250 employees (38 %) from different industries in



teams with a mean size of 14 members ( $SD = 12.71$ ). Their leaders were mainly men (73 %) with a mean age of 42 years ( $SD = 11.10$ ) and belonged to the middle or upper management level (together 81 %). The mean tenure of the leaders was 12 years ( $SD = 9.28$ ). The leaders' supervisors were mainly men (73 %) and belonged to the upper management level (71 %) with a mean age of 46 years ( $SD = 9.86$ ) and a mean tenure of 16 years ( $SD = 10.00$ ).

All team members were asked to evaluate a concrete change process, which was chosen by the leader. Fifty-five percent of the change processes were not completed and the leaders rated the change impact on the organization with  $M = 3.62$  ( $SD = 1.06$ ; 1 (*not at all affected*) to 5 (*strongly affected*)).

#### 4.3.2 Measures

***Instrumental leadership.*** Antonakis and House (2004) originally developed 16 items for the assessment of instrumental leadership. In this study the German version of these 16 items ( $\alpha = .93$ ) - four items for each dimension - translated and validated by Rowold (2014) was utilized. All items begin with "My supervisor..." and a sample item was "...understands the constraints of our organization".

***Affective change commitment.*** Employees' and leaders' affective change commitment was measured using the six-item (employees:  $\alpha = .87$ ; leaders:  $\alpha = .86$ ) scale developed by Herscovitch and Meyer (2002). The scale was used in a German version, which has been applied and tested in prior studies (Abrell-Vogel & Rowold, 2014). A sample item for affective change commitment is "I believe in the value of this change".

***Individual championing support for change.*** For the assessment of employee's championing behavior towards an ongoing change process I used six items ( $\alpha = .81$ ) from Herscovitch and Meyer's (2002) questionnaire for the measurement of behavioral support for change in a German translation. The translation was implemented by using the translation-back-translation procedure (Brislin, 1980). Sample items were "I speak positively about the change to outsiders" or "I try to overcome co-workers' resistance toward the change".

***Team change success*** was examined with eight newly developed items ( $\alpha = .78$ ) which were generated by reviewing the social scientific change literature regarding relevant change success criteria (Meyer & Hamilton, 2013; Oreg et al., 2011). The selected success criteria were goal achievement (two items; e.g. Meaney & Pung, 2008), affective organizational commitment (Allen & Meyer, 1990), championing support for change (two items; Herscovitch & Meyer,

2002), job satisfaction (Neuberger, Allerbeck, & Ulich, 1978), performance (Schweiger & Denisi, 1991) and intention to quit (Cunningham, 2006). The leaders' supervisors were asked to assess the success of the defined change initiative in respect of the specific team of the leader. The used items were: "The change initiative was successful/will probably be successful.", "The defined goals of the change initiative were/are going to be reached.", "Team members want to continue their professional lives in this organization even after the change.", "Team members support the change initiative actively with their behavior.", "Team members speak positively about the change initiative.", "The change initiative reduced job satisfaction of team members." (reverse scored), "Team members' willingness to perform did not reduce due to the change initiative.", "Some team members think about resigning as a result of the change initiative." (reverse scored).

All used scales were rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Control variables.** Firstly, I measured and controlled with a single item for the impact of the change on the organizational level. Therefore, employees were asked how their organization in general is hit by the change process ranging from 1 (*not at all affected*) to 5 (*very strong affected*). Previous studies showed that the impact of a change process has an influence on the change commitment of the employees (Fedor et al., 2006; Herscovitch & Meyer, 2002) and enhances the cohesion between leadership and commitment to change (Herold et al., 2007; Herold et al., 2008). Secondly, I controlled for employees' years of organizational tenure, because participants, who have worked longer than others have at their respective organization, possibly have bigger problems to adapt to new working conditions (Furst & Cable, 2008; Seo et al., 2012; van Dam et al., 2008). Thirdly, in previous studies it was shown that the managerial level had an effect on the change reaction, because leaders at higher managerial levels themselves are usually more involved in ongoing change processes (Herrmann, Felfe, & Hardt, 2012). The involvement reduces fear and concerns about the change (Coyle-Shapiro, 1999). Additionally, according to Antonakis and Atwater (2002), leaders on different hierarchical levels show different behaviors in association with their distance to followers. Therefore, to avoid biases from structural conditions and the motivational background of the participants, I also controlled for the hierarchical level of the leaders.

### 4.3.3 Analytical Approach

To test the hypothesized multilevel model of moderated mediation, instrumental leadership and affective change commitment rated by the employees were aggregated at the team level. To test the appropriateness of aggregation I calculated the inter-rater agreement within teams ( $r_{wgj}$ ) (James, Demaree, & Wolf, 1984), the intraclass correlations ( $ICCI$ ) and the reliability of the team means ( $ICC2$ ) (Bliese, 2000). The results for instrumental leadership were  $r_{wgj} = .87$ ,  $ICCI = .51$ ,  $p < .05$  and  $ICC2 = .76$ ,  $p < .05$ . For affective change commitment the results were  $r_{wgj} = .94$ ,  $ICCI = .55$ ,  $p < .05$  and  $ICC2 = .79$ ,  $p < .05$ . The intraclass correlations showed large effects, meaning that team membership explained considerable variance in the individual ratings of instrumental leadership and affective change commitment. The reliabilities of the team means were good and the inter-rater agreements of both constructs reached relevant cut-off values of .70 (Bliese et al., 2002). Therefore, the appropriateness of aggregation was given for instrumental leadership and affective change commitment rated by the employees.

Because the data of the employees' assessment were nested within teams, I used MPlus Version 7.3 (Muthen & Muthen, 2017), which allowed me to test my multilevel moderated mediation model simultaneously. Prior to the analysis, all predicting variables were grand mean centered to avoid bias from multicollinearity (Cohen & Cohen, 1975). To predict the team change success, I built an indirect effect on the between level. For the cross-level indirect effect I conducted an unconfounded multilevel path analysis with manifest variables as described by Preacher et al. (2010) as one proposed method for a 2-1-1 design. Thus, to reduce the bias of conflation the level-1 mediator affective change commitment was group mean centered and included together with the centered team affective change commitment to predict the individual outcome (Preacher et al., 2010). Accordingly, the mediation effect is only a between indirect effect and is reported as such, meaning that the level-1 mediator serves only as a control variable, as shown in Figure 4. In order to determine 95 % bias corrected confidence intervals for the conditional direct and indirect effects at different levels of the first-stage moderator (Mackinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2008) the bootstrapping procedure was used (Preacher et al., 2010) and I applied the command *model constraint* as recommended by Preacher et al. (2007). To ensure statistical power 1,000 iterations were fulfilled.

## 4.4 Results

### 4.4.1 Confirmatory Factor Analysis, Descriptive Statistics and Reliability

Before I started testing my hypotheses, I performed confirmatory factor analyses to evaluate the discriminant and convergent validity of the employee-rated constructs used in the study. I took two parcels as indicators for each construct that was measured with more than three items (Landis et al., 2000). For the measurement of instrumental leadership I developed four item parcels in accordance with the dimensional structure of Antonakis and House (2002; 2004). As intended, each item loaded on its designated latent factor. My expected three-factor model (instrumental leadership, affective change commitment and championing support for change) yielded a significantly better fit with  $\chi^2 (17; N = 375) = 68.41$  ( $CFI = .97$ ,  $TLI = .95$ ,  $RMSEA = .09$ ,  $SRMR = .03$ ) in comparison to the two-factor (combined affective change commitment and championing support as one factor;  $\Delta\chi^2 (2) = 160.28$ ,  $N = 375$ ,  $p < .01$ ,  $CFI = .89$ ,  $TLI = .83$ ,  $RMSEA = .17$ ) or the single-factor model, where all items were loading on one factor ( $\Delta\chi^2 (3) = 604.49$ ,  $N = 375$ ,  $p < .01$ ,  $CFI = .64$ ,  $TLI = .50$ ,  $RMSEA = .30$ ). The findings of the confirmatory factor analysis encouraged the distinctiveness of the employee-rated variables. To test the hypotheses, I built the construct scales on the average of their items.

The descriptive statistics, reliabilities and correlations for all study variables are reported in Table 7. Reliabilities demonstrate high internal consistency of the constructs. The controls were related to substantive variables and were therefore included in the model testing. Tenure is negatively related to instrumental leadership and affective change commitment. The organizational change impact influenced the affective change commitment of the leader positively. And the leader's hierarchical level had a positive influence on the change success.

### 4.4.2 Tests of Hypotheses

I tested my hypotheses simultaneously in one multilevel model. Hypothesis 1 proposed that instrumental leadership is positively linked to employees' affective change commitment. As presented in Table 8, instrumental leadership demonstrated a significant effect on employees' team affective change commitment ( $estimate = .38$ ,  $p < .01$ ), which supported hypothesis 1. Hypotheses 2a and 2b stated that employees' team affective change commitment positively predicts the individual championing support and the team change success. Results showed significant effects of affective change commitment on individual support for change ( $estimate = .39$ ,  $p < .01$ ) and the team change success ( $estimate = .34$ ,  $p < .01$ ). Thus, hypothesis 2a and 2b could be supported.

Table 7. Study 2: Means, standard deviations, reliabilities, and correlations.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Individual Level											
1. Affective change commitment	4.12	.80	(.87)								
2. Championing support for change	3.86	.73	.58**	(.81)							
Team Level											
3. Tenure	7.16	7.42	-.13*	-.06	-						
4. Organizational change impact	3.62	.84	.03	.12*	.17**	-					
5. Leaders' hierarchical level	2.05	.65	.01	.10*	.00	.03	-				
6. Instrumental leadership	3.76	.60	.33**	.38**	-.19**	.06	.04	(.93)			
7. Affective change commitment	4.13	.67	.84**	.53**	-.15**	.04	.02	.39**	(.87)		
8. Team change success	4.23	.52	.40**	.33**	-.06	.01	.11*	.28**	.48**	(.78)	
9. Leaders' affective change commitment	4.42	.71	.33**	.20**	-.04	.14**	.04	.04	.39**	.28**	(.86)

Note.  $N_{\text{Individual}} = 375$ ;  $N_{\text{Team}} = 125$ . Cronbach's alphas are indicated on the diagonal.

\*  $p < .05$ ; \*\*  $p < .01$ .

Table 8. Study 2: Multilevel model predicting affective change commitment, championing support, and team change success.

Model	Affective change commitment		Championing support		Team change success	
	Estimate	(SE)	Estimate	(SE)	Estimate	(SE)
Individual level						
Affective change commitment			0.41**	(0.07)	0.05	(0.06)
Team level						
Leader's hierarchical level	-0.02	(0.05)	0.06	(0.04)	0.04	(0.04)
Organizational change impact	-0.01	(0.11)	0.06	(0.03)	-0.01	(0.04)
Tenure	-0.04	(0.05)	0.02	(0.04)	0.02	(0.04)
Instrumental leadership (=A)	0.38**	(0.09)	0.26**	(0.09)	0.12	(0.07)
Leader's affective change commitment (=B)	0.35**	(0.08)				
AxB	0.26*	(0.11)				
Affective change commitment			0.39**	(0.07)	0.34**	(0.07)
Quality criteria						
Residual variance at level 2	0.32	(0.05)	0.07	(0.02)	0.20	(0.03)
Residual variance at level 1			0.24	(0.03)		

Note.  $N_{\text{Individual}} = 375$ ;  $N_{\text{Team}} = 125$ . *SE* = standard error.

\*  $p < .05$ ; \*\*  $p < .01$ .

As posited in hypothesis 3 the affective change commitment of the leader moderates the positive effect between instrumental leadership and follower's affective change commitment. As Table 8 shows, the interaction between instrumental leadership and the leader's affective change commitment on followers' affective change commitment was significantly positive ( $estimate = .26, p < .05$ ). To indicate the interaction pattern, I plotted the interaction following the procedures of Aiken and West (1991) and conducted simple slope analyses to interpret the effects. As shown in Figure 5 the cohesion between instrumental leadership and followers' affective change commitment was significantly positive, when the leader's affective change commitment was high ( $\gamma = 0.64, p < .01$ ), but not significant, when the leader's affective change commitment was low ( $\gamma = 0.12, ns$ ). These results supported hypothesis 3.

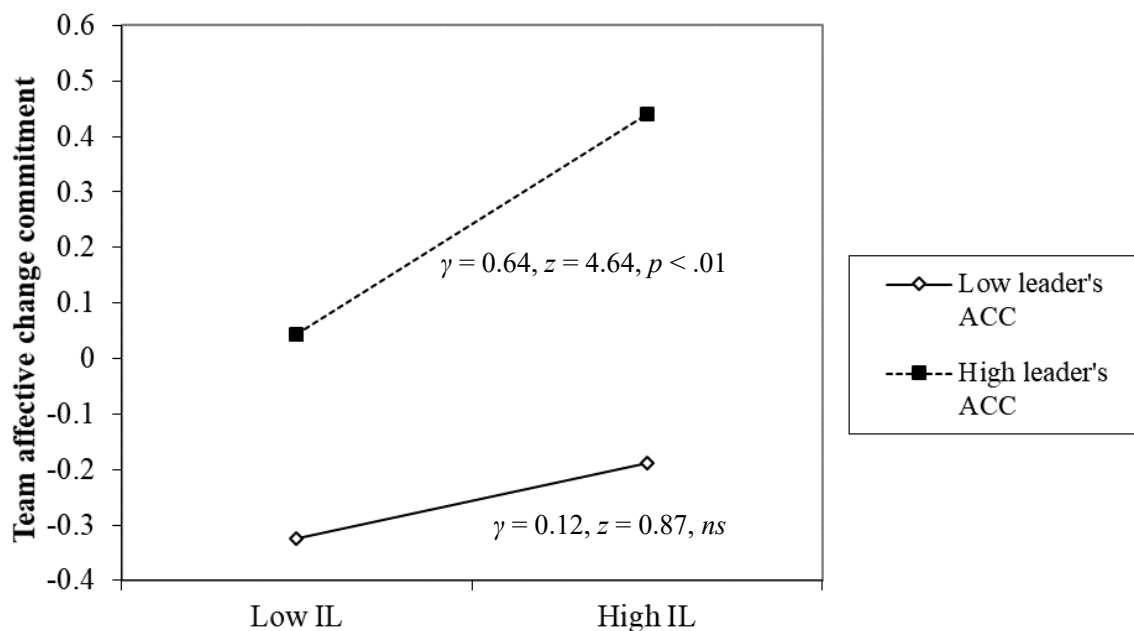


Figure 5. Study 2: Interaction effect of instrumental leadership and leader's affective change commitment (ACC) on employees' affective change commitment.

IL = Instrumental leadership.

The results regarding the moderated mediation hypotheses of the indirect effects of instrumental leadership on championing support for change and team change success conditional upon the leader's affective change commitment are presented in Table 9. The unconditional indirect effect of instrumental leadership through affective change commitment of the follower on championing support for change is significantly positive ( $estimate = .15,$

$p < .01$ ). A similar result was demonstrated for the indirect effect on team change success ( $estimate = .13, p < .01$ ). The conditional indirect effect of instrumental leadership on championing through affective change commitment increased as the leader's affective change commitment increased from low ( $-1 SD; estimate = .08, ns$ ) to high ( $+1 SD; estimate = .22, p < .01$ ). At the low level of leader's affective change commitment the indirect effect was no longer statistically significant, supporting hypothesis 4a.

A similar result could be presented for the indirect effect of instrumental leadership on team change success via affective change commitment of the employees moderated by the leader's affective change commitment. The results in Table 9 showed a significant effect in the high ( $+ 1 SD; estimate = .19, p < .01$ ) and medium ( $+ 1 SD; estimate = .13, p < .01$ ) condition of the moderator, while the effect was not significant in the low condition ( $-1 SD; estimate = .07, ns$ ). Accordingly, hypothesis 4b could be confirmed.



Table 9. Study 2: Estimated (un-)conditional indirect effect of instrumental leadership on change outcomes.

	Championing support for change		Team change success	
	Estimate	(SE)	Estimate	(SE)
Unconditional indirect effect	0.15**	(0.05)	0.13**	(0.04)
Conditional indirect effects				
Low leader's affective change commitment (-1 SD)	0.08	(0.05)	0.07	(0.05)
Medium leader's affective change commitment	0.15**	(0.05)	0.13**	(0.04)
High leader's affective change commitment (+1 SD)	0.22**	(0.05)	0.19**	(0.05)

Note.  $N_{\text{Individual}} = 375$ ;  $N_{\text{Team}} = 125$ . SE = standard error; SD = standard deviation.

\*\*  $p < .01$ .

## **4.5 Discussion**

The aim of this study was to examine the potential of instrumental leadership in the context of change processes and to analyse more precisely the mechanisms with which this pragmatic leadership style can promote the change reactions of employees. For this purpose, the affective change commitment of the team was examined as a meaningful mechanism between leadership and team change success as well as individual change support. In addition, the influence of the leader's attitude towards change in the form of affective change commitment was taken into account considering the leader's own attitude towards the change is decisive for the perception of the observable behavior. In line with my hypotheses, instrumental leadership has a direct effect on the affective change commitment of the employees (hypothesis 1) and this relation is moderated by the affective change commitment of the leader (hypothesis 3). According to hypothesis 3, there is only a connection between instrumental leadership and the employees' affective change commitment if the leader's affective change commitment is high. As assumed and in conformity with the models of Oreg et al. (2011), Meyer and Hamilton (2013) and the meta-analysis of Bouckennooghe et al. (2015), the employees' affective change commitment represents a predictor of championing support for change and team change success (hypothesis 2). It mediates the relation between leadership and the individual and team change outcomes. In line with my hypothesized integrative model of moderated mediation (hypotheses 4a and 4b), I find that in the case of a high degree of leaders' affective change commitment, instrumental leadership increases both individual change support and team change success via the affective change commitment of the team.

### **4.5.1 Implications for Leadership and Change Literature**

The study showed that instrumental leadership is a meaningful leadership style also in the context of change. As Antonakis and House (2014) mentioned, that estimates of the other full range factors may be overestimates in previous studies because of omitted leadership behaviors. The present study gives reason to assume that the impact of the change-oriented transformational leadership (Bass & Riggio, 2006) may have been overestimated in earlier change studies, too (Abrell-Vogel & Rowold, 2014; Bommer et al., 2005; Carter et al., 2013; Herold et al., 2008; Michaelis et al., 2010; Seo et al., 2012). The results showed that instrumental leadership has a direct influence on the individual change support of the employees, which illustrates the concrete task-related impact of the leadership style in the daily work of the individual employee (McKee et al., 2018) and reflects the assumed social exchange between leader and team members (Liden, Sparrowe, & Wayne, 1997). Additionally, the results

expand social exchange research in the change context by linking team and individual level outcomes, because the existing theory is mostly applied to individual outcomes. In this regard, the study gives insights to treat affective change commitment as a team level outcome.

By analysing the impact of instrumental leadership in a multi-level model, this study considers that change must be implemented across teams as well as by the individual employee (Abrell-Vogel & Rowold, 2014; Fedor et al., 2006; Herold et al., 2008; Rafferty & Jimmieson, 2010) and thus expands the change literature to include the multi-level perspective on change outcomes. In this context, it turned out that the newly developed change success items represented a reliable measuring instrument and provided insight into how successful respective changes are assessed from the perspective of the leader's superior.

It is noteworthy that the connection between instrumental leadership and team change success is completely mediated by the team affective change commitment, while the mediation between instrumental leadership and individual change support takes place partially via team affective change commitment. These findings underline the functional and task oriented impact of instrumental leadership, because a direct link between instrumental leadership and the behavioral outcome championing support remains.

#### **4.5.2 Practical Implications**

The study has important implications for practice. The results show the relevance of instrumental leadership in times of change and thus for successful corporate management. As already mentioned by Antonakis and House (2014), as well as by Rowold (2014), there is a need to promote instrumental leadership through training approaches in organizations. It has to be considered that instrumental leadership behavior depends on the expert knowledge of the executive and that particularly environmental monitoring may be a way of leader behavior that develops in the longer term (Antonakis & House, 2014).

In addition, the relevance of affective change commitment of the leader as a factor for positively influencing the employees' change reactions became apparent. Accordingly, it is important that, when leading a team, the leader is aware of his or her own attitude towards change in the sense of his or her position as a role model (Abrell-Vogel & Rowold, 2014) promoting a certain change. In a training course, feedback could therefore be used not only on leadership behavior but also on affective change commitment in order to develop managers as change agents.

When selecting change agents, care should therefore be taken to ensure that people who are to drive a change are themselves bound to the change and can convey their positive attitude in their behavior, i.e. through communication, in order to be able to credibly and authentically convince other employees of the change. In addition, instrumental leadership suggests that change agents have sufficient knowledge of the organization and the change to be able to describe to employees exactly how the change is implemented and why, thus removing uncertainties.

#### **4.5.3 Strengths, Limitations and Future Research**

Due to the complex data collection with three data sources within a team, the sample size can be classified as relatively large. In addition, there are no limitations regarding the representativeness of the sample in terms of organization, industry or type of change, which increases the generalization of the results. Moreover, the meditation effects are mapped on two levels and thus increase the explanatory value of the effect of instrumental leadership (Fischer, Dietz, & Antonakis, 2017). Furthermore, assessing the success of changes on the team level rated by the leaders' supervisors presents a rare and more objective criterion in the change management literature. Commonly individual criteria were used as indicators for the success of a change or in rare cases the team-leader itself rated one success criterion, such as team innovation (Eisenbeiss, van Knippenberg, & Boerner, 2008) or team OCB (Nohe & Michaelis, 2016).

In addition to the strengths of the study, some limitations provide approaches for future research. First, the assessments of instrumental leadership, affective change commitment and championing support are rated by the same source, hence the possibility of common source bias (Podsakoff et al., 2012) exists. However, factor analysis of employee assessments shows that the assumed three-factor model presents the data better than a single factor. Therefore, the bias should be limited in the sample (Korsgaard & Roberson, 1995). Another limitation is the high intercorrelation between instrumental and transformational leadership, which is why we did not control for transformational leadership to avoid multicollinearity. As mentioned above, in the opposite sense, this leads to a bias of omitted variables, meaning an overestimation of the effects of instrumental leadership, since the remaining full range factors were not controlled for (Antonakis & House, 2014). In future studies, it would therefore be important to replicate the effects of instrumental leadership under the control of laissez-faire, transactional and transformational leadership to avoid an omitted variables bias. In addition, outcomes should be

analysed rated by different sources to reduce common source bias in order to minimize the bias of endogeneity in the data (Antonakis et al., 2014a).

Moreover, although I have derived my hypotheses from theory, I cannot draw causal conclusions from the results. It would therefore be important to investigate further, how the interrelationships can be confirmed in an experimental design. In this context, it would also be of relevance to investigate further the theoretically assumed mechanisms of action between instrumental leadership and affective change commitment. Mediators such as uncertainty (Bordia et al., 2003), trust (Oreg, 2006), perceived leadership competence (Neves, 2011) and self-efficacy (Ashford, 1988) could usefully complement the theoretical assumptions about the effects of instrumental leadership in change.

With regard to the individual phases of a change, it could give relevant insights into how to apply a weekly diary study to analyse the leadership behavior during a change process. The factor of time could be analysed using a dynamic change model, for example the model of Bullock and Batten (1985), which consists of four change phases and fits to most change processes (Burke, 2017; Kraft, Sparr, & Peus, 2018).

Regarding the level of analysis, it would be interesting to further differentiate the effect of the different facets of instrumental leadership. For example, strategic leadership at the team level and work follower facilitation could rather be examined at the individual level. In addition, the hierarchy level and upper echelon theory are often examined in connection with strategic leadership (Simsek et al., 2015). Thus, it would be interesting to examine whether the results found can be replicated at the level of top management. In the sense of upper echolon theory, top management makes decisions based on personal characteristics that influence the performance of a company. Accordingly, it is important for top management that convictions and emotions are reflected in the behavior shown. The investigated interaction between instrumental leadership behavior and affective change commitment should therefore also be important at top management level in order to implement company-wide changes successfully.

## **5. Study 3 - Developing like U: Considering the Nonlinearity in the Evaluation of a Change-Oriented Training in Instrumental and Transformational Leadership**

### **5.1 Introduction**

In times of continuous organizational changes, the implementation of change initiatives is a crucial task for leaders. However, there seems to be a tremendous need for optimization considering two thirds of all initiatives fail because of managerial mistakes (Beer & Nohria, 2000). Leader development interventions are therefore an effective method for organizations to develop the potential of leaders, to improve their performance (Avolio et al., 2009), and to enhance their skills to lead employees successfully through changes. Dynamic and change-oriented leadership behaviors such as transformational leadership seem to be an appropriate way to foster employees' reactions towards change (Herold et al., 2008; Seo et al., 2012). Transformational leadership is a behavior-based leadership concept (Yukl, 2010), which can be actively improved through learning (Bass, 1990; Burke & Day, 1986). The increased perception of transformational leadership by the followers after training interventions could be shown in different contexts (Barling et al., 1996; Dvir et al., 2002).

However, research indicates different results regarding the transformational training's effectiveness and even negative effects on employee perceptions (Mason et al., 2014). The way in which leaders develop is still not clear, and Boyatzis (2008) points out that leader development is a nonlinear and discontinuous phenomenon rather than a linear one, as it is usually assumed in the leader development literature. In addition, the critical considerations of the transformational leadership concept in recent years indicate shortcomings in the method and content of the concept. The definition of the construct itself is increasingly criticized as being invalid (van Knippenberg & Sitkin, 2013). The full-range of leadership model (Bass & Avolio, 1997), which includes transformational leadership next to transactional leadership and laissez-faire, does not seem to represent key leadership behaviors, which are necessary for successful corporate governance, mainly lacking strategic and task-oriented behaviors (Yukl, 2008). Additionally, the consideration of the external environment and the strategic use of opportunities (Morgeson et al., 2010) are essential leadership behaviors, which are not covered by the full-range of leadership model either (Yukl, 1999). These missing behaviors are important during changes to recognize opportunities early and to be able to adapt to the upcoming developments (Kotter, 2014). Thus, Antonakis and House (2002; 2004) filled these

shortcomings by adding the concept of instrumental leadership, which consists of the two main facets strategic leadership and follower-work facilitation, into the full-range of leadership model (extended full-range of leadership model). The positive effect of instrumental leadership and even its incremental validity beyond transformational leadership regarding organizational outcomes could be supported in recent studies (Antonakis & House, 2014; Rowold, 2014). Therefore, the need for training development and evaluation of instrumental leadership has been expressed before (Antonakis & House, 2014; Rowold, 2014; Rowold et al., 2017). Moreover, instrumental leadership has not been examined in the context of change.

The present study addresses these issues with the development and evaluation of a leader development training for instrumental and transformational leadership with regard to change relevant outcomes. Building on the assumption that instrumental leadership is - equally to transformational leadership - a behavior-based leadership concept and therefore learnable, I presume that in the perception of the followers instrumental leadership will increase after the two-day training. Moreover, I want to replicate the findings that also transformational leadership will increase after the intervention. However, I also want to analyze the way in which leaders develop further and consider the nonlinear effect of leader development. Doing so, I take the pretest ratings of the leadership behaviors by the subordinates into account as previous knowledge and refer to it as the starting point of their development. In addition, I tested the effectiveness of the training by assuming that the followers' affective change commitment and support for change in the experimental group will be enhanced after the training. To test this training-based effect, I focus on the change of constructs between the pre- and posttest.

The study contributes to the existing literature in four ways. First, I am expanding the scope of leader development with a training approach for instrumental leadership. Second, I consider the nonlinear effect in the leader development and explore the curvilinear effect of the transformational and instrumental leadership behaviors relative to their growth rate. Third, I evaluate the training with change-relevant criteria and provide insights into the impact of instrumental leadership in the context of change processes. Fourth, I replicate previous findings on the trainability of transformational leadership behavior.

## **5.2 Theory**

### **5.2.1 Training Transformational Leadership Behaviors**

The concept of transformational leadership was developed by Bass (1985) and is characterized by behaviors with which the employee is individually supported and intellectually

developed, inspired by a positive vision, and the leader himself acts as a role model (Bass, 1985). Since then transformational leadership has been widely studied and refined in its conceptualization. Podsakoff and colleagues (1996; 1990) extended Bass's (1985) original four-dimensional concept by taking behaviors of a charismatic leader into account (Conger & Kanungo, 1987). They defined the following six behaviors of a transformational leader, which served as basis for training interventions: (a) *Identifying and articulating a vision*, (b) *providing an appropriate model*, (c) *fostering the acceptance of group goals*, (d) *high performance expectations*, (e) *providing individualized support* and (f) *intellectual stimulation*.

The underlying idea of transformational leadership is to change the motivational basis of employees by transforming their goals and values over the long term from self-centered interests to overarching goals that are aligned with the good of the organization (Bass, 1985; Shamir et al., 1993). In this way, employees' performance and motivation increase beyond an expected extent (Bass & Riggio, 2006). Several meta-analyses emphasize the effectiveness of transformational leadership on organizational and individual outcomes like effectiveness, motivation, job satisfaction or commitment (Dumdum, Lowe, & Avolio, 2013; Fuller, Patterson, Hester, & Stringer, 1996; Jackson et al., 2013; Judge et al., 2004; Lowe, Kroeck, & Sivasubramaniam, 1996; Sturm, Reiher, Heinitz, & Soellner, 2011; Wang et al., 2011).

Investing in transformational leadership development programs is therefore a beneficial way to foster employees' performance via more transformational leaders. Despite the wealth of transformational leadership studies, there are a limited number of field-based experimental or quasi-experimental studies that have examined the trainability of this leadership style and that could show a causal link to outcome criteria. One of the first intervention studies (Barling et al., 1996; Popper, Landau, & Gluskinos, 1992) is of Barling et al. (1996), which could support the improvement of intellectual stimulation of the trained leaders in the perception of the subordinates after a training intervention in combination with feedback. These results could be replicated with the same intervention by Kelloway et al. (2000). Frese et al. (2003) focused in their intervention study - with a pretest-posttest design without a control group - on the transformational dimension being inspirational, which is comparable with articulating a vision, and could also show an improvement regarding the trained behavior.

In the intervention study of Dvir and colleagues (2002), the efficacy of a general training for transformational leadership behaviors in the military context was explored and the authors were able to demonstrate an increased follower perception of transformational leadership as an overall construct. In line with these results, recent studies are increasingly



looking at the trainability of all facets of transformational leadership and analyzed the effect either at the overall scale level (Abrell et al., 2011; Hardy et al., 2010; Mason et al., 2014) or the facets (in the military context: Arthur & Hardy, 2014; Hardy et al., 2010; Parry & Sinha, 2005; in the sport context: Vella, Oades, & Crowe, 2013). However, the results of the studies do not consistently show an improvement in transformational leadership in the perception of employees: The study by Mason et al. (2014) shows no improvement at the level of employees, which is most relevant for the assessment of leadership behavior. In addition, most studies were conducted in a specific context, such as military or sports, and only a few in an industrial context. One study was conducted in a bank (Barling et al., 1996) and another two studies in public sector organizations (Abrell et al., 2011; Mason et al., 2014).

Therefore, in this study the new training approach to train transformational and instrumental leadership together is examined in its impact on employee assessment and within a heterogeneous civilian context – in five different organizations from the profit and non-profit sector. In line with previous training interventions, the training is conducted in combination with 180-degree feedback and based on the social learning theory (Bandura, 1977). Thus, the training includes a theoretical part, which is deepened by practical exercises where participants learn from each other and share practical day-to-day work experience to ensure the training transfer. Based on the feedback and according to the goal setting theory (Locke & Latham, 1984), the participants set motivating goals for their development of transformational behavior after the training. Following this, I hypothesize:

*Hypothesis 1:* After the training intervention, the leaders' transformational leadership will have increased in the perception of their subordinates in comparison with the leaders of the control group.

### **5.2.2 Training Instrumental Leadership Behaviors**

Instrumental leadership was introduced by Antonakis and House (2002; 2004) after continued criticism of the construct validity of the full-range of leadership model (van Knippenberg & Sitkin, 2013) and of omitted leadership behaviors, like the construct initiating structure. The construct initiating structure can, however, elucidate its own share of variance in organizational outcomes (Judge et al., 2004). As a result, Antonakis and House (2002) critically compared the nine factors of the full-range of leadership model with other neo-charismatic leadership theories: charismatic and visionary leadership. They found that in particular the external environment, which is taken into account in the charismatic leadership model according to Conger and Kanungo (1987), and strategic leadership, as described by Sashkin

(1988) in his theoretical work on visionary leadership, were not represented in the full-range of leadership model, but are important for the organizational performance. Antonakis and House (2002; 2004) therefore expanded the full-range of leadership model into the fuller or extended full-range of leadership model and added instrumental leadership consisting of strategic leadership with the facets of strategy formulation and environmental monitoring, as well as follower work-facilitation leadership with the two facets path-goal facilitation and outcome monitoring. The authors defined instrumental leadership ‘... as the application of leader expert knowledge on monitoring of the environment and of performance, and the implementation of strategic and tactical solutions’ (Antonakis & House, 2014, p. 749).

According to the authors, the strategic leadership behaviors have an indirect influence on the organizational performance through managerial decisions and actions. The first dimension *environmental monitoring* means monitoring the internal and external environment and gathering information about developments that have impact on strengths, weaknesses or threats and opportunities of the team and the organization. Second, an instrumental leader uses the gathered information from the monitoring for the *strategy formulation* and develops goals and attainable objectives to implement the mission (Antonakis & House, 2014). The follower-work facilitation instead has a direct effect on the follower’s performance based on the leader’s expertise and cognitive and practical support (Rowold, 2014). The third dimension *path-goal facilitation* strives to pave the way for goal achievement and goal clarification. For this purpose, the leader provides necessary resources and removes obstacles. Fourth, the instrumental behavior *outcome monitoring* stands for constructive and learning-focused feedback during the work process and aims at supporting goal-attainment.

Antonakis and House (2004; 2014) emphasize that, despite high levels of intercorrelation with the other full range factors, instrumental leadership is a theoretically independent construct. Accordingly, it is neither transactional, because it is not conditional, nor idealized leadership behavior like transformational leadership. Recent studies already gave empirical confirmation of the construct validity (Antonakis & House, 2014; Rowold, 2014) and supported the positive influence of instrumental leadership on organizational outcomes like affective commitment, objective performance and even its incremental validity beyond the full range leadership factors regarding job satisfaction (Antonakis & House, 2014; Rowold, 2014).

Accordingly, the need to develop a training concept for instrumental leadership was already mentioned (Antonakis & House, 2014; Rowold, 2014; Rowold et al., 2017). So far, there exists no evaluated training program for instrumental leadership. Following the

assumption that instrumental leadership is a behavior-based leadership concept comparable to transformational leadership, it is assumed and stated in recent meta-analysis (Lacerenza et al., 2017), that leadership can be learned and thus actively enhanced through two-day trainings (Bass, 1990; Bass, 1999). However, instrumental leadership builds on a different foundation than the emotion-based transformational leadership concept. Instrumental leadership is based on the expertise of the leader and the specific know-how within the organization (Antonakis, 2006). Therefore, the concept is not detached from the organization and experience of the leader (Antonakis & House, 2014). Taking these points into account, the participants' exchange of experience and task related know-how in the practical part of the exercise has an important place in the training in order to promote learnings from each other according to the social learning theory (Bandura, 1977).

To ensure the training transfer, the four instrumental behaviors were first theoretically explained and then deepened by practical exercises. For the strategic behaviors, the focus was on the practical exercises to teach participants how they should obtain information and formulate a strategy as well as to make the two organizational-level behaviors accessible to their employees. Regarding the facilitating behaviors it was important to make the participants aware of the proactive and developmental character of these behaviors and how to share their expert knowledge with their subordinates in a path-goal oriented, and not a controlling or mistake-focused manner (Antonakis, 2006). In addition, to increase the transfer of the training, it was repeatedly pointed out how the individual leadership behaviors should relate to those of the transformational leadership and combined in practice. As conclusion, an integrative exercise was held which should represent the most important instrumental and transformational behaviors in change. Therefore, a springboard speech was prepared and presented voluntarily. Afterwards the volunteers received feedback from the participants and the trainer.

Similarly to the training part of transformational leadership, the newly developed group-based training part of instrumental leadership is combined with a 180-degree feedback. To promote the training transfer and based on the feedback and the goal setting theory (Locke & Latham, 1984), the participants should again select certain behaviors and set concrete and motivating goals for development. For this purpose, measures to achieve the goals are gathered in writing at the end of the training and discussed with the trainer. As a result, I assume that instrumental leadership can be actively improved:

*Hypothesis 2:* After the training intervention, the leaders' instrumental leadership will have increased in the perception of their subordinates in comparison with the leaders of the control group.

### **5.2.3 A Training Effectiveness Threshold Theory of Nonlinear Effects - The Influence of Previous Knowledge**

The effectiveness of leadership training is again reflected in a recent meta-analysis (Lacerenza et al., 2017) that evaluated training interventions from 335 samples according to Kirkpatrick's (1959) four evaluation criteria *reaction, learning, behavior / transfer, and results*. The analysis indicates even higher effect sizes than were assumed in previous meta-analyses (e.g. Avolio et al., 2009; Powell & Yalcin, 2010), but trainee, work environment and training characteristics cause a wide range of differences in these effect sizes (Avolio et al., 2009; Blume, Ford, Baldwin, & Huang, 2010; Lacerenza et al., 2017). Focus should be on the transfer level, because according to Day (2000) the positive change of the leader's behavior on-the-job is one of the main goals of leadership trainings and it is known that a *transfer problem* (Baldwin & Ford, 1988) does exist. Accordingly, the effects of a training in transformational leadership could not always increase the perception of the employees and, in some cases, the employees' perception was found to have even slightly impaired (Mason et al., 2014).

These results give reason to question how leaders develop and whether every participant benefits from a training intervention. Boyatzis (2008) emphasizes that leadership development, unlike commonly used in leadership development literature, is often nonlinear and discontinuous. Day (2010) for example mentioned, in connection with individual ability to learn from experience, an inverted u-shaped relation between self-confidence and learning-related curiosity (Weick, 1993). Very self-confident participants became less curious, thinking they already know all important things, while less self-confident participants avoided curiosity, because it enhances insecurity (Day, 2010). In line with the learning curve it can be assumed that previous knowledge influences the way participants learn (Lim & Johnson, 2002). Therefore it is still not known which kind of participants benefit more from a training - those with little previous knowledge who are on a steep section of the learning curve, or those who already have solid previous knowledge (Day, Fleenor, Atwater, Sturm, & McKee, 2014).

If I follow the assumption that leadership development is nonlinear (Boyatzis, 2008) and if I consider the individual previous knowledge of the participants as a starting point for their development, then I assume that the effectiveness of the training is subject to a threshold theory of nonlinear effects. Accordingly, I classified the participants by their leadership

behavior rated by the subordinates in the pretest, which could be seen as previous knowledge, in rates of high, middle and low.

Accordingly, I assume firstly that leaders with a low level of previous transformational or instrumental leadership can learn more in the training, because they move along a steeper part of the learning curve (Hirst et al., 2004) and consequently improve their leadership behavior more than leaders who already reached high levels of leadership behaviors.

Secondly, analogous to the learning curve, I assume declining yields for already highly transformational or instrumental leaders. Leaders with a high prior knowledge already apply the trained behaviors to a large extent and need longer to acquire new knowledge (Hirst et al., 2004). This is why, due to the measurement shortly after training, I expect no training effect for leaders with high prior knowledge. It is also evident in intervention studies on transformational leadership that the effectiveness of a training needs time to cause behavioral changes. Abrell et al. (2011), for example, who assessed the leadership behavior three, six, nine and 12 months after training, revealed that only after six months a relevant increase of transformational leadership in the perception of the followers was noticeable. Additionally, there are indications that some training participant's perception of transformational behaviors even decreases after the intervention, measuring at the end of a one-year training program (Mason et al., 2014).

Thirdly, I expect the group of leaders with a moderate level of leadership to build on a solid foundation regarding the trained behaviors, and therefore, find it easier to transfer the training input into practice than those with little prior knowledge. The amount of learning input is also one moderator for the training transfer (Lacerenza et al., 2017), which is why a leader with little prior knowledge can feel overwhelmed by a great amount of training content. The leader with a medium degree of prior knowledge is able to concentrate on selected behaviors, which might seem more relevant.

Our threshold theory will be strengthened by the training design, especially by the use of feedback and practical group-exercises where participants learn from each other (Bandura, 1977). Feedback is one important aspect to encourage the motivation of the participants to transfer the trained behaviors (Blume et al., 2010; Lacerenza et al., 2017). Feedback clearly shows the strengths and weaknesses of the participants and provides a comparative value for their orientation. If high-rated leaders receive positive feedback on their leadership behavior, the incentive to set ambitious goals according to the goal setting theory is lower than for low- or medium-rated leaders with a need for improvement. For high-rated leaders, feedback can be rather demotivating and they make no effort to deal with the new content and integrate new

knowledge. Additionally, high-rated leaders would act like role models during the group-based exercises for low- and medium-rated leaders, which results in less input for their own development.

Therefore, taking the previous knowledge of leadership behaviors into account, I assume that the development of the leadership behaviors is not linear, but inverted u-shaped.

*Hypothesis 3:* The improvement of leaders' behavior (3a: transformational, 3b: instrumental) in the perception of their subordinates will be inverted u-shaped, such that the improvement of the leaders' behavior is initially positive but becomes more negative as the initial status increases. As such, the improvement will be maximized in the midrange of the initial status.

#### **5.2.4 Change-Related Outcomes of the Training's Effectiveness**

For the evaluation on the result level (Kirkpatrick, 1959), I use change-related outcomes in line with the change orientation of the training and examine whether the difference values between pre- and posttest of the leadership behaviors are related to changes in the outcomes. The change orientation in the trainings follows the demands placed on a leader today, which are strongly influenced by change processes. Changes are pervasive in organizations, so leading through change has been an integral part of leadership for many years (Bass & Riggio, 2006; Brown & Eisenhardt, 1997).

Transformational leadership is considered an emotional leadership style that touches on the self-concept and transforms the values and attitudes of employees into higher-order values that are beneficial to the organization (Shamir et al., 1993). Accordingly, a higher motivation in employees arouses resulting in performance beyond the expected level (Bass, 1985). This transformational idea is particularly evident in complex and uncertain contexts (Bass, 1999), which explains why transformational leadership is considered suitable for promoting change processes in organizations and is described as change-oriented leadership (Bass & Riggio, 2006; Conger & Kanungo, 1987; Eisenbach et al., 1999).

The effectiveness of transformational leadership during changes could be shown empirically by a number of studies, but there exists no experimental study that has investigated this relation. For example, Hoogh et al. (2005) could show a significant interaction between charismatic leadership (which is part of the transformational leadership concept) and the dynamic of the environment, meaning that in dynamic situations or during change processes the relation between charismatic leadership and performance is higher than in stable situations.

Additionally, a positive influence was found on acceptance of a merger (Nemanich & Keller, 2007), openness to change (Groves, 2005), change readiness (Herrmann et al., 2012; Santhidran, Chandran, & Borromeo, 2013) or negative influence on change cynicism (Bommer et al., 2005; Wu et al., 2007).

Following the theoretical framework of change recipients' reaction towards change by Oreg et al. (2011) and in order to be able to map the training effect on the attitudinal and behavior level of the employees, we use the affective change commitment and championing support for change outcomes (Herscovitch & Meyer, 2002).

According to Meyer and Hamilton (2013), affective change commitment of the employees can be considered a key driver between contextual factors, particularly leadership (Herold et al., 2008), and the behavioral consequences to support a change initiative. Herscovitch and Meyer (2002) defined affective change commitment as an emotional force or attitude that binds an individual to actions that are necessary for the successful implementation of a change initiative. Hence, affective change commitment is a desire to support change because of the belief in the resulting gain from the change (Herscovitch & Meyer, 2002).

When the transformational leader is able to convince the employees of the need for a change initiative and when the leader responds to the fears of the employees, they feel obligated to follow the leader's vision of the change and are committed to the change process based on the social exchange theory (Blau, 1964). In addition, a transformational leader communicates the change as a common goal of the organization and makes a personal contribution to this change visible for each employee. In this way, the self-concept of the employees is strengthened and linked to the goal of the change. Thus, the employees gain self-confidence and show an increased commitment to the change as the common goal (Shamir et al., 1993). The relation between transformational leadership and change commitment could be shown in previous research (Abrell-Vogel & Rowold, 2014; Herold et al., 2008; Michaelis et al., 2010; Seo et al., 2012).

Based on the theory of planned behavior (Ajzen, 1991), affective change commitment can be seen as a close predictor of supportive behavior towards change (Herscovitch & Meyer, 2002). According to the theory, a person's intention to behave determines the degree of commitment he or she is willing to put in to a particular behavior. Thus, if a person is affectively tied to change, it is his or her desire to support the change and to commit to the implementation of the change. Therefore, a high degree of commitment leads to a very strong support, namely championing support towards change.

Bouckenooghe et al. (2015) were able to meta-analytically confirm that the affective component of change commitment in particular is a predictor of championing support for change. Hence, the research model is based on the established relationship between affective change commitment and championing support for change to explore the effect of the leadership development program.

I presume that the change of the transformational leadership perception between pre- and posttest will influence the difference value of employees' affective change commitment and their support for change between the pre- and posttest, moderated by training participation.

*Hypothesis 4a:* After the training intervention, the difference value of leaders' transformational leadership between the pre- and posttest will foster the difference value of subordinates' championing support for change, mediated by the difference value of the subordinates' affective change commitment in the experimental group.

In Nadler and Tushman's (1990) model of leadership of change, charismatic leadership is described as not enough to successfully implement change. While charismatic or transformational leadership is a suitable way to enhance employees' commitment through "envisioning, energizing and enabling" (Nadler & Tushman, 1990, p. 82), only instrumental leadership can lead to employees' compliance over time (Nadler & Tushman, 1990).

In accordance with the dimension of environmental monitoring, the instrumental leader recognizes changes in the market at an early stage and takes advantage of them while searching for opportunities for the team. Especially in times of change when the internal and external environment changes, this behavior is indispensable (Antonakis & House, 2014; Kotter, 2014; Osborn, Hunt, & Jauch, 2002). In addition, the strategy formulation makes the abstract vision of transformational leadership more tangible for the employees, because the leader derives a strategy that is appropriate to the change situation. The way how to implement the change is explained and thereby stability for the employees is provided (Antonakis & House, 2014; Argyris, 1964). Formulating clear goals and frameworks creates the basis for a trusting relationship and reduces uncertainty (Rafferty & Griffin, 2006). Accordingly to the uncertainty reduction theory (Berger & Calabrese, 1975), employees are looking for information to assess behavior and events in their environment and to reduce their own uncertainty. Therefore, the strategic, forward-looking and initiative behaviors of the leader reduce the uncertainty of the employees (Antonakis & House, 2014). In this way, employees' trust in the supervisor is



strengthened, which is an important predictor of affective change commitment (Michaelis et al., 2009; Oreg, 2006).

The instrumental leader acts directly on the task performance of the employees through work-oriented behaviors. In demonstrating path-goal facilitation, the executive supports the employee with his or her expert knowledge and ensures that goals can be achieved. If the goals change during a change situation, the leader ensures nevertheless that all necessary resources are available and new obstacles are removed (Antonakis & House, 2014; Rowold, 2014). Through this direct technical support, the self-efficacy (Antonakis, 2006) and job satisfaction (Rowold, 2014) of the employee is increased. Based on the social exchange theory (Blau, 1964), a reciprocal relationship of trust is created whereby the employee acknowledges the support with greater commitment to the change goals and the mission of the leader. In addition, the leader strengthens the self-efficacy and motivation of the employee through constructive feedback in the dimension outcome monitoring. In doing so, the leader focuses on learning from mistakes (Antonakis & House, 2014; Stajkovic & Luthans, 2003). During change processes, new tasks arise and the possibility for making mistakes increases. However, if the employees receive constructive feedback, the response is considered appreciative and their self-efficacy and motivation enhance, resulting in increased work performance (Shipper, Hoffman, & Rotondo, 2007). Accordingly, based on the trusting relation with the supervisor, they feel committed to the change goals and are willing to support the change.

Besides the above-mentioned positive findings with regard to organizational success criteria, like objective performance (Rowold, 2014), instrumental leadership has not been examined in the context of change yet. It can be seen that instrumental leadership has a negative effect on the objective stress measure cortisol (Rowold et al., 2017). Thus, instrumental leadership empowers employees by providing tangible and intangible resources that are necessary for coping with work demands, thereby protecting them from stress, which is often caused by change processes. Empirically, Neves (2011) showed that the competence and perceived support of superiors are positively related to affective change commitment.

Analogous to the previous hypothesis, the affective change commitment, because of its behavioral intention, leads employees to championing a change (Bouckenooghe et al., 2015; Herscovitch & Meyer, 2002). Therefore, I evaluate the change-oriented training with the mediation effect of the difference value of instrumental leadership between the pre- and posttest on employees' support for change via the affective change commitment of the employees.

*Hypothesis 4b:* After the training intervention, the difference value of leaders' instrumental leadership between the pre- and posttest will foster the difference value of subordinates' championing support for change, mediated by the difference value of the subordinates' affective change commitment in the experimental group.

## **5.3 Method**

### **5.3.1 Participants and Design**

For the evaluation of the training, I used a pre-test-posttest control group design. Accordingly, I collected data about one month before and three months after the training.  $N = 59$  leaders from five different organizations in Germany participated in the training and make up the experimental group (EG). The control group (CG) consists of  $N = 54$  leaders, who were randomly selected from different German organizations. The leaders' transformational and instrumental leadership behaviors in the EG were rated by  $N = 387$  (T1; T2:  $N = 266$ ) followers, who also rated their own affective change commitment and support for change. In the CG  $N = 188$  (T1; T2:  $N = 164$ ) followers rated their leader's behaviors and their own affective change commitment and support for change. In order to ensure that the leader and the employees refer to the same change in their assessment, the leader was asked in the run-up to the survey to select a specific change in the team and to communicate it to the employees.

The leaders of the EG had a mean age of 41.17 years ( $SD = 10.60$ ) and 17 of the 59 leaders were female. Their mean team size was 11.19 ( $SD = 13.40$ ) and mean job tenure was 6.64 years ( $SD = 6.40$ ). On average the leaders had 9.32 years ( $SD = 7.37$ ) of leadership experience. Leaders of the CG had a mean age of 41.36 years ( $SD = 11.17$ ) and 23 of the 54 leaders were female. The mean team size in the CG was 16.87 ( $SD = 13.81$ ) and the control group leaders had mean job tenure of 7.12 years ( $SD = 6.41$ ). On average the leaders had 8.80 years ( $SD = 8.35$ ) of leadership experience.

The 387 employees, who rated the leaders from the EG, worked mostly full-time (78.40 %). Their mean age was 37.80 years ( $SD = 10.97$ ) and 46 % were female, 45 % male. The team members had a mean job tenure of 4.64 years ( $SD = 5.57$ ). The employees of the control group had a mean age of 36.06 years ( $SD = 11.97$ ) and a mean job tenure of 5.72 years ( $SD = 5.93$ ). Fifty-seven percent of the employees were female, 36.5 % were male and most of them worked full-time (65 %).

The personal impact of the change process, which was rated by all team members on a five-point Likert scale, was rated by the employees of the EG with a mean of 3.58 ( $SD = 1.20$ )

and the impact on the organizational level with a mean of 3.79 ( $SD = .98$ ). The employees of the CG rated their own personal change impact with a mean of 3.68 ( $SD = 1.19$ ) and the organization impact of the change with a mean of 3.74 ( $SD = 1.02$ ).

With regard to the demographic characteristics, it was examined whether there are significant differences between the CG and the EG. For the leaders' demographics, no difference was found between EG and CG regarding age (T-test:  $t(110) = -.09, p = .93$ ), gender (Chi-Square Crosstable Test:  $\chi^2(2, 113) = 3.69, p = .16$ ), job tenure (Mann-Whitney  $U$  Test:  $z = -.35, p = .73$ ) or leadership experience (Mann-Whitney  $U$  Test:  $z = -.74, p = .46$ ). However, a difference is noticeable between the EG and CG regarding team size (Mann-Whitney  $U$  Test:  $z = -3.21, p = .00$ ). Related to the employees' demographics, there is a difference between EG and CG regarding gender (Chi-Square Crosstable Test:  $\chi^2(2, 575) = 12.58, p = .00$ ) and full-time vs. part-time employment status (Chi-Square Crosstable Test:  $\chi^2(1, 536) = 14.65, p = .00$ ), but no difference regarding age (Welch-test:  $t(345) = 1.67, p = .10$ ) and job tenure (Mann-Whitney  $U$  Test:  $z = -1.45, p = .15$ ). In addition, it was examined whether there were differences in the assessment of the change processes. There was no difference regarding the personal or organizational impact of the change rated by the employees between the pretest and posttest (T-test:  $t(541) = .31, p = .76$  and  $t(539) = 1.03, p = .30$ ) neither in the EG nor in the CG (T-test:  $t(541) = -.98, p = .33$  and  $t(539) = .59, p = .56$ ).

### 5.3.2 Measures

To avoid unfair comparisons among the training outcomes (Cooper & Richardson, 1986), I used standardized and validated questionnaires and ensured procedural equivalence of the operationalization.

**Transformational leadership.** To measure transformational leadership in the perception of the followers, I used the 22 items from the validated German version (Heinitz & Rowold, 2007) of the Transformational Leadership Inventory (TLI; Podsakoff et al., 1990). All items started with "My supervisor ..." and one sample item is "paints an interesting picture of the future for our group". The internal consistency in the control group dataset was at T1  $\alpha = .92$  and at T2  $\alpha = .92$ . In the experimental group the internal consistency in the dataset was  $\alpha = .92$  at T1 and  $\alpha = .93$  at T2.

**Instrumental leadership.** I used 16 items developed by Antonakis and House (2004) in the German translation by Rowold (2014) to measure instrumental leadership from the perspective of the employees. All items started again with "My supervisor ..." and one sample item is "removes obstacles to my goal attainment". The internal consistency in the control group

dataset was at T1  $\alpha = .93$  and  $\alpha = .94$  at T2. In the experimental group dataset the internal consistency was at T1 and T2  $\alpha = .94$ .

***Affective change commitment.*** I examined affective change commitment using the six items from the Commitment to Change Scale developed by Herscovitch and Meyer (2002) in a German translation, which was used in previous studies (e.g. Abrell-Vogel & Rowold, 2014). One sample item is “I believe in the value of this change.” The internal consistency in the control group dataset was at T1  $\alpha = .92$  and at T2  $\alpha = .86$ . In the experimental group dataset the internal consistency was at T1 and T2  $\alpha = .92$ .

***Championing support for change.*** Championing support for change was assessed using the Measures of Behavioral Support for Change developed by Herscovitch and Meyer (2002). The scale for championing support consists of six items and was translated with the translation-back-translation procedure endorsed by Brislin (1980). Sample items are “I try to overcome co-workers’ resistance toward the change” or “I speak positively about the change to outsiders”. The internal consistency in the control group dataset was at T1  $\alpha = .83$  and  $\alpha = .78$  at T2. In the experimental group dataset the internal consistency was at T1  $\alpha = .84$  and at T2  $\alpha = .83$ .

All items were answered on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

***Controls.*** To analyze the difference of transformational and instrumental leadership behavior between the pre- and posttest, I controlled for the leaders’ personality traits conscientiousness (four items,  $\alpha = .63$ ), openness to experience (five items,  $\alpha = .66$ ) and neuroticism (four items,  $\alpha = .66$ ), because these three traits have an influence on the training transfer according to (Blume et al., 2010). They were measured using the BFI-K by Rammstedt and John (2005). One sample item for the openness to experience scale is “I am interested in many things”, rated on a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Moreover, I controlled for demographic differences between the EG and CG and included therefore the variables age leader, gender leader, gender subordinates, team size and type of employment. Additionally, I controlled for change-relevant variable change impact, because previous studies showed that change commitment is effected by the level of the individual change impact (Herold et al., 2008). I measured the change impact with a single item and asked, how much an employee is affected in the daily work routines by the change process. The answers could be made on a range from 1 (*not affected at all*) to 5 (*very strongly affected*).

### 5.3.3 Training Intervention

According to Day (2000), the developed training intervention in instrumental and transformational leadership behavior corresponds to a *leader* development intervention, because leadership behaviors are trained excluding the social interaction between the leaders and the subordinates. The intervention was carried out by the author a total of ten times with an average of six leaders participating. The training is designed for two days and based on Bass's (1990) training concept for transformational leadership. According to Bass's (1990) concept, it consists of a combination of a 180-degree feedback report with individual feedback sessions and group-based training methods such as lecture, discussions and role-play (Abrell et al., 2011).

In its theoretical foundation, the transformational leadership part is based on Podsakoff et al.'s (1990) six-dimensional conceptualization of transformational leadership. The theoretical input regarding instrumental leadership is based on Antonakis and House's (2002; 2004) four-dimensional conceptualization of the construct. All exercises for the four leadership behaviors were newly developed.

At the beginning of the first day, participants were first familiarized with the term "leadership" by receiving a theoretical introduction to the extended full-range of leadership model and in particular, to the six transformational and four instrumental dimensions (Antonakis & House, 2002; Antonakis & House, 2004; Podsakoff et al., 1990). Subsequently, the participants received their individual leadership feedback report based on the data of the pretest. The report showed the participants a strengths and weaknesses profile that should help them to reflect on their leadership style and to set goals on how to improve their post-training leadership.

The afternoon session of the first day focused on the four dimensions of instrumental leadership. Each dimension was explained in detail and empirical evidence for the effectiveness of the construct was presented (Antonakis & House, 2014; Rowold, 2014). Afterwards, a practical exercise for each dimension was carried out to ensure the transfer from training to everyday leadership. For example, the strategy formulation exercise consisted of targeted key questions ("*What goals should my team pursue?*" and "*Which measures / procedures are needed first?*") to gradually guide the participants to developing a strategy for their teams.

On the second day the training focused on transformational leadership and the individual dimensions were explained theoretically and consolidated by practical exercises. At the end of the training, participants were asked to revisit their goals. Each participant should set him- or

herself a goal in the area of transformational and instrumental leadership, towards which he or she would like to work after the training. In addition, the participants should note the measures and actions they intend to take when implementing their goals. The trainer discussed the goals with every participant and paid attention to their feasibility.

#### 5.3.4 Analyses

To test the effectiveness of the training I conducted repeated measurement analyses of covariance (RM-ANCOVAs) and controlled for the above-mentioned variables. In addition, I calculated Carlson and Schmidt's (1999) effect size  $d_{ppc}$ . To analyze the change (growth rate) of transformational and instrumental leadership between the pre- and posttest further, I conducted a two-level hierarchical path analysis using MPlus version 7.3. The intercepts and slopes as the outcome models test whether the level two variable training (experimental group = 1 vs. control group = 0) and the controls have an influence on the initial status of the leadership behaviors and their growth rate. According to my assumption that the training effect is nonlinear, I calculated ANOVAs to test whether the means of the training outcomes differ significantly among a low, medium and high classification by median split procedure. Consequently, I calculated the effect sizes according to the same classification, namely in the expressions low, medium and high. In order to confirm the hypothesis that the training effect is nonlinear, I have supplemented the multilevel analysis with the square effect of the leadership styles.

To analyze the effect of the training on the change related variables, I tested the moderated mediation hypotheses using the bootstrapping procedure (Hayes, 2013). First, I calculated the changes in the constructs by taking the difference between the pretest and posttest data for transformational and instrumental leadership, affective change commitment and championing support for change. Then I assessed the relation between the changes via mediation. To test whether the changes of the variables are caused by the training, I moderated the first path by the training variable.

The data of the employee-rated constructs were aggregated for each leader. The appropriateness for aggregation was given for all constructs (T1: TL:  $r_{wgj} = .97$ ;  $ICCI = .31$ ;  $ICC2 = .70$ ; IL:  $r_{wgj} = .95$ ;  $ICCI = .25$ ;  $ICC2 = .64$ ; affective change commitment:  $r_{wgj} = .79$ ;  $ICCI = .42$ ;  $ICC2 = .80$  and support for change:  $r_{wgj} = .83$ ;  $ICCI = .25$ ;  $ICC2 = .63$  and T2: TL:  $r_{wgj} = .92$ ;  $ICCI = .32$ ;  $ICC2 = .51$ ; IL:  $r_{wgj} = .93$ ;  $ICCI = .16$ ;  $ICC2 = .43$ ; affective change commitment:  $r_{wgj} = .86$ ;  $ICCI = .43$ ;  $ICC2 = .75$  and support for change:  $r_{wgj} = .84$ ;  $ICCI = .22$ ;  $ICC2 = .51$ ).

## 5.4 Results

Means and standard deviations of the study variables as well as intercorrelations and internal consistencies of the experimental group variables are reported in Table 10.

### 5.4.1 Training Effectiveness

The results show that transformational leadership behavior increased significantly in the perception of the followers after the training intervention in comparison to CG:  $F(1, 97) = 6.10$ ,  $p = .02$ ,  $\eta^2 = .06$ ;  $d_{ppc} = .37$ . The data also supported the effectiveness of the training in instrumental leadership. The results of the RM-ANCOVA showed that the followers rated their leaders significantly higher in instrumental leadership in comparison to the CG:  $F(1, 97) = 4.62$ ,  $p = .03$ ,  $\eta^2 = .05$ ;  $d_{ppc} = .34$ . The results of the multilevel analyses presented in Table 11 and Table 12 confirm these findings. The growth rates of transformational and instrumental leadership were significantly positively influenced by the training, meaning that leaders of the EG had a higher level of transformational and instrumental leadership after the training than the leaders of the CG. The findings support hypotheses 1 and 2.

Prior to analyzing the nonlinear effect of the training, the results of the analyses of variance (ANOVAs) supported the assumption that the means of the training outcomes differ significantly among the classification low, medium and high at the pretest. The results for transformational leadership showed significant differences between the low ( $M = 3.31$ ,  $SD = 0.22$ ), medium ( $M = 3.69$ ,  $SD = 0.09$ ) and high ( $M = 4.03$ ,  $SD = 0.16$ ) manifestation,  $F(2, 56) = 97.28$ ,  $p = .00$ . The leaders of the experimental group differed significantly between the low ( $M = 3.40$ ,  $SD = 0.18$ ), medium ( $M = 3.83$ ,  $SD = 0.12$ ) and high ( $M = 4.19$ ,  $SD = 0.18$ ) manifestation of instrumental leadership  $F(2, 56) = 116.32$ ,  $p = .00$ , too. Due to the significantly different characteristics, I separated the effect sizes once more into the three categories for transformational and instrumental leadership.

Table 10. Study 3: Descriptive statistics, intercorrelations and internal consistencies of study variables at pre- and posttest.

							Pretest														
Variable	EG			CG			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
	N	M	SD	N	M	SD															
1 TL	59	3.68	.34	54	3.76	.49	(.92)														
2 IL	59	3.80	.36	54	3.91	.47	.85**	(.94)													
3 ACC	59	3.96	.76	54	4.12	.69	.22	.18	(.92)												
4 SfC	59	3.73	.49	54	3.84	.52	.30*	.23	.65**	(.84)											
5 Consc. <sup>1</sup>	55	3.90	.61	53	4.26	.55	.03	.12	-.07	.12	(.63)										
6 Openn. <sup>1</sup>	55	3.54	.64	53	3.78	.74	-.25	-.28*	-.06	.04	.39**	(.66)									
7 Neuro. <sup>1</sup>	55	2.43	.66	53	2.25	.77	-.11	-.16	-.01	-.16	-.42**	-.08	(.66)								
							Posttest														
8 TL	59	3.72	.39	54	3.64	.50	.55**	.54**	.14	.20	.23	.05	-.04	(.92)							
9 IL	59	3.85	.37	54	3.83	.51	.48**	.62**	.03	.17	.24	.00	-.13	.85**	(.94)						
10 ACC	59	3.97	.76	53	4.19	.60	.10	.11	.72**	.54**	.04	.09	-.02	.32*	.20	(.72)					
11 SfC	59	3.67	.49	53	3.86	.57	.00	.05	.43**	.55**	.31*	.24	-.07	.20	.14	.66**	(.83)				
							Difference values														
12 Δ TL	59	.04	.35	54	-.12	.33	-.35**	-.22	-.06	-.06	.23	.31*	.07	.58**	.49**	.27*	.22				
13 Δ IL	59	.05	.32	54	-.09	.37	-.39**	-.40**	-.17	-.12	.15	.30*	.03	.38**	.47**	.12	.11	.81**			
14 Δ ACC	59	.01	.57	53	.07	.47	-.17	-.10	-.38**	-.15	.14	.19	-.01	.24	.23	.37**	.31*	.43**	.38**		
15 Δ SfC	59	-.06	.47	53	.02	.45	-.31*	-.19	-.24	-.48**	.20	.21	-.00	-.02	.02	.13	.47**	.30*	.24	.48**	

Note. Values in the diagonal represent internal consistencies in the experimental group (Cronbach's  $\alpha$ ). Intercorrelations are presented for experimental group data. EG = Experimental group; CG = Control group. TL = Transformational leadership; IL = Instrumental leadership; ACC = Affective change commitment; SfC = Support for change; Consc. = Conscientiousness; Openn. = Openness for experience; Neuro. = Neuroticism.

\* $p < .05$ , \*\* $p < .01$ .

<sup>1</sup>variables measured only at pretest



Table 11. Study 3: Multilevel analysis of linear and nonlinear training effects on transformational leadership behavior development.

Fixed effect	coef.	SE	T	coef.	SE	T
<b>Model for initial status, <math>\pi_0</math></b>						
Intercept, $\gamma_{000}$	5.23	1.21	4.32**	5.23	1.21	4.32**
Conscientiousness, $\gamma_{002}$	-0.15	0.13	-1.15	-0.15	0.13	-1.15
Openness to experience, $\gamma_{003}$	-0.01	0.12	-0.09	-0.01	0.12	-0.09
Neuroticism, $\gamma_{004}$	-0.19	0.10	-1.97*	-0.19	0.10	-1.97*
Age leader, $\gamma_{005}$	-0.07	0.05	-1.34	-0.07	0.05	-1.34
Gender leader, $\gamma_{006}$	-0.20	0.16	-1.29	-0.20	0.16	-1.29
Gender subordinates, $\gamma_{007}$	0.24	0.39	0.63	0.26	0.39	0.63
Team size, $\gamma_{008}$	0.12	0.02	1.07	0.12	0.02	1.07
Type of employment, $\gamma_{009}$	-0.22	0.31	-0.72	-0.22	0.31	-0.72
Change impact, $\gamma_{010}$	0.04	0.13	0.33	0.05	0.14	0.33
Training, $\gamma_{001}$	-0.24	0.15	-1.66	-0.25	0.15	-1.66
<b>Model for growth, <math>\pi_1</math></b>						
Intercept, $\gamma_{100}$	-1.29	0.68	-1.91	-1.29	0.68	-1.91
Conscientiousness, $\gamma_{102}$	0.13	0.07	1.81	0.14	0.07	1.81
Openness to experience, $\gamma_{103}$	0.06	0.06	1.01	0.06	0.06	1.01
Neuroticism, $\gamma_{104}$	0.11	0.05	2.10*	0.10	0.05	2.10*
Age leader, $\gamma_{105}$	-0.01	0.03	-0.19	-0.01	0.03	-0.19
Gender leader, $\gamma_{106}$	0.18	0.09	2.14*	0.20	0.09	2.28**
Gender subordinates, $\gamma_{107}$	-0.22	0.19	-1.14	-0.23	0.20	-1.17
Team size, $\gamma_{108}$	-0.01	0.01	-1.30	-0.01	0.01	-1.30
Type of employment, $\gamma_{109}$	0.12	0.15	0.78	0.10	0.15	0.78
Change impact, $\gamma_{110}$	0.03	0.08	0.39	0.03	0.08	0.44
Training, $\gamma_{101}$	0.21	0.08	2.65**	0.17	0.08	2.04**
Transformational leadership <sup>2</sup> , $\gamma_{111}$				-0.08	0.03	-2.60**

Note. Training: 1 = Experimental group; 0 = Control group; Gender leader: 1 = male, 2 = female, Gender subordinates: 1 = male, 2 = female; Type of employment: 1 = temporary employees, 2 = part time, 3 = full time; coef. = coefficient.

\* $p < .05$ ; \*\*  $p < .01$ .

Table 12. Study 3: Multilevel analysis of linear and nonlinear training effects on instrumental leadership behavior development.

Fixed effect	coef.	SE	T	coef.	SE	T
<b>Model for initial status, <math>\pi_0</math></b>						
Intercept, $\gamma_{000}$	4.98	1.10	4.54**	4.98	1.10	4.54**
Conscientiousness, $\gamma_{002}$	-0.02	0.14	-0.12	-0.02	0.14	-0.12
Openness to experience, $\gamma_{003}$	-0.15	0.12	-1.19	-0.14	0.12	-1.19
Neuroticism, $\gamma_{004}$	-0.10	0.09	-1.05	-0.10	0.09	-1.05
Age leader, $\gamma_{005}$	-0.01	0.06	-0.12	-0.01	0.06	-0.12
Gender leader, $\gamma_{006}$	-0.21	0.14	-1.45	-0.20	0.14	-1.45
Gender subordinates, $\gamma_{007}$	0.29	0.36	0.82	0.31	0.36	0.87
Team size, $\gamma_{008}$	0.04	0.02	2.17*	0.03	0.02	2.17*
Type of employment, $\gamma_{009}$	-0.04	0.29	-0.14	-0.03	0.29	-0.11
Change impact, $\gamma_{010}$	-0.09	0.14	-0.62	-0.07	0.14	-0.62
Training, $\gamma_{001}$	-0.25	0.14	-1.79	-0.25	0.14	-1.80
<b>Model for growth, <math>\pi_1</math></b>						
Intercept, $\gamma_{100}$	-1.04	0.65	-1.61	-1.04	0.65	-1.61
Conscientiousness, $\gamma_{102}$	0.02	0.07	0.23	0.01	0.07	0.23
Openness to experience, $\gamma_{103}$	0.13	0.06	2.21*	0.13	0.06	2.21*
Neuroticism, $\gamma_{104}$	0.02	0.05	0.48	0.02	0.05	0.48
Age leader, $\gamma_{105}$	-0.04	0.03	-1.46	-0.04	0.03	-1.46
Gender leader, $\gamma_{106}$	0.14	0.08	1.75	0.15	0.08	1.75
Gender subordinates, $\gamma_{107}$	-0.15	0.17	-0.90	-0.15	0.17	-0.90
Team size, $\gamma_{108}$	-0.03	0.01	-1.95	-0.02	0.01	-1.95
Type of employment, $\gamma_{109}$	0.01	0.15	0.09	0.02	0.16	0.09
Change impact, $\gamma_{110}$	0.15	0.07	2.19*	0.15	0.07	2.19*
Training, $\gamma_{101}$	0.18	0.07	2.45*	0.16	0.08	1.89*
Instrumental leadership <sup>2</sup> , $\gamma_{111}$				-0.04	0.06	-0.66

Note. Training: 1 = Experimental group; 0 = Control group; Gender leader: 1 = male, 2 = female, Gender subordinates: 1 = male, 2 = female; Type of employment: 1 = temporary employees, 2 = part time, 3 = full time; coef. = coefficient.

\* $p < .05$ ; \*\*  $p < .01$ .

The results are presented in Table 13, using transformational leadership as reference group for the classification and instrumental leadership as reference group. The effect sizes showed that the training effect is strongest at medium severity of both transformational and instrumental leadership. The results of the classified effect sizes therefore supported the assumption of an inverted u-shaped course of the training effect and gave reason to consider the nonlinear effects in the multilevel analysis.

Table 13. Study 3: Effect sizes classified according to the extent of previous leadership knowledge.

	Reference group	$d_{ppc}$ low ( $N_{CG} = 18 /$ $N_{EG} = 19$ )	$d_{ppc}$ medium ( $N_{CG} = 18 /$ $N_{EG} = 20$ )	$d_{ppc}$ high ( $N_{CG} = 18 /$ $N_{EG} = 20$ )
Transformational leadership	TL T1	0.58	2.56	0.16
Instrumental leadership	TL T1	0.70	1.40	-0.44
Transformational leadership	IL T1	0.33	1.09	0.41
Instrumental leadership	IL T1	0.67	2.43	-0.20

Note. For reference group transformational leadership: low =  $M_{TL\_T1\_EG} < 3.57$  and  $M_{TL\_T1\_CG} < 3.53$ ; medium =  $M_{TL\_T1\_EG} < 3.84$  and  $M_{TL\_T1\_CG} < 3.99$ ; high =  $M_{TL\_T1\_EG} > 3.84$  and  $M_{TL\_T1\_CG} > 3.99$ . TL T1 = Transformational leadership at measurement point 1.

For reference group instrumental leadership: low =  $M_{IL\_T1\_EG} < 3.57$  and  $M_{IL\_T1\_CG} < 3.53$ ; medium =  $M_{IL\_T1\_EG} < 3.84$  and  $M_{IL\_T1\_CG} < 3.99$ ; high =  $M_{IL\_T1\_EG} > 3.84$  and  $M_{IL\_T1\_CG} > 3.99$ . IL T1 = Instrumental leadership at measurement point 1. EG = Experimental group; CG = Control group.

Regarding the nonlinear effect of the training, I found support for hypothesis 3a with a significantly negative squared effect for transformational leadership on the growth rate ( $estimate = -2.60, p < .01$ ). The results are presented in Table 11. Therefore, leaders with an initial medium status of transformational leadership improved the most, while leaders with an initial low status still had a positive improvement. Yet, leaders with a high initial status showed impaired leadership behavior. The plot of the inverted u-shaped development of transformational leadership behaviors in the experimental group is presented in Figure 6. The squared effect for instrumental leadership on the growth rate presented in Table 12 was not

significant, thus the training effectiveness threshold hypotheses could not be confirmed for instrumental leadership.

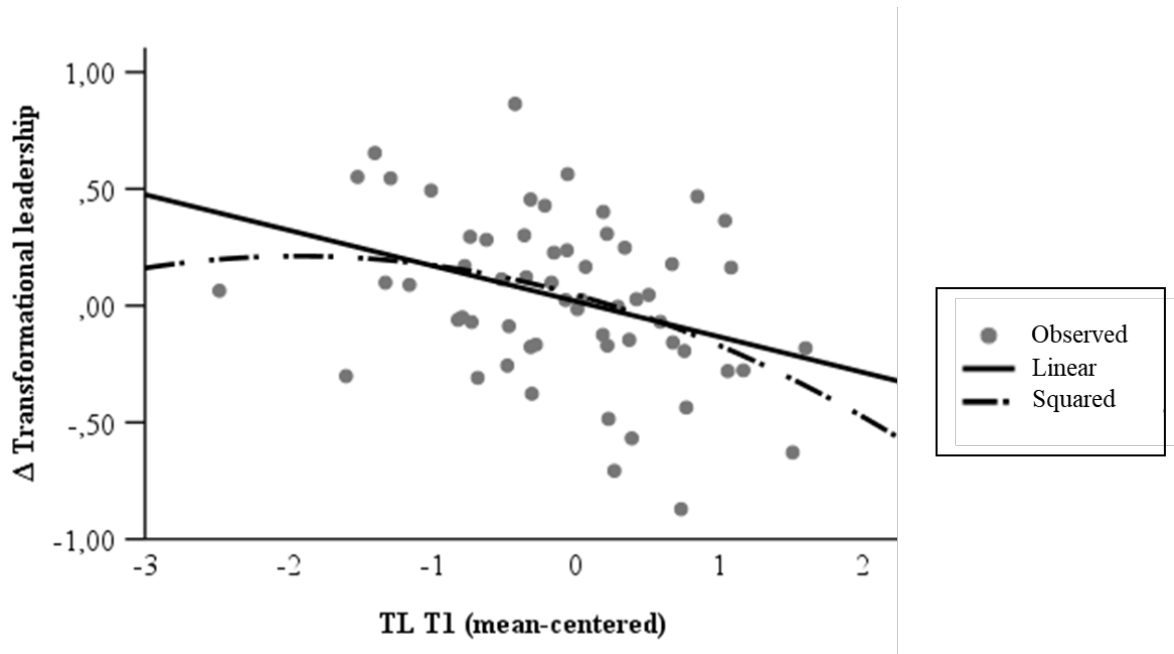


Figure 6. Study 3: Association between transformational leadership at T1 (mean-centered) and  $\Delta$  transformational leadership in the experimental group.

TL T1= Transformational leadership at measurement point 1.

The outcomes of the training effectiveness on the result level are presented in Table 14 and Table 15. The moderated mediation analysis showed a significant effect for  $\Delta$  transformational leadership on  $\Delta$  championing support via  $\Delta$  affective change commitment in the experimental group (*estimate* = 0.08,  $p < .01$ ). This mediation effect could not be found for the control group. The simple slope analysis and the plot of the interaction presented in Figure 7 indicate that the relationship between the delta of transformational leadership and the delta of affective change commitment is only significant in the experimental group ( $\gamma = .24$ ,  $z = 3.81$ ,  $p = .00$ ). Therefore, I could corroborate hypothesis H4a.

Table 14. Study 3: Bootstrapping results for the change in affective change commitment and championing support for change.

Model	Δ Affective change commitment			Δ Championing support		
	Estimate	(SE)	R <sup>2</sup>	Estimate	(SE)	R <sup>2</sup>
Transformational leadership			.12			.18
Δ Transformational leadership Training	0.01	(0.07)		0.06	(0.12)	
Δ Transformational leadership x training	-0.12	(0.10)				
	0.23*	(0.10)				
Δ Affective change commitment				0.33**	(0.08)	
Instrumental leadership			.09			.17
Δ Instrumental leadership Training	-0.02	(0.07)		0.04	(0.04)	
Δ Instrumental leadership x training	-0.11	(0.10)				
	0.25*	(0.10)				
Δ Affective change commitment				0.34**	(0.07)	

Note. SE = Standard error; Training: 1 = Experimental group; 0 = Control group.

\*  $p < .05$ ; \*\*  $p < .01$ .

Table 15. Study 3: Estimated conditional indirect effect of Δ transformational and Δ instrumental leadership on Δ championing support through Δ affective change commitment.

	Δ Championing support	
	Estimate	(SE)
Δ Transformational leadership		
Conditional indirect effects		
Experimental group	0.08**	(0.03)
Control group	-0.00	(0.03)
Δ Instrumental leadership		
Conditional indirect effects		
Experimental group	0.08**	(0.03)
Control group	-0.01	(0.02)

Note. SE = Standard error.

\*\*  $p < .01$ .

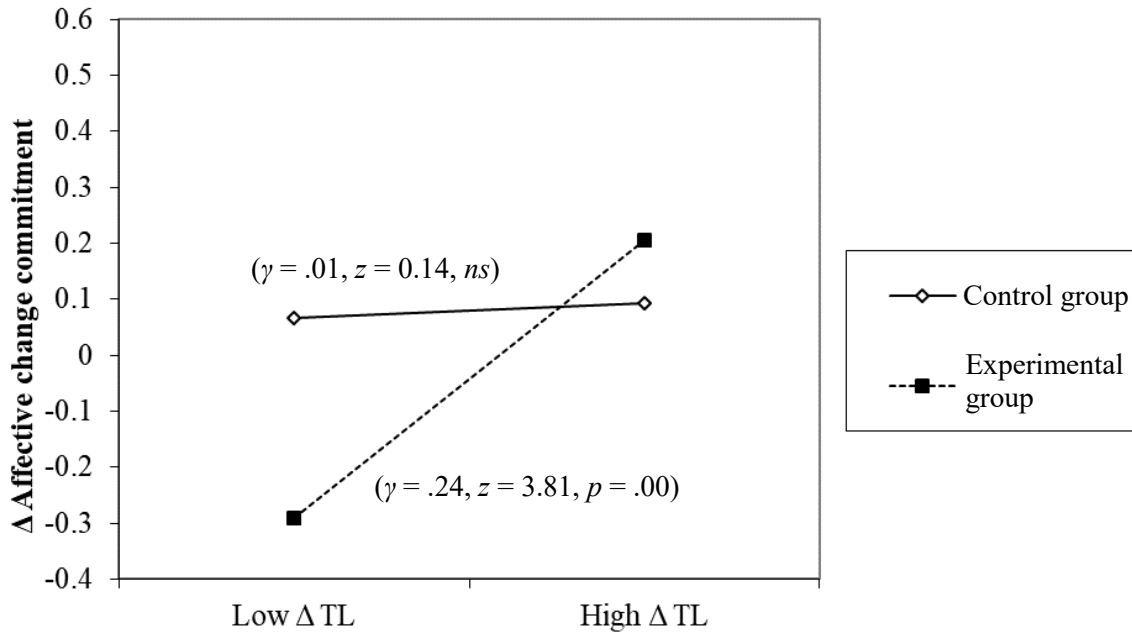


Figure 7. Study 3: Interaction effect of  $\Delta$  transformational leadership and training on  $\Delta$  affective change commitment.

TL = Transformational leadership.

Hypothesis 4b predicted that positive change in instrumental leadership would be associated with positive change in championing support via a change in affective change commitment in the experimental group. The results presented in Table 15 supported this hypothesis. The indirect effect was only significant in the experimental group (*estimate* = 0.08,  $p < .01$ ). As expected, the simple slope analysis showed that the relationship between  $\Delta$  instrumental leadership and  $\Delta$  affective change commitment is significantly positive in the experimental group ( $\gamma = .24$ ,  $z = 3.25$ ,  $p = .00$ ). The effect was not significant in the control group ( $\gamma = -.02$ ,  $z = -0.24$ , *ns*). The plot of the interaction is presented in Figure 8. These results support hypothesis 4b.

#### 5.4.2 Supplemental Analysis

In order to gain an additional insight into the trainability of the leadership behaviors, especially instrumental leadership, I have calculated RM-ANCOVAs for the individual sub-dimensions of instrumental and transformational leadership. I also calculated the effect sizes  $d_{ppc}$ . The results are presented in Table 16. The results show that for transformational

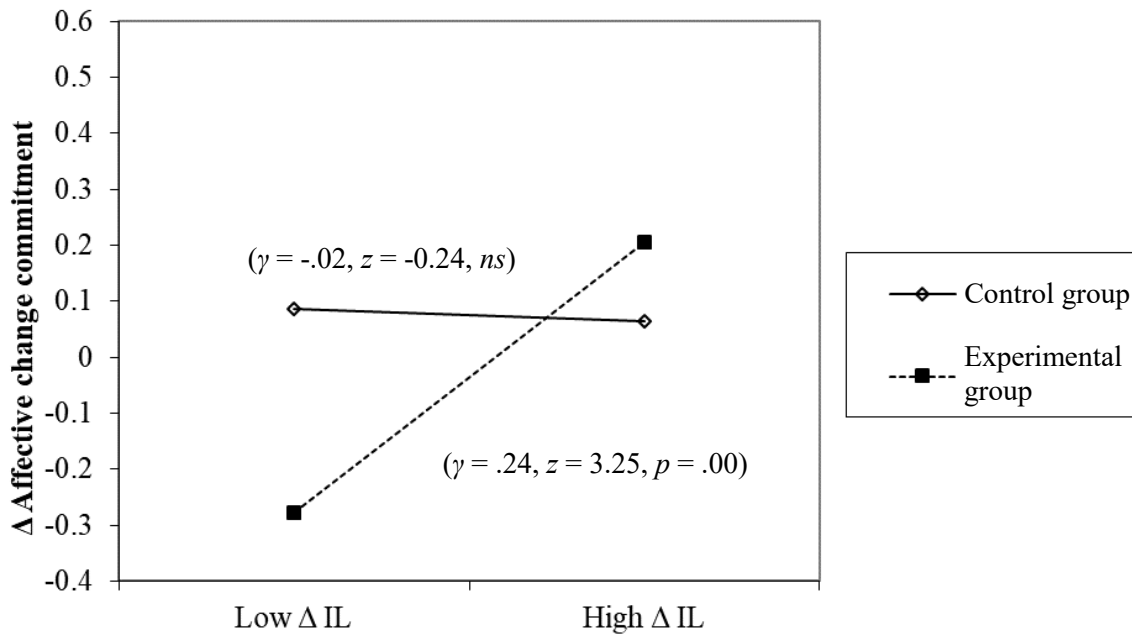


Figure 8. Study 3: Interaction effect of  $\Delta$  instrumental leadership and training on  $\Delta$  affective change commitment.

IL = Instrumental leadership.

leadership, all sub-dimensions in the experimental group increased, while the mean values in the control group decreased. Taking into account the control variables described above, the results of the RM-ANCOVAs presented significant interactions between time x group for all dimensions except fostering the acceptance of group goals and individualized support.

The mean values of the sub-dimensions of instrumental leadership increased in the experimental group, while they decreased in the control group. The RM-ANCOVAs indicated significant results for the dimensions strategy formulation and outcome monitoring. No significant interaction was found for the dimensions environmental monitoring and path-goal facilitation. The calculated effect sizes of the ten sub-dimensions reflect the development of leadership behavior in the same way. Thus, all dimensions except fostering the acceptance of group goals, individualized support, environmental monitoring and path-goal facilitation reach the threshold of  $d_{ppc} = .30$ . The dimensions intellectual stimulation of transformational and outcome monitoring of instrumental leadership developed strongest with an effect size of  $d_{ppc} = .43$  each.

Table 16. Study 3: RM-ANCOVA results and effect sizes for leadership behaviors sub-dimensions.

	Experimental group		Control group		Interaction	
	<i>M (SD)</i> T1	<i>M (SD)</i> T2	<i>M (SD)</i> T1	<i>M (SD)</i> T2	<i>F</i> -value	<i>d</i> <sub>ppc</sub>
Transformational leadership	3.68 (.34)	3.72 (.39)	3.76 (.49)	3.64 (.50)	6.10*	.37
Articulation a vision	3.52 (.49)	3.56 (.48)	3.71 (.60)	3.55 (.63)	4.57*	.36
Appropriate role model	3.63 (.49)	3.67 (.56)	3.74 (.64)	3.56 (.64)	3.60 <sup>†</sup>	.39
Fostering acceptance of group goals	3.80 (.48)	3.76 (.50)	3.88 (.69)	3.77 (.70)	0.68	.13
High performance expectations	3.56 (.53)	3.64 (.55)	3.72 (.65)	3.63 (.69)	4.66*	.30
Individualized support	4.02 (.46)	4.04 (.62)	3.91 (.71)	3.86 (.71)	0.74	.11
Intellectual stimulation	3.54 (.46)	3.64 (.55)	3.54 (.57)	3.40 (.61)	8.86**	.43
Instrumental leadership	3.80 (.36)	3.85 (.37)	3.91 (.47)	3.83 (.51)	4.62*	.34
Environmental monitoring	4.00 (.36)	4.02 (.38)	4.01 (.53)	3.99 (.54)	0.59	.10
Strategy formulation	3.66 (.46)	3.69 (.48)	3.92 (.53)	3.75 (.53)	5.62*	.38
Path-goal facilitation	3.67 (.42)	3.73 (.43)	3.74 (.54)	3.74 (.60)	0.99	.14
Outcome monitoring	3.86 (.45)	3.97 (.43)	3.95 (.59)	3.83 (.64)	5.58*	.43

Note. <sup>†</sup>  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ .



## 5.5 Discussion

In the study, I designed and evaluated a training concept for instrumental and transformational leadership and tested whether instrumental leadership, next to transformational leadership was trainable and had an influence on change outcomes. To test the effect on the change outcomes, I hypothesized a moderated mediation model and assumed that the changes in leadership behavior caused by the training positively influence the reactions of employees to change. In addition, the development of leaders was examined more closely by using their previous knowledge as a starting point for their development and by calculating a growth curve model to analyze how the initial behavior changes and whether this change is influenced by the training. In doing so and with regard to Boyatzis's (2008) proportion of nonlinear leader development, I assumed an inverted u-shaped course of the development and included the squared effect of previous knowledge in the growth curve model.

The results showed that instrumental and transformational leadership in the perception of employees can be significantly improved by a two-day training approximately 3 months after the training, compared to the control group. The supplemental analysis of the effects on facet level showed that the interaction between measurement time and group was significant for all facets except fostering the acceptance of group goals and individualized support as well as environmental monitoring and path-goal facilitation. The growth curve models provided information on the influence of the control variables on the initial status of leadership behavior, i.e. the previous knowledge and on which variables the development of leadership behavior was dependent. My assumption was also confirmed that the development of leaders in transformational leadership follows an inverted u-shape relation, i.e. training participants with little or medium previous knowledge benefited significantly from the training, while participants with a high level of previous knowledge had no ambitions to change their behavior in the short run. The squared effect of the previous knowledge was not significant for instrumental leadership, whereas the effect sizes classified by the previous knowledge indicated a u-shaped course of the development. The moderated mediation analysis with regard to change outcomes showed that changes in leadership behavior caused by the training for both transformational and instrumental leadership triggered changes in affective change commitment, which predicted changes in championing support for change.

### **5.5.1 Theoretical Implications for Leader Development Literature**

The present study contributes to the leader development literature following the definition of Day (2000) (leader vs. leadership development) firstly by showing that instrumental leadership can be enhanced through a two-day training intervention in both profit and non-profit organizations. This study thus meets the need to develop a training concept for instrumental leadership (Antonakis & House, 2014; Rowold, 2014; Rowold et al., 2017). When analyzed in more detail, significant improvements can be seen in the dimensions of strategy formulation and outcome monitoring. The fact that there is no significant improvement in the environmental monitoring dimension is less surprising, since this leadership behavior only has an indirect effect on employees and is strongly dependent on the strategic expertise and experience of the leader. Antonakis and House (2014) therefore assume that this behavior develops over years of repeated experience depending on the leader's ability to learn. More surprising is that path-goal facilitation has not increased significantly, as it is perceived more directly by employees and would be expected to have a short-term effect after three months. A pragmatic explanatory approach can be based on the objective of the participants. In one organization, which makes up about half of the experimental group, the management focused on the dimensions of outcome monitoring and the transformational dimension of high performance expectation. This explains why these two dimensions have developed particularly strong and why other dimensions have therefore been taken into account less frequently in setting objectives. Only three dimensions should be selected, so that the path-goal facilitation close to outcome monitoring was selected less frequently. In light of the relatively small sample, the selection was more evident

Secondly, the nonlinearity of leader development (Boyatzis, 2008) is tested empirically for the first time and an inverse u-shaped course can be drawn between previous knowledge in transformational leadership and the growth rate. This means that while the training is not beneficial for already strongly transformational leaders, it is especially beneficial for those who are medium-strongly pronounced and weakly pronounced. The previous knowledge therefore works as an important variable that determines the development of leaders and should be considered in training evaluations. The result that leaders start with their leadership development from individual points, which moderates the training transfer, was also found for the level of leadership (Avolio et al., 2009; Lacerenza et al., 2017) or the experience of the leaders (Hirst et al., 2004). It was found that lower level leaders achieve a higher training effect than middle or high level leaders (Avolio et al., 2009; Lacerenza et al., 2017). A similar effect was found in the study by Hirst et al. (2004) who could show that new leaders learn more than

experienced ones. These effects can be explained with the assumption that low-level leaders have less leadership experience and thus fewer leadership skills, which makes them more accessible for improvement than experienced leaders who might reach a ceiling effect through leader development. However, I assume that the level of leadership and therefore the experience might be only one fact in the determination of leadership behavior, because 30 % of variance in leadership role occupancy seems to be attributed to genetic factors (Arvey, Rotundo, Johnson, Zhang, & McGue, 2006). Thus, the ability to demonstrate certain leadership behaviors is not only dependent on the leadership position, which was used as an indicator of leadership experience. Good leaders are already to be expected at low leadership levels with little leadership experience and vice versa. Therefore, I developed my research model based on the leader's previous knowledge believing it is a better predictor for the leader development.

Thirdly, the study extends leadership literature by giving insights into the causal link between transformational and instrumental leadership behaviors and change outcomes because of the experimental design of the study. The moderated meditation demonstrated that changes in leadership styles in the training group caused changes in the change support through the affective change commitment of the employees (Herscovitch & Meyer, 2002). Accordingly, instrumental leadership seems to be a necessary extension to the full-range of leadership model in the context of change, too.

Fourthly, the results of previous intervention studies (Abrell et al., 2011; Barling et al., 1996; Dvir et al., 2002) could be replicated with regard to the trainability of transformational leadership. It could be seen that the personality trait neuroticism negatively predicted the initial status of transformational leadership, which is in line with the results of the meta-analysis by Bono and Judge (2004). On the other hand, neuroticism promoted the development of transformational leadership, which contradicts the results of the meta-analysis of Blume et al. (2010), as they found a negative connection to training transfer. However, the effect can be explained with the theory of social comparisons (Festinger, 1954). If participants show a high degree of neuroticism, they start the training with little previous knowledge of transformational leadership. Through feedback they were made aware of their weaknesses in comparison to their colleagues, so that, according to the theory, an effort is made to eliminate the big gap to their colleagues (contrast effect). Consequently, participants set themselves higher development goals for fear that their self-esteem will be further weakened by experiencing a contrast effect in the posttest.

### **5.5.2 Strengths, Limitations and Suggestions for Future Research**

The relatively large sample compared to other intervention studies can be regarded as a strength of the study (Abrell et al., 2011; Barling et al., 1996; Dvir et al., 2002; Frese et al., 2003; Kelloway et al., 2000). In addition, the sample is heterogeneous, consisting of leaders from the profit and non-profit sector and with a balanced gender ratio, strengthening external validity of the study. The external validity is also strengthened by the random selection of the participants both in the experimental and in the control group. The experimental design of the field study with a control group also increases the internal validity.

In contrast, the internal validity of the study is weakened by the fact that it is not possible to clearly identify the reasons for the changes in the variables between pre- and posttest. Despite comprehensive consideration of control variables such as the influence of the change, it is not possible, for example, to determine exactly which changes were caused by training, feedback or other environmental influences. In order to be able to examine the changes more closely, the control group should be further differentiated: one without feedback and one with feedback, then the training effect could be calculated more precisely.

According to Day (2000), one weakness of studies, which has existed for decades in the leadership development literature, is the fact that training is only a leader development measure and not leadership development, since this can only happen in interaction with employees and with actual problems from everyday management life. This weakness also applies to this study. Approximations or a combination of both development approaches would therefore be the goal for future training approaches.

In order to further explore leader development and to investigate whether the reverse u-shaped course can be replicated, data should not only be collected in the pretest-posttest design, but at several measurement points, so that a more comprehensive growth curve model can be calculated. In addition, the results should be further investigated with regard to change outcomes, since effects were quite small and there were also considerable changes in the variables of the control group.

### **5.5.3 Practical Implications**

In practice, there are three main points from this study that should be considered when conducting leader training. Firstly, it was found that the complex leadership styles of instrumental and transformational leadership can be learned within two days. Within three months, positive behavioral changes could be measured, while the control group deteriorated.

Training is therefore an efficient and effective tool to enable managers to lead their employees well through change, when resources are scarce anyway.

Secondly, it turned out that not all participants developed positively, as high performers did not benefit from the training. Therefore, high performers should be trained by separate measures, which train leadership behavior in more detail and have a better individual fit. In this way it could be ensured that, according to the theory of social comparison, they continue to be encouraged to set motivating development goals and to work on their leadership behavior.

Thirdly, in order to avoid a downward spiral of the leadership level in the training of participants with a low or medium level of previous knowledge, high performers should be presented as role models in the practical part of the training and should share their experiences. In this way, the social comparison and motivation to catch up with the high performers remains. In the run-up to a training course, it is therefore important to first ascertain the previous knowledge of the participants and to determine a suitable training measure on the basis of the results.

## 6. Overall Discussion

The overall purpose of this dissertation was to examine the influence of instrumental leadership within the framework of the extended full-range of leadership model on employees' reactions to change. Five research questions and an integrative research model linking leadership to four differentiated change reactions were developed as a basis to conduct three empirical studies. In the first place, all four leadership styles of the extended full-range of leadership model were to be examined simultaneously to determine their effect on the reactions in consideration of interdependencies. Subsequently, the mechanisms and conditions of how instrumental leadership affects employees' change reactions were examined in more detail. Finally, a training for the two change-promoting leadership styles of the model - instrumental and transformational leadership - was developed and evaluated.

The main finding of the dissertation is that instrumental leadership behavior promotes the change reactions of employees and is a necessary supplement to the existing full-range of leadership factors in the context of change. Additionally, instrumental leadership can be actively increased through training interventions.

Study 1 showed in the first sub-study that under control of all four extended full-range of leadership factors, transformational leadership only had a positive influence on the change support of the employees when instrumental leadership was highly pronounced. In the second sub-study, a vignette study, no interaction of the manipulated leadership styles on the change reactions of the employees was found. However, a significant main effect of instrumental leadership on the affective change commitment of the employees and on trust in the leader was observed. In comparison, only one significant main effect on trust in the leader was found for transformational leadership. Both manipulated leadership styles had no influence on change support. Study 2 showed a positive effect of instrumental leadership on team change success as well as on individual change support through team affective change commitment. In addition, it became apparent that the affective change commitment of the leader moderates the relationship between instrumental leadership and team affective change commitment. The indirect effects of instrumental leadership on team change success and individual change support were only significant in the case of high and medium levels of leaders' affective change commitment. Study 3 showed that instrumental and transformational leadership can be significantly increased through a two-day training intervention in the perception of employees. Moreover, the development of transformational leadership showed an inverted u-shaped course.

In the experimental group, the difference values from the pre- and posttests of the two leadership styles led to significant changes in the difference value of change support, mediated by the difference values of employees' affective change commitment. These indirect effects were not apparent in the control group. By investigating instrumental leadership in the context of change, the studies contribute to the understanding of how and under which conditions it promotes the change reactions of employees. The results of the three empirical studies thus extend research in the fields of leadership, leadership development and change management.

This concluding chapter points out the main results of the three studies as well as the contribution and methodological strengths of the studies. Afterwards, limitations of the results and their implications for further research are outlined. Finally, practical implications are derived and a conclusion is drawn.

## **6.1 Summarization of Findings and Contribution**

Study 1 was conducted to answer the first two research questions. The first sub-study was devoted to answering research question 1 (RQ 1: *Can instrumental leadership make an additional contribution to the other full-range of leadership factors for predicting the change reactions of employees?*) and showed that when all four full-range of leadership factors are considered simultaneously, instrumental leadership has no direct influence on the change support of employees. As assumed, transformational leadership had a significant influence, while laissez-faire and transactional leadership could not contribute to the prediction of change support, either. It should be noted that the influence of instrumental leadership was very close to significance and the intercorrelations between instrumental and transformational leadership with championing support were almost identically high. In addition, as in previous studies (Rowold, 2014; Rowold et al., 2017), the two leadership styles correlated to a level of .85, which is an indication of multicollinearity. However, the discriminant validity of the individual factors was confirmed by the confirmatory factor analysis in Study 1.1.

Following on from this the second research question (RQ 2: *How do the leadership styles of the extended full-range of leadership model, in particular transformational and instrumental leadership, interact in their effect on the change reactions of employees?*), was analyzed within Study 1.1 and information was provided on how instrumental and transformational leadership interact. The results showed that instrumental leadership, as assumed by Antonakis and House (2004), is a facilitator of transformational leadership. Accordingly, transformational leadership can only positively influence change support if

instrumental leadership is highly developed. In order to investigate this interaction in a controlled framework, a vignette study was carried out in the second part, Study 1.2. In this study, the two leadership styles were manipulated in high and low levels. It was shown that the interactions of the manipulated leadership styles (2x2) did not cause a significant difference in the mean values of the change reactions of employees. However, significant main effects of instrumental leadership on affective change commitment of the employees and on trust in the leader were found. Transformational leadership only had a significant effect on trust in the leader. Both leadership styles had no influence on the mean values of employees' championing support in this sub-study. The mean values of the change reactions were therefore significantly stronger influenced by instrumental leadership than by transformational leadership. The results of both sub-studies showed that instrumental leadership had a significant influence on employees' reactions to change. The effect was even stronger than that of transformational leadership in Study 1.2. This result questions the previous results on the change-promoting effect of transformational leadership and suggests that the effects were overestimated without considering instrumental leadership. Previous studies (Abrell-Vogel & Rowold, 2014; Herold et al., 2008; Oreg & Berson, 2011; Seo et al., 2012; Shin et al., 2012) showed positive effects of transformational leadership on affective change commitment and support for change, which were not shown within the framework of the manipulated constructs. For this reason, further studies in the change context are necessary to examine transformational leadership together with instrumental leadership. This would avoid the omitted variable bias from previous studies and allow the calculation of more realistic effects of transformational leadership.

The results of the two partial studies on championing support were heterogeneous. While the behavioral response of the employees was influenced by leadership behavior in the field study, it was independent of the manipulated leadership behavior in the vignette study. The fictitious scenario in the vignette study implies a higher degree of abstraction. This makes it more difficult for the study participants to imagine how they would behave in the situation described instead of assessing how they would evaluate the change. Thus, the described leadership behavior influences the spontaneous attitude to the situation more than the behavior a respondent would show in the fictitious situation. In previous vignette studies conducted with change outcomes, attitude-related outcomes such as change commitment or openness to change were preferred (Devos et al., 2007; Helpap, 2016) and there appeared to be no direct effect on the behavioral variable intention to resist (Helpap & Bekmeier-Feuerhahn, 2016).



The second study focused on the mechanisms and conditions of action of instrumental leadership in change and thus answered the third research question (RQ 3: *How and under which conditions does instrumental leadership affect employees' change reactions at the individual and team level?*). The results showed that affective change commitment of employees aggregated at team level represents an effective mechanism between instrumental leadership and team change success as well as individual change support. This chain of effects between leadership behavior, affective change commitment and change support or change success is in line with the theoretical models of change commitment (Meyer & Hamilton, 2013) and the change reactions of employees (Oreg et al., 2011). Thus, the functional behavior of instrumental leadership seems to be an appropriate way to convince employees of the benefits of change and to commit them to change. With regard to the nature of the change commitment, the results confirmed that the affective component can be regarded as a cognitive reaction (Oreg et al., 2011).

In addition, the results showed that instrumental leadership has a positive effect on change-related outcomes at both individual and team levels, whereby the influence on team change success was only indirect via team affective change commitment. This coincides with the assumption of Antonakis and House (2002; 2004; 2014) and Rowold (2014) that instrumental leadership has a direct influence on employees' performance through task-oriented behavior, which corresponds to the individual level. The indirect influence on employees' performance through strategic behavior is more likely to be assigned to the team level. In order to further investigate these different effects, instrumental leadership should be examined at the facet level. The sub-facets of strategic leadership should therefore be examined at the team level and the task-oriented at the individual level. Moreover, cross-level effects would be of interest. This would provide further information on how exclusively strategic choices affect the individual reactions of employees, for which no empirical results are currently known (Oreg & Berson, 2019). A first approach to close the gap between strategy and organizational behavior research was taken by Waldman and Javidan (2009). The authors developed a theoretical model linking leaders' attitudes and charismatic behaviors with strategic choices. They proposed that these constructs are influenced by the employees' attitude towards the merger. The results of this dissertation offer a first empirical linkage, which showed that instrumental leadership - as an overall construct and aggregated at team level - has a positive cross-level effect on the individual change support of employees.

With regard to the interaction conditions, the affective change commitment of the leader acts as a moderator between instrumental leadership on team change commitment. This means the described indirect effects are only apparent if the leader him- or herself is convinced of the change. This result illustrates the relevance of the attitudes of leaders in change (Abrell-Vogel & Rowold, 2014; Oreg & Berson, 2011), which have so far received little attention in change studies. It is therefore important to consider the attitude of the leader when investigating leadership behavior in change, because it has a decisive influence on the effect of the behavior itself. If the manager is not convinced of the change, he or she will not be able to convince the employees, because he or she cannot credibly transport the advantages of the change. The negative influence of inauthentic transformational leadership is already known (Bass & Steidlmeier, 1999). A study showed that the affective change commitment of the executive moderates the connection between the transformational behavior *providing an appropriate role model* and the affective change commitment of the employees (Abrell-Vogel & Rowold, 2014).

In Study 1.1 and Study 2, the hierarchical level of the executive was taken into account as a control variable to consider structural (Antonakis & Atwater, 2002) and motivational (Coyle-Shapiro, 1999; Herrmann et al., 2012) influences. The results of both studies revealed that the managerial level correlates positively with the championing support of the employees. In Study 1.1, the effect also persists in the regression analysis if adding the leadership styles. One explanation could be the involvement of the employees at higher levels and accordingly a better understanding, why the change is necessary. Instrumental leadership was independent of the managerial level indicating that this leadership behavior is presented at all organizational levels. Instrumental leaders should thus help employees at lower levels in particular, who may implement the change operationally. Understanding the reasons for the change and knowing how to implement it in day-to-day tasks would strengthen their commitment.

The third study was designed as a training study to answer the fourth and fifth research question whether and how instrumental and transformational leadership behavior can be developed. Regarding the fourth question (RQ 4: *Can instrumental and transformational leadership behavior be developed through a change-oriented leader training intervention and do the developments cause changes in the change reactions of the employees?*), the results of the longitudinal multilevel path analysis (Gentry & Martineau, 2010) showed that instrumental and transformational behavior could be significantly increased by training. As a result, the leadership behavior of the training participants in both leadership styles improved significantly in the perception of the employees compared to the control group. The results replicate existing

findings on the trainability of transformational leadership (Abrell et al., 2011; Arthur & Hardy, 2014; Barling et al., 1996; Dvir et al., 2002; Hardy et al., 2010; Mason et al., 2014). The outcome that instrumental leadership behavior can be actively improved through a two-day training intervention adds a new training concept for an effective and change-promoting leadership style to the existing leadership development literature.

In order to test the effectiveness of the training at outcome level (Kirkpatrick, 1959), the core model of the dissertation was used, meaning the indirect effect of the leadership styles via affective change commitment on support for change. In the context of a moderated mediation, it was assumed that the changes in leadership behavior caused by the training lead to alterations in the change outcomes. The results confirmed this assumption for both leadership styles and thus the indirect effect was only significant in the experimental group. The effectiveness of the training reflects the results of recent meta-analyses about the effectiveness of leadership training interventions (Avolio et al., 2009; Lacerenza et al., 2017; Powell & Yalcin, 2010). The indirect effect of the core relation, which was investigated in the second study within a field study, was thereby replicated in an experimental design. The use of change-related outcomes for the evaluation of the training also sheds new light on transformational leadership, because previous intervention studies have not evaluated transformational training interventions with regard to affective change commitment or support for change.

The fifth research question (RQ 5: *Do leaders develop nonlinearly in their instrumental and transformational leadership behavior?*) dealt with how leaders develop in their behavior and whether the development process is nonlinear (Boyatzis, 2008). The hypothesis was confirmed that leaders developed inversely u-shaped in their transformational leadership behavior based on their previous level of knowledge. Accordingly, leaders with intermediate prior knowledge benefit most from the training intervention, while leaders who are already highly developed have no additional or even declining training effects. Leaders who are less developed have a positive but weaker effect than leaders with intermediate knowledge. This finding could also explain the occurrence of negative effect sizes in another training study (Mason et al., 2014). However, the effect was not shown for the development of instrumental leadership, although the determined effect sizes suggest a nonlinear course. The consideration of prior knowledge therefore represents an important influencing factor for training transfer in both cases and should be considered in training studies. It is known from training literature that trainee, work environment and training characteristics cause a wide range of effect sizes (Avolio et al., 2009; Blume et al., 2010; Lacerenza et al., 2017). So far, the managerial level (Avolio et

al., 2009; Lacerenza et al., 2017) or the managerial experience (Hirst et al., 2004) has been examined as influencing variables on training transfer. It was found that leaders at higher levels or with more experience generated a lower training effect. However, a negative training effect could not yet be explained by the linear development assumptions. The consideration of nonlinear effects in the development of leaders thus represents an explanatory approach that includes the dynamic development of behavior patterns (Boyatzis, 2008). This approach should therefore be further investigated in order to test whether the effect can be replicated and whether it represents a stable result. Thoughts about ceiling effects or moderating effects by characteristics of the trainees, the working environment or the training characteristics (Lacerenza et al., 2017) should always be considered.

In summary, the contribution of this dissertation to leadership, change and leadership development literature can be summarized in three main points. First, by examining instrumental leadership together with the other full-range of leadership factors in the change context, the dissertation provides a comprehensive insight into how the four leadership styles of the model affect change reactions, which has not been done to date, and thus supports the criterion validity of the model. In addition, theoretical assumptions about the interaction of transformational and instrumental leadership are examined that have not yet been empirically tested, and more realistic effects of transformational leadership in change have been achieved. In this way, current criticism of both the construct of transformational leadership and of the full-range of leadership model is met. Second, by investigating instrumental leadership in change, literature is broadened, in particular by investigating the effects of strategic behavior on the reactions of employees in change. In this way, the dissertation contributes to reducing gaps between existing research fields within the framework on leadership behavior and organizational change. The study also provides insights into whether, how and when instrumental leadership influences employees' reactions to change, taking into account outcomes at the individual and team level. Third, by developing and evaluating an instrumental leadership training program, the dissertation expands the existing leadership development literature with effective training to develop leaders and to implement change more successfully. Through the investigation of nonlinear training effects, a new approach is also used in the evaluation of interventions and offers an explanatory approach for negative effect sizes.

From a methodological point of view, the dissertation represents a triangulation by examining the core relation of the research model within the framework of different research methods. Thus, the low internal and high external validity of Study 2, a field study, can be compensated by the high internal and low external validity of the experimental training study. In addition, the use of a pretest-posttest control group design with a randomly selected control group increased the internal validity of Study 3. The first study was also conducted according to the principle of triangulation, so that strengths and weaknesses (internal versus external validity) of the field and vignette study were balanced (Scandura & Williams, 2000). This approach also reduces systematic errors such as the common method bias (Podsakoff et al., 2012; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Moreover, the common method bias was reduced by obtaining predictor and outcome at different measurement times (Study 1.1, Study 3) and from different sources (Study 2: three sources). Moreover, validated questionnaires with positive and negative items and different rating scales were applied to prevent possible bias. Finally, during data analysis, the calculation of Harman's single factor was used to control for common method bias (Study 1.1, Study 2).

## **6.2 Limitations and Implications for Further Research**

In addition to the strengths of the three studies, there are also limitations, which are described below and from which approaches for future research can be derived. First, methodological shortcomings are presented followed by content-related ones.

With regard to the methodological limitations, the first point to be made regarding the causality of the results is that the main relationship of the dissertation can be confirmed in its direction of impact by the experimental designs from Study 1.2 and Study 3. Instrumental and transformational leadership behaviors lead to positive change reactions of the employees. However, causal statements cannot be derived from Study 1.1 and Study 2 due to their cross-sectional design. In addition to the experimental designs applied so far, further clarification of the causal relationships would be provided by longitudinal studies that consider more than two measurement points. Thus, it would be possible to consider the chronological sequence between predictor, mediator and outcome and improve the validity of the relationships between the variables. Longitudinal studies would also be advantageous for the conduct of future training studies in order to be able to calculate a more comprehensive growth curve model with several measurement points (Gentry & Martineau, 2010). There is also a limitation in the meaningfulness of the results in Study 3 because it is not possible to say exactly what caused the difference in leadership behavior between pre- and posttest, whether through training,

feedback or other environmental influences. In order to investigate the training effect more closely and to increase the internal validity of the results, it would therefore be necessary to further differentiate the control group into a group with feedback and a group without feedback.

Secondly, although attempts were made to avoid the common method bias within the individual studies as far as possible, it can be assumed that distortions nevertheless exist. Thus, the data in Study 1.2, the vignette study, were collected at one point in time and by self-report data. A distortion by common method bias causes an overestimation of the main effects and an underestimation of the interaction effects (Podsakoff et al., 2012). Since the interaction from Study 1.1 could not be replicated and the main effects were partially significant, a possible bias is indicated (Podsakoff et al., 2012). In all three studies, the data were collected by questionnaire, meaning that personal factors of the respondents could always influence the assessment of leadership behavior (e.g., social desirability, liking, contact frequency) and their change reactions (e.g., change self-efficacy, locus of control, tolerance for ambiguity, personal workload; Meyer & Hamilton, 2013). In order to prevent these influences, the above variables could be controlled. In addition, preferably leadership behavior and change reactions should be collected from different sources or at different time points in order to avoid overestimating the relationships due to the common source (Podsakoff et al., 2012).

Thirdly, multicollinearity is a methodological problem when investigating leadership styles. In particular, the correlation between instrumental and transformational leadership in Study 1.1 and Study 3 showed that the two leadership styles correlate at a level of .85. This is comparable to other studies (Rowold, 2014; Rowold et al., 2017) and it is argued methodically and theoretically that the two leadership styles are separate constructs (Antonakis & House, 2014; Bormann & Rowold, 2018; Rowold, 2014). Confirmative factor analysis and comparison of different models confirmed in Study 1.1 that the two leadership styles are separate factors, but the results of the study should be considered with the reservation that multicollinearity may exist. One possibility to examine instrumental and transformational leadership together and to take into account the effect of high intercorrelation is the multi-method survey. A multitrait-multimethod analysis (Campbell & Fiske, 1959) could then adjust the correlation of the factors by the effect of the measurement method used to calculate the actual correlation of leadership styles. This would contribute to the construct validation of instrumental leadership (Rowold, 2014).

Fourthly, the above point is followed by the problem of an omitted variable bias, which, in contrast, is caused when variables that contribute to the variance elucidation of a criterion are not considered and the estimation model therefore cannot be correctly identified (Antonakis et al., 2014a). As a result, the effects of the considered variables may be overestimated. This problem exists in Study 2 because the effect of instrumental leadership was not controlled for the remaining full-range of leadership factors. A possible overestimation of the effects due to the omitted variable bias is consequently not excluded. Thus, future studies should replicate the mechanisms of action and conditions of instrumental leadership in change under control of the other full-range factors, especially transformational leadership, in order to avoid such bias (Antonakis et al., 2014a; Antonakis & House, 2014). At the same time, however, the aforementioned point should be taken into account, suggesting that for methodological reasons a multitrait-multimethod analysis would resolve the dichotomy between multicollinearity and omitted variable bias.

At the content level, the research model of the dissertation provides a comprehensive framework for investigating the connection between instrumental leadership and employees' reactions to change, but the analysis of further underlying psychological processes would nevertheless provide a deeper understanding of the effect. It remains unclear how the leadership behavior influences the affective change commitment of the employees. It turned out that, based on the theory of social exchange and the theory of planned behavior, affective change commitment functions as a mediating mechanism between instrumental leadership and change support. It can be assumed that within the framework of the theory of social exchange, instrumental leadership, via trust in the leader, affects employees' change commitment, since a significant direct effect between instrumental leadership and trust was shown in Study 1.2. Previous studies have established a connection between change commitment and trust (Michaelis et al., 2009; Neves & Caetano, 2006). This mediation effect should consequently be examined in future studies. In addition, Antonakis (2006) argues that instrumental leadership increases employees' self-efficacy through constructive feedback. This mechanism would be similar to the motivating self-concept theory (Shamir et al., 1993) of transformational leadership, so that it would be interesting to test this effect using mediators such as change self-efficacy (Ashford, 1988). Furthermore, it would be important to test the theoretical assumptions about the uncertainty-reducing effect (Berger & Calabrese, 1975) of instrumental leadership, assuming that this is the prerequisite for a social exchange relationship in times of change. Therefore, the mediator uncertainty (Bordia et al., 2003) might also be a potential mechanism between instrumental leadership and change commitment.

Secondly, it would be insightful to examine the leadership constructs at the facet level. For transformational leadership, articulating a vision (Geijsel, Slegers, Leithwood, & Jantzi, 2003; Oreg & Berson, 2019) or individualized support (Abrell-Vogel & Rowold, 2014) were the most important facets to increase change commitment. Since instrumental leadership acts as a facilitator of transformational leadership in change, it would be helpful to examine whether the facets of strategy formulation and path-goal-facilitation of instrumental leadership interact with the facets of transformational leadership and whether they promote their impact. The analysis at facet level or the separation into individual- and collective-focused sub-facets (Wu, Tsui, & Kinicki, 2010) would convey a differentiated picture of the effect of leadership styles and take into account existing criticism of transformational leadership (van Knippenberg & Sitkin, 2013). The division into individual and collective focus would also make it possible to examine strategic leadership at team or organizational level and to test the already mentioned cross-level effect on employees' reactions (Oreg & Berson, 2019). Moreover, the interaction of leadership styles should be examined in a different setting than in change, since according to Antonakis and House (2004) it is especially the impact of the vision that is promoted by the formulation of a strategy. It would therefore be conceivable that in the absence of a crisis situation, the vision might not be as significant and instrumental leadership would therefore have no beneficial effect.

Thirdly, the moderator stage in time should be taken into account in the research model in order to better reflect the dynamics of a change process (Mainemelis et al., 2015; Rosing et al., 2011). Alternatively, the dynamic would be represented by a longitudinal design. For example, the change model by Bullock and Batten (1985) could be used as a basis, which describes four different phases of a change process and is suitable for most organizational changes (Burke, 2017). In the context of a weekly diary study, it could be examined how the leadership behavior and the change reactions of the employees alter in the course of the different change phases and which leadership behavior is particularly effective in which phase. It is assumed, for example, that transactional leadership behavior is more effective in later phases, when implementation predominates, and transformational behavior is more effective in initial phases, when ideas are generated. Therefore, it is questionable, at what points in time instrumental behavior is more effective; perhaps in later phases of implementation. An additional moderator to be considered and added to the research model is the cultural setting. It was found that culture influences the relationship between transformational leadership and change commitment in a Dutch-Canadian comparison (Geijsel et al., 2003) and the relationship



between leader-member-exchange and employee change commitment (Lee et al., 2014) in an American-Korean comparison.

Fourthly, the intervention conceived in Study 3 represents management training, which, according to Day (2000), is actually a leader development measure and not a leadership development measure, since leadership can only be learned through interaction with employees and dealing with current problems. For example, a training approach that takes into account employee interaction could combine group-based training and multiple booster sessions with team coaching based on employees and leaders by discussing current problems of the team or individual volunteers. In this way, obstacles in the implementation of change processes could also be discussed and solved. Thus, the previously learned instrumental leadership behavior, e.g. path-goal-facilitation, could be applied directly and deepened in the interaction with the employees. Given that instrumental leadership behavior is more context-bound than transformational leadership behavior since it refers specifically to the completion of tasks, the team coaching also allows for a much better fit to the coaching situation and work situation than in a single training. Additionally, team coaching would increase the involvement within the team in the design of the change process, which in turn would have a positive influence on the cognitive reactions to change and consequently on the behavior-related reactions. The combination of change-oriented training for instrumental leadership and team coaching thus represents a promising approach for future training studies. In order to be able to evaluate this training measure, it would be an idea to record the team coaching sessions between leader and employees via video tape. Based on the recording, the behaviors could be coded by trained observers (e.g. act4team, Kauffeld, Lehmann-Willenbrock, & Meinecke, 2018) and evaluated by a sequential analysis. A latent growth model could follow the development of the executive in his or her instrumental behavior and also the development of employee reactions during the coaching session, as well as throughout several coaching sessions. This method would also provide insights into the effectiveness of instrumental leadership behavior, since it would become clear which leadership behavior leads to which reactions among employees (Lehmann-Willenbrock, Meinecke, Rowold, & Kauffeld, 2015).

### **6.3 Practical Implications**

From the results of this dissertation, four essential findings can be drawn for practice. The first is the insight that instrumental and transformational leadership behavior positively influence change-relevant success criteria. Secondly, these two leadership styles can be significantly improved by two days of training. Thirdly, not all training participants benefit

from training, so that their previous knowledge should be taken into account when choosing and designing training measures. Fourthly, the attitude of the manager towards change is decisive as to whether employees support the change or not. The individual points are described below in terms of personnel development and selection.

For the successful implementation of organizational change processes, it was shown that instrumental and transformational leadership behavior are suitable for positively influencing the change reaction of employees and subsequently increasing the success of change. Since change processes are part of everyday organizational life, it is a central task for managers to guide employees through change processes (Yukl, 2010). It is therefore important not only from the perspective of the organization to know which leadership styles are effective in change, but also for the managers themselves in order to be able to meet the challenge of leading the change.

With regard to personnel development measures, the results of the dissertation showed that the implementation of a two-day leadership training course is an effective and efficient tool for organizations to develop leaders in their instrumental and transformational behavior, and thus improving their abilities to successfully lead employees through change. Within three months, significant improvements in leadership behavior could be achieved, so that relatively short-term successes become visible for the organization. This can be decisive for change success, especially in case of unpredictable changes.

In order to develop leaders optimally and to select a suitable intervention, it is important to obtain the prior knowledge of the participants and to consider it when designing the intervention. With the help of multisource feedback such as 360-degree feedback, a status quo of leadership behavior from the perspective of employees, superiors, colleagues and one's self could be ascertained. In the preparation of the training, the feedback could be used to identify strengths and weaknesses in leadership behavior and to determine the level of prior knowledge. Executives with low or average levels of leadership behavior would be suitable participants in the group-based training. For leaders who already have particularly high levels, an alternative training measure should be devised. A focus here should no longer be on the basic idea of the leadership concepts, but rather on the personal development of the participants, thus giving them new input and setting motivating goals for personal development (Locke & Latham, 1984). It would be important for the training measure of the low or averagely developed leaders to be able to gear themselves to high performers, since learning through the observation of role models plays a central role within an interactive training. In order to provide an incentive for

the participants and to avoid a downward spiral of the leadership level, high performers could be specifically used as role models in trainings by reporting on their positive leadership experiences. In this way, a social comparison would provide an incentive for the low and averagely developed managers.

Feedback also represents an important instrument for improving the participants' performance during training (Atwater, Roush, & Fischthal, 1995; Barling et al., 1996; Kelloway et al., 2000), in order to show participants their own strengths and weaknesses. Based on this profile of strengths and weaknesses, the participants set themselves motivating development goals (Locke & Latham, 1984). The decisive factor here is especially the assessment by the employees and the discrepancy between their assessment and the self-assessment. It turned out that managers are less successful if they rate themselves divergently from their employees, especially if they overestimate themselves (Lee & Carpenter, 2018; Yammarino & Atwater, 1997). These aspects should be taken into account when setting objectives within the training or through additional coaching measures.

Interventions that facilitate the transfer of training for the participants would be, as mentioned above, team coaching between employees and leaders. In addition, a training measure could be digitally supported via a web app and chat box, which can be accessed by management and employees. This would facilitate communication between leaders and employees and would not require spatial presence, which would be particularly advantageous in increasingly flexible working conditions. It also supports team development and is an economic method. The evaluation of a digital training tool could be performed using the unified theory of acceptance and use of technology (UTAUT) model (Venkatesh, Morris, Davis, & Davis, 2003), which represents a comprehensive model to explore the behavioral intention to use digital tools.

In selecting leaders, care should be taken to ensure that they show instrumental and transformational behavior. This means that strategic thinking and solid expertise would be indicators for instrumental behavior, as well as charismatic and empathetic behavior would be indicators for transformational behavior. The implementation of assessment centers could support the selection of personnel in order to identify suitable people. With regard to the predictors of instrumental leadership, only individual study results are available suggesting that agreeableness and intelligence predict instrumental behavior (Antonakis et al., 2017; Antonakis

& House, 2004). However, further empirical research should first be carried out on them before they can be used for personnel selection.

When selecting change agents, the attitudes of leaders to change should be considered, since a high level of affective change commitment of the leader is decisive as to whether the leadership behavior promotes the change reactions of the employees or not. If the leader does not stand behind the change, he or she cannot communicate the advantages of the change to his or her employees credibly and authentically. Within the framework of 360-degree feedback, the commitment of the leader should thus be collected and reported back. To foster leaders' change commitment, they should be informed about changes at an early stage and included in decision processes, as involvement has a positive influence on change reactions (Coyle-Shapiro, 1999). In addition, across all hierarchical levels, the superiors of managers should ensure that they provide technical (instrumental) and emotional (transformational) support to their subordinate leaders in order to also consider the role of leaders as change recipients.

## **6.4 Conclusion**

In summary, this dissertation offers insight into the effects of instrumental leadership in the context of change. It turned out that instrumental leadership is decisive for the effect of transformational leadership in change and has a direct influence on the different change reactions of employees. The study of mediation and moderation factors revealed how and under which conditions instrumental leadership influences cognitive and behavioral reactions as well as change consequences. In addition, the trainability of instrumental leadership could be determined and the developmental process of transformational leadership was found to be nonlinear. The results thus provide a deeper understanding of the impact and development of leadership behavior in change and offer an approach to combine strategic research more strongly with organizational behavior research by examining strategic leadership behavior at the micro level as well. Lastly, the dissertation contributes to exploring the extended full-range of leadership model in the context of change and offers approaches for future research especially through the findings on the interdependence of instrumental and transformational leadership.

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## **Appendix A: Vignettes Applied in Study 1.2**

I developed four vignettes, which represent the different forms of leadership behavior. One baseline vignette, which was applied in all vignettes, described the specific change scenario.

Vignette 1: High transformational and high instrumental leadership behavior

Vignette 2: High transformational and low instrumental leadership behavior

Vignette 3: Low transformational and high instrumental leadership behavior

Vignette 4: Low transformational and low instrumental leadership behavior

### **Vignette texts:**

#### **Baseline vignette**

German version of the original baseline vignette developed by Helpap (2016):

Die gegenwärtige Situation der ELEC Inc.

Sie arbeiten seit fünf Jahren in der Serviceabteilung der ELEC Inc. im Hauptsitz in Hannover. Die ELEC Inc. ist ein global operierendes Elektronikunternehmen mit einer langen Tradition. Das deutsche Unternehmen wurde 1960 gegründet und ist seitdem zu einem der größten Produzenten von Elektrotechnik herangewachsen. ELEC Inc. erarbeitete sich in unterschiedlichen Ländern die Marktführerschaft und hat sein Produktportfolio seither kontinuierlich erweitert. Im Jahr 2016 hatte das Unternehmen mehr als 12.000 Mitarbeiter.

Bisher sind Sie immer zufrieden mit Ihrem Arbeitgeber gewesen und haben die harmonische Arbeitsatmosphäre geschätzt. Aufgrund verschiedener Entwicklungen hat die ELEC Inc. wichtige Marktanteile und Erträge in den letzten zwei Jahren verloren. Im Geschäftsjahr 2016 hat das Elektronikunternehmen rund 9 Millionen € weniger im Vergleich zum Vorjahr eingefahren. Ausgehend von dieser Entwicklung hat sich das Management entschieden, dass das Unternehmen dringend restrukturiert werden muss.

Aufgrund der schlechten vierteljährlichen Geschäftsberichte herrschen bereits seit längerem Gerüchte über anstehende Veränderungen in dem Unternehmen, die Sie und Ihre Kollegen beunruhigen und beschäftigen.

Schließlich hat der Vorstand der ELEC Inc., Herr Dr. Lehmann, letzte Woche den aktuellen Stand des Unternehmens in einer umfassenden Rede vorgestellt. Er erklärte, dass ein Restrukturierungsplan mit dem Titel „Change ELEC“ das Unternehmen wieder konkurrenzfähig machen soll. Der Plan wird in den nächsten Monaten implementiert und erlaubt es unter anderem, dass sich das Unternehmen auf die Kernbereiche der Unterhaltungselektronik fokussiert. In seiner Rede hat Herr Dr. Lehmann betont, dass Stellenkürzungen möglich sind, dass aber alles getan wird, um Entlassungen zu verhindern. Innerhalb der nächsten vier Monate wird beurteilt, ob die erste Phase der Veränderung erfolgreich durchgeführt wurde. Erst nach dieser ersten Durchführungsphase kann entschieden

werden, ob Stellen möglicherweise gestrichen werden. Herr Dr. Lehmann schloss seine Rede mit den Worten: „es wird keine einfache Aufgabe für uns alle werden, aber mit Ihrer Unterstützung werden wir - die Mitglieder des Vorstandes glauben fest daran - die Zukunft von ELEC Inc. erfolgreich gestalten!“. Weitere und genauere Informationen werden durch den direkten Vorgesetzten an die einzelnen Abteilungen weitergegeben.

### **Vignette: High transformational leadership**

Eine Woche nach der Verkündung des Restrukturierungsplans „Change ELEC“ durch den Vorstand findet das erste Abteilungstreffen mit Ihrem Vorgesetzten statt. „Guten Morgen, Zusammen. Trotz der Spekulationen im Vorfeld, hat auch mich die Nachricht der Restrukturierung letzte Woche überrascht und betroffen gemacht, aber wir müssen nun nach vorne schauen. Ab heute startet der Restrukturierungsplan „Change ELEC“. Mit diesem umfassenden Plan können wir einen Meilenstein in der Geschichte des Unternehmens und der Unterhaltungselektronik setzen. Das Projekt ist eine wahre Herausforderung für die ELEC Inc. und wird Eure komplette Hingabe und Anstrengung benötigen. Dabei ist jeder Einzelne von Euch gefordert und ich weiß, dass Ihr alle die nötige Bereitschaft und Fähigkeiten dazu besitzt. Ich bin mir sicher, dass Ihr Euer Bestes geben werdet. Euer Einsatz in diesem Projekt wird eine wertvolle Erfahrung für Euch sein und auch für Eure persönliche Entwicklung und Karriere von Bedeutung sein. Ich erwarte von Euch, dass Ihr die Initiative ergreift und Ihr Euch selbstständig dafür einsetzt, dass die Veränderung umgesetzt und bestehende Probleme mit den Teamkollegen gelöst werden. Ich bin für jeden von Euch erreichbar, wenn Ihr Hilfe oder einen Ratschlag braucht. Ich werde ausreichend Zeit dafür einplanen, Euch zu coachen und weiterzuentwickeln, um Euch bei der Bewältigung auftretender Probleme zu unterstützen. Es ist sehr wichtig für die ELEC Inc. und natürlich auch für uns alle als Mitarbeiter des Unternehmens, dass der Veränderungsplan erfolgreich in den nächsten vier Monaten anläuft. Wenn jeder von Euch sein/ihr Bestes gibt, dann werden wir stolz darauf sein können, was wir erreicht haben. Mit diesem Veränderungsplan wird ELEC Inc. in der Lage sein, seine erfolgreiche Marktposition in der Elektronikbranche zurückzugewinnen und weiterhin ein sicherer Arbeitgeber zu sein.

Wir werden bei ELEC Inc. das Versprechen halten, unseren Kunden erstklassige Unterhaltungselektronik anzubieten. Meine Vision für unsere Abteilung möchte ich Euch gerne vorstellen. Diese Vision beschreibt unsere langfristigen und optimalen Ziele und gibt uns die Richtung für die Implementierung von „Change ELEC“ vor. Seit ich hier bei ELEC Inc. arbeite, bin ich stolz darauf, dass wir qualitativ hochwertige Unterhaltungselektronik-Produkte herstellen, die unsere Kunden zufrieden stellen. Auch zukünftig wollen wir genau daran festhalten, indem wir unsere Vision verfolgen: „Mit dem Fokus auf unser Kerngeschäft und unsere Kernkompetenz, wollen wir bei ELEC Inc. unsere Marktführerschaft bis 2025 beibehalten und unsere Erträge um 20 % steigern.“ Und damit wir die Vision auch verwirklichen können, werde ich jeden von Euch so gut es geht bei der Umsetzung unterstützen.

### **Vignette: Low transformational leadership**

Eine Woche nach der Verkündung des Restrukturierungsplans „Change ELEC“ durch den Vorstand findet das erste Abteilungstreffen mit Ihrem Vorgesetzten statt. „Guten Morgen, Zusammen. Trotz der Spekulationen im Vorfeld, hat auch mich die Nachricht der

Restrukturierung letzte Woche überrascht und auch etwas ratlos gemacht. Ab heute startet der Restrukturierungsplan „Change ELEC“ und es wird sich einiges ändern. Dieser Plan ist wichtig für das Fortbestehen des Unternehmens, sodass alle Mitarbeiter versuchen müssen, die Anforderungen so gut es geht umzusetzen. Das Projekt wird zeitlich sehr aufwendig sein. Es gibt einen engen Zeitplan, der vorsieht, dass innerhalb der nächsten vier Monate die Einführungsphase des Projektes erfolgreich durchgeführt wurde. Wie Herr Dr. Lehmann sagte, wird dann nämlich entschieden, ob Arbeitsplätze gestrichen werden müssen oder nicht. Also muss diese Zeit irgendwie überstanden werden. Durch diese zusätzliche Belastung, wird es wahrscheinlich Änderungen in den alltäglichen Arbeitsabläufen geben. Es wird sich zeigen, wie stark sich an den Restrukturierungsplan angepasst werden muss. Ich erwarte von Euch, dass Ihr umgehend mit dem Projekt startet und, dass Ihr Euch flexibel bei der Gestaltung Eures Arbeitsalltages zeigt. Sind zum Beispiel Überstunden notwendig, so wird sich an anderer Stelle ein Ausgleich dafür finden. Wenn Fragen oder Probleme während des Projektes entstehen, könnt Ihr mich direkt ansprechen und ich werde mich darum kümmern. Falls es Verzögerungen geben sollte, dann werde ich Euch helfen, den Zeitplan dennoch einhalten zu können. Da es keine Zeit zu verlieren gilt, sehe ich es als meine Aufgabe an, auf die Einhaltung des Zeitplans zu achten. Zudem werde ich regelmäßig schauen, ob die Abteilung die Qualitätsstandards trifft. Der Plan kann nur dann eingehalten werden, wenn Abweichungen so früh wie möglich erkannt werden. Der Vorstand hat deutlich gemacht, dass mit diesem Veränderungsplan ELEC Inc. in der Lage sein wird, seine Marktposition in der Elektronikbranche zurückzugewinnen und weiterhin ein sicherer Arbeitgeber zu sein.

ELEC Inc. wird das Versprechen halten, seinen Kunden gute Unterhaltungselektronik anzubieten. Es ist bekannt, dass ich nicht viel von Visionen halte, deswegen möchte ich jetzt auch keine aufzeigen. Trotzdem denke ich, dass die Pläne, die Herr Dr. Lehmann vorgestellt hat, sinnvoll sind. Deswegen ist „Change ELEC“ nun der nächste Schritt, um die Arbeitsplätze zu erhalten.

### **Vignette: High instrumental leadership**

Jetzt, bevor wir starten, möchte ich Euch noch ein paar Informationen geben, die wichtig für das Projekt sein werden. Rund 80% unserer Gewinne erwirtschaften wir mit der Unterhaltungselektronik. Die Unterhaltungselektronik ist demzufolge unsere Haupteinnahmequelle und auch unsere Kernkompetenz, mit der wir hier am deutschen Standort starteten. Genau in diesem Bereich besitzt unser Unternehmen das umfangreichste Knowhow, sodass wir auch gegenüber der Konkurrenz Wissensvorsprünge aufweisen. Das Ziel von „Change ELEC“ ist daher die nachvollziehbare Rückbesinnung auf unsere ursprüngliche Kernkompetenz. Mit unserem Wissen und unserer Erfahrung in dem Bereich können wir die Möglichkeiten, die der Markt bietet, für uns nutzen. Der Markt ist nicht gesättigt, sodass wir mit neuen Produkten und Ideen unsere bestehenden Kunden und neue Kunden mit bester elektronischer Unterhaltung zufrieden stellen können und bessere Erträge als in den Vorjahren erzielen können. Wir müssen nur einsehen, dass wir unser Portfolio auf das Wesentliche begrenzen müssen. Bisher hat unser Team sich stark bemüht, neue Marktnischen in Hinblick auf elektronische Serviceleistungen zu entdecken und diese für das Unternehmen zu gewinnen. Wenn wir nun aber unsere Ressourcen gezielt für den Ausbau der Unterhaltungselektronik einsetzen, können wir diesen Fehler schnell beheben und unsere Ziele effizient erreichen. Für unser Team bedeutet das nun, dass wir gemeinsam neue Serviceleistungen anbieten, die den Verkauf von Elektroprodukten für die Unterhaltungsbranche fördern. Wir werden uns dabei auf unsere bewährten Serviceleistungen - unsere Stärken - berufen, diese in der Qualität verbessern und die eingesparten Ressourcen aus den übrigen Elektrobereichen sinnvoll für die

Unterhaltungssparte einsetzen. Auf diese Weise werden wir auch genügend Möglichkeiten haben, auftretende Hindernisse zu umgehen. Und wenn jemand von Euch doch Probleme haben sollte, gebe ich Euch gerne Feedback, wie eine Lösung aussehen kann. Ich werde jeden von Euch dabei unterstützen, dass Ihr Eure eigenen Ziele erreichen könnt und versuchen, Euch alle nötigen Ressourcen bereitzustellen, die Ihr jetzt für die neuen Aufgaben benötigt. Das Ziel oder besser gesagt, die Mission, die wir in den nächsten vier Monate verfolgen, ist es, Serviceleistungen, die nicht zur Unterhaltungsbranche zählen, auslaufen lassen und drei neue Ideen für mögliche Serviceleistungen entwickeln, die wir in Zukunft unseren Kunden anbieten können. Gerne gebe ich Euch in regelmäßigen Einzelgesprächen Feedback dazu, ob Ihr auf dem richtigen Weg seid und welche Erkenntnisse aus möglichen Fehlern gewonnen werden können. So können wir uns kontinuierlich verbessern und aus unseren Fehlern lernen. Am Ende der vier Monate werden wir unsere Ideen Herrn Dr. Lehmann vorstellen und ich bin mir sicher, dass wir ihn von den Stärken unserer Abteilung und jedes Einzelnen von uns überzeugen können.“

### **Vignette: Low instrumental leadership**

Jetzt, bevor wir starten, möchte ich Euch noch ein paar Informationen geben, die wichtig für das Projekt sein werden. Die Gewinne von ELEC Inc. stammen hauptsächlich aus der Unterhaltungselektronik, daher werden wir uns auf unsere Kernkompetenz zukünftig konzentrieren. Im Rahmen von „Change ELEC“ ist genau dies vorgesehen und ich denke, wenn dem Restrukturierungsplan des Vorstandes gefolgt wird, wird das Unternehmen gut für die Zukunft gewappnet sein. Wie genau die Umsetzung des Plans aussieht, wird sich in den nächsten vier Monaten zeigen. Eine genaue Strategie für unsere Serviceabteilung habe ich bisher nicht entwickeln können, da ich genauso wie alle anderen Mitarbeiter von dem Restrukturierungsplan des Vorstandes letzte Woche überrascht wurde. Aber die Abteilung wird an ihren bewährten Serviceleistungen festhalten und alle weiteren Anforderungen von „Change ELEC“ schon irgendwie bewältigen können. Dass ELEC Inc. vor einer solchen Restrukturierung steht, war mir nicht bewusst. Bisher ging ich davon aus, dass das Unternehmen mit seinem Produktportfolio gut aufgestellt ist, wenn auch die Zahlen der letzten Jahre etwas Anderes zeigten. Ich sah gerade die Stärke des Unternehmens in seiner Vielfältigkeit. Daher hat sich bisher unsere Abteilung stark bemüht, neue Marktnischen in Hinblick auf elektronische Serviceleistungen zu entdecken und diese für das Unternehmen zu gewinnen. Jetzt hat sich dieses Vorgehen allerdings als Fehler herausgestellt und die Abteilung muss sich erst umorientieren. Aber ich bin mir sicher, dass das Management sich sehr genau überlegt haben wird, in welche Richtung es das Unternehmen führen wird. Die Unterhaltungselektronik ist die Hauptgewinnquelle, sodass es nachvollziehbar ist, dass sich das Unternehmen zukünftig darauf fokussieren wird. Die Probleme, die nun in den nächsten vier Monaten entstehen werden, werden sicherlich nicht immer einfach zu bewältigen sein. Ebenso sollte damit gerechnet werden, dass unvorhersehbare Hindernisse auftreten oder es kurzzeitig an Ressourcen mangelt, für die ich aktuell noch keine Lösung habe. Aber es sollte versucht werden, den Plan des Vorstandes so gut es geht umzusetzen. Am Ende der vier Monate zeigen wir Herrn Dr. Lehmann die Ergebnisse, die die Abteilung in der Unterhaltungselektronik schon erreichen konnte.“