

# Who Am I and Who Are We? Exploring Leadership from an Identity Perspective



Inaugural-Dissertation  
zur Erlangung des Doktorgrades der Philosophie  
an der Ludwig-Maximilians-Universität München

vorgelegt von  
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Mit Respekt, Dankbarkeit und Liebe  
für alles, was war, ist und sein wird

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**Martin P. Fladerer**

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## Zusammenfassung (deutsch)

„Wer bin ich?“ „Was macht mich aus?“ Dies sind Fragen, die viele von uns im Laufe des Lebens immer wieder beschäftigen. Befriedigende Antworten zu finden, ist nicht leicht. Die Definition dessen, wer und was man ist, wird komplex und vielschichtig sein; sie entwickelt sich über die Zeit und unterschiedliche Situationen aktivieren verschiedene Facetten (Ramarajan, 2014). Gleichzeitig wirkt sich unsere *Identität*, d. h. das „subjektive Wissen, sowie Sinnzuschreibungen und Erfahrungen, die selbstbeschreibend sind“ (Ramarajan, 2014, S. 539, *eigene Übersetzung*), auf unser Denken, Fühlen, und Handeln aus (Brewer & Gardner, 1996). Unsere Identität setzt sich dabei zum Teil aus individuellen Eigenschaften, Motiven und Zielen (der *persönlichen* Identität; Turner, 1982) und zum Teil aus der Zugehörigkeit zu sozialen Gruppen (z. B. einem Team oder einer Organisation) verbunden mit dem Wert und der emotionalen Bedeutsamkeit dieser Zugehörigkeit (der *sozialen* Identität; Tajfel, 1972) zusammen.

Identität spielt eine zentrale Rolle in Führungsprozessen (z. B. Epitropaki, Kark, Mainemelis, & Lord, 2017): Identität beeinflusst, *wer* führt (z. B. DeRue & Ashford, 2010), *wie* jemand führt (z. B. Johnson, Venus, Lanaj, Mao, & Chang, 2012), und auch *wer* sich führen lässt (z. B. Chrobot-Mason, Gerbasi, & Cullen-Lester, 2016). Im Rahmen dieser Arbeit wird Führung definiert, als die Fähigkeit einer Person, eine oder mehrere andere Personen zu beeinflussen, sodass sie zu einem gemeinsamen Ziel beitragen *will* bzw. *wollen* (vgl. Hollander, 1985).

Die vorliegende Arbeit untersucht die Rolle von Identität in Führungsprozessen aus zwei Perspektiven: Im 1. Teil (Part 1: Who am I?) werden die Ergebnisse zweier Studien vorgestellt, die die Auswirkung der Konzeption von „Wer bin ich?“, d. h. der persönlichen Identität der Führungsperson, und Fluktuationen dieser Konzeption auf das authentische Führungsverhalten zeigen. Im 2. Teil (Part 2: Who are we?) wird eine Archivstudie präsentiert, die, aufbauend auf dem *Sozialen Identitätsansatz effektiver Führung* (Haslam, Reicher, & Platow, 2011; van Knippenberg & Hogg, 2003), die Auswirkung der Gestaltung einer sozialen Identität durch eine Führungsperson

(d. h. Identitätsmanagement; Steffens et al., 2014) auf den Erfolg von Organisationen untersucht.

Beide Forschungsprojekte werden im Folgenden zusammengefasst.

## Teil 1: Wer bin ich?

Das erste Forschungsprojekt „*Why resources matter: A multi-study exploration of how managers' positive psychological capacities and ethical organizational climates relate to authentic leadership*“ wurde gemeinsam mit Prof. Dr. Susanne Braun von der *Durham University Business School (UK)* durchgeführt. Die Datenerhebung wurde vom *seedcorn* Fond der Durham University Business School unterstützt. Im Projekt war Martin Fladerer primär für die Studienkonzeption und vollständig für die Datenerhebung und -auswertung verantwortlich. Das Manuskript wurde gemeinschaftlich entwickelt und ist derzeit im *revise and resubmit (Revision 1)* beim *British Journal of Management* (Stand: Juni 2019).

Die zentrale Fragestellung des Projekts ist: Welche Faktoren beeinflussen authentisches Führungsverhalten? Authentische Führung beschreibt einen beziehungsorientierten Führungsstil, der sich durch vier Dimensionen charakterisieren lässt: (1) Selbstkenntnis, (2) eine verinnerlichte moralische Perspektive, (3) eine ausgewogene Informationsverarbeitung und (4) eine transparente Beziehungsgestaltung (Avolio & Gardner, 2005; Neider & Schriesheim, 2011). Bisherige Forschung konzentrierte sich vor allem auf die Auswirkungen von authentischer Führung auf die Geführten (z. B. Wohlbefinden, Arbeitszufriedenheit und -engagement) sowie die Organisation (z. B. Unternehmensperformance; Gardner, Cogliser, Davis, & Dickens, 2011; Gill & Caza, 2018). Die „linke Seite“, sprich die Antezedenzen, authentischer Führung wurden bisher in der Literatur vernachlässigt (Petersen & Youssef-Morgan, 2018). Darüber hinaus wurde in den vorliegenden Studien (z. B. Jensen & Luthans, 2006; Peus, Wesche, Streicher, Braun, & Frey, 2012; Petersen & Youssef-Morgan, 2018), entgegen der ursprünglichen Konzeption authentischer Führung von Luthans und Avolio (2003), diese als relativ stabiler inter-personaler Faktor und weniger als dynamischer Prozess betrachtet.



Basierend auf der *Conservation of Resources Theory* (COR; Hobfoll, 1989, 2001) untersuchten wir in zwei Studien persönliche und kontextuelle Ressourcen als potenzielle Antezedenzien authentischer Führung. Allgemein definiert sind Ressourcen, alles (z. B. Objekte, Fähigkeiten, oder Zustände), was von Personen als hilfreich bei der Erreichung ihrer Ziele wahrgenommen wird (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Ressourcen sind dabei integrale Bestandteile des individuellen Verständnisses von „Wer bin ich?“ (z. B. Hobfoll, 2002) und beeinflussen, wie Menschen mit anderen interagieren (Judge, Locke, Durham, & Kluger, 1998). Eine zentrale Annahme der COR Theorie ist, dass Personen Ressourcen investieren müssen, um ihre Ressourcen zu schützen, wiederherzustellen oder neue hinzu zu gewinnen (Hobfoll, Halbesleben, Neveu, & Westman, 2018). Ressourcen können unterschiedliche Ursprünge haben (z. B. Hobfoll, 2002). Persönliche Ressourcen sind internal und beschreiben persönliche Charakteristika. In diesem Projekt wurden persönliche Ressourcen als Selbstwirksamkeit, Selbstvertrauen und Optimismus operationalisiert (Hobfoll, 2002). Kontextuelle Ressourcen sind external, d. h. Teil des sozialen Umfelds einer Person. Kontextuelle Ressourcen wurden in diesem Forschungsprojekt spezifisch als prinzipien-orientiertes und fürsorge-orientiertes ethisches Organisationsklima (Victor & Cullen, 1988) operationalisiert. In einem fürsorge-orientierten ethischen Organisationsklima steht bei Entscheidungen und Handlungen das individuelle Wohlbefinden der Organisationsmitglieder im Vordergrund. In einem prinzipien-orientierten ethischen Organisationsklima orientieren sich Entscheidungen und Handlungen an übergeordneten Standards, wie zum Beispiel professionellen Verhaltenskodizes. Die Kernhypothese dieses Projekts ist, dass Führungspersonen bei einer hohen Verfügbarkeit von (persönlichen und kontextuellen) Ressourcen, diese in authentisches Führungsverhalten investieren. In einer Erweiterung des Modells in Studie 2 überprüfen wir, ob der Zusammenhang von persönlichen Ressourcen und authentischem Führungsverhalten durch einen selbstregulatorischen Fokus auf das Ideal-Selbst (d. h. *promotion focus*; Higgins, 1997) vermittelt wird.

In der ersten Studie begleiteten wir 89 Führungskräfte aus verschiedenen Branchen über 10 Arbeitstage, um die Auswirkung von Fluktuationen der persönlichen Ressourcen zwischen den Tagen sowie des ethischen Organisationsklimas auf authentisches Führungsverhalten zu untersuchen. Die Ergebnisse zeigen, dass authentisches Führungsverhalten bedeutsam fluktuiert und dies mit Fluktuationen in den persönlichen Ressourcen zusammenhängt (Studie 1). In der zweiten Studie (quer-schnittliches Design mit 2 Messzeitpunkten) mit 130 Führungskräften zeigt sich, dass dieser positive Zusammenhang auch auf inter-individueller Ebene besteht (d. h. zwischen Personen) und durch einen erhöhten selbstregulatorischen Fokus auf das Ideal-Selbst vermittelt wird. In beiden Studien finden wir einen Zusammenhang eines prinzipien-orientierten, aber nicht eines fürsorge-orientierten ethischen Organisationsklima, mit authentischem Führungsverhalten.

Die beiden Studien tragen mit drei zentralen Erkenntnissen zur Führungsliteratur im Allgemeinen und zur Theorie der authentischen Führung im Spezifischen bei. In der ersten Studie konnten wir zeigen, dass authentisches Führungsverhalten bedeutsam zwischen Tagen variiert und diese Variation (zum Teil) von den verfügbaren persönlichen Ressourcen abhängt. Diese Ergebnisse unterstreichen die Bedeutsamkeit, Führung als Prozess über die Zeit zu erforschen und intra-individuelle Variation zu berücksichtigen (McClean, Barnes, Courtright, & Johnson, 2019; McCormick, Reeves, Downes, Li, & Ilies, 2018). Die Untersuchung des selbstregulatorischen Fokus als möglichen zugrunde liegenden Prozess der Beziehung von persönlichen Ressourcen und authentischem Führungsverhalten in der zweiten Studie ist eine wichtige und bisher vernachlässigte Prüfung der Theorie der authentischen Führung (Gardner et al., 2005; Luthans & Avolio, 2003). Im Einklang mit der COR Theorie unterstützen vorhandene Ressourcen, die Akkumulierung weiterer Ressourcen durch einen Fokus auf Wachstum und persönliche Weiterentwicklung (Halbesleben et al., 2014; Hobfoll, 2001). Unsere Ergebnisse deuten zudem auf die Bedeutsamkeit der Tugendethik für authentische Führung hin (Lemoine, Hartnell, & Leroy, 2019). Über beide Studien hinweg zeigt sich, dass ein prinzipien-orientiertes (aber nicht fürsorge-orientiertes) ethisches Organisationsklima

als kontextuelle Ressource (über persönliche Ressourcen hinaus) förderlich auf authentisches Führungsverhalten wirkt. In einem fürsorge-orientierten ethischen Organisationsklima fokussieren Organisationen und ihre Mitglieder darauf, „was gut für uns“ ist. Dadurch entstehen für Führungspersonen möglicherweise Spannungsfelder zu übergeordneten moralischen Werten. In einem prinzipien-orientierten ethischen Organisationsklima hingegen werden ethische Regeln und Standards (z. B. Verhaltenskodex) als Referenzpunkte für Entscheidungen und das Handeln herangezogen (Victor & Cullen, 1998). Die Orientierung an dem, was „richtig“ ist, grenzt authentische Führung auch von anderen positiven Führungsstilen (z. B. dienende Führung) ab (Lemoine et al., 2019).

## Teil 2: Wer sind wir?

Das zweite Forschungsprojekt „*The value of speaking for ‘us’: The relationship between CEOs’ use of I- and we-referencing language and subsequent organizational performance*“ wurde gemeinsam mit Prof. Dr. S. Alexander Haslam und Dr. Niklas K. Steffens von der *University of Queensland (AUS)* sowie Prof. Dr. Dieter Frey (LMU München) durchgeführt. Das Projekt wurde auf der Plattform *Open Science Framework* prä-registriert und die Daten sowie Materialien werden mit der Veröffentlichung des Manuskripts öffentlich zugänglich gemacht. Im Projekt war Martin Fladerer primär für die Studienkonzeption und vollständig für die Datenerhebung und -auswertung verantwortlich. Das Manuskript wurde primär von Martin Fladerer entwickelt und ist derzeit *under review* beim *Journal of Business and Psychology* (Stand: Juni 2019).

Die zentrale Fragestellung des Projekts ist: Welchen Einfluss hat die Verwendung ich- oder wir-bezogener Sprache von Geschäftsführern (engl. CEOs) als Form des Identitätsmanagements auf den Unternehmenserfolg? Die Fragestellung wurde in einer Archivstudie mit Daten aus DAX-Unternehmen aus den Jahren 2000 bis 2016 untersucht. Die Verwendung von ich- und wir-bezogener Sprache wurde in den Jahresberichtsbriefen analysiert und die Beziehung zu drei Indikatoren des

Unternehmenserfolgs (d. h. Kapitalrendite, Umsatzrendite, und Umsatz je Mitarbeiter/in) zum Ende des Geschäftsjahres statistisch ermittelt.

Das theoretische Rahmenmodell für die Studie war der *Soziale Identitätsansatz effektiver Führung* nach Haslam, Reicher und Platow (2011; siehe auch: Steffens et al., 2014; van Dick et al., 2018; van Knippenberg & Hogg, 2003). Entsprechend dieses Modells gingen wir davon aus, dass wir-bezogene Sprache einen positiven Effekt auf den Unternehmenserfolg hat, da sie zum einen die Identifikation der Führungsperson mit dem Unternehmen signalisiert (van Dick, Hirst, Grojean, & Wieseke, 2007) und zum anderen definiert sowie gestaltet „wer wir sind“, „wofür wir stehen“ und „wer wir sein wollen“ (Haslam et al., 2011). Hingegen gingen wir davon aus, dass ich-bezogene Sprache, welche eine starke *persönliche* Identität der Führungsperson signalisiert, keinen Zusammenhang mit dem Unternehmenserfolg hat (z. B. Chatterjee & Hambrick, 2007). Die Ergebnisse zeigen, dass die Verwendung wir-bezogener Sprache konsistent mit zwei Indikatoren von Unternehmenserfolg (Kapitalrendite und Umsatz je Mitarbeiter/in) zusammenhängt. Die Verwendung von ich-bezogener Sprache hat (basierend auf Bayesianischen Analysen) keinen Einfluss auf den Unternehmenserfolg.

Im Einklang mit theoretischen Entwicklungen zum Verständnis von sozialer Identität in Organisationen (z. B. Ashforth & Mael, 1989) und der Bedeutsamkeit sozialer Identitäten in Führungsprozessen (z. B. Haslam et al., 2011) zeigen die vorliegenden Ergebnisse, dass Geschäftsführer/innen, die gemeinschaftlich denken und sprechen erfolgreicher Organisationen führen. Hierdurch trägt unsere Arbeit zur (strategischen) Führungsliteratur bei: Die Ergebnisse stellen verbreitete Annahmen infrage, was Geschäftsführer/innen machen sollten, um erfolgreich zu sein. Während Führungspersonen, im Speziellen Geschäftsführer/innen großer Konzerne, als Individuum besonders sein mögen, ist das es nicht, was sie erfolgreich macht. Vielmehr entsteht ihre Fähigkeit andere Gruppenmitglieder zu beeinflussen, aus und durch die Demonstration ihrer Zugehörigkeit zu „uns“ (d. h. der sozialen Gruppe). Die Studie erweitert auch das nomologische

Netzwerk des *Sozialen Identitätsansatz effektiver Führung*: Bisherige Studien im Organisationskontext erfassten v.a. die Beurteilung der Führungsperson durch die Mitarbeiter/innen (z. B. Barreto & Hogg, 2017), aber weniger die materiellen Auswirkungen von Führung (z. B. Unternehmensleistung). Arbeiten aus dem politischen Kontext wählten zumeist einen qualitativen Ansatz (für eine Ausnahme siehe: Steffens & Haslam, 2013). Die vorliegende Studie generalisiert den *Sozialen Identitätsansatz effektiver Führung* auf das strategische Führungslevel und liefert Hinweise für die Bedeutung gruppenorientierten Führungsverhaltens in Organisationen.

## Ausblick

Die vorliegende Arbeit beleuchtet die Auswirkung von Identität (Brewer & Gardner, 1996; Ramarajan, 2014) auf Führung in Organisationen (Epitropaki et al., 2017). Die beiden Forschungsprojekte nähern sich von unterschiedlichen Enden — der Perspektive der persönlichen bzw. der sozialen Identität — dem Forschungsfeld an. Sie sind dabei verbunden im zugrunde liegenden Verständnis von *Führung als (Gruppen-)Prozess*. In diesem Verständnis ist Führung nicht etwas, was eine Person *hat* oder *besitzt*; sie entsteht dynamisch in der Interaktion der beteiligten Personen (vgl. DeRue & Ashford, 2010; Epitropaki et al., 2017; Haslam et al., 2011).

Dieses Verständnis von Führung stellt verschiedene Herausforderungen an zukünftige Forschung, von denen drei hervorstechen. Erstens: *Zeit* bzw. die *Dynamik von Führung* wird zu einem zentralen *Konstrukt* in der Führungsforschung (McClellan et al., 2019; Fischer, Dietz, & Antonakis, 2017). McClellan und Kollegen (2019) diskutieren verschiedene Formen von Fluktuationen (z. B. Sprünge, Wachstum und Verfall) im Führungsverhalten. Zukünftige Forschung steht vor der Herausforderung, theoretisch fundiert und methodisch stimmig, diese Fluktuationen zu beschreiben, zu verstehen, (kausal) vorherzusagen und gegebenenfalls Interventionen zu entwickeln.

Zweitens: Die situative Aktivierung von Anteilen sowie graduelle Veränderung der Identität einer Führungsperson wirkt sich auf ihr Führungsverhalten und letztendlich ihre Führungseffektivität aus (z. B. Epitropaki et al., 2017; Lord & Brown, 2004). Es stellt sich dabei die Frage, in welchem

Maße persönliche („Wer ich bin“) bzw. soziale („Wer wir sind“) Anteile der Identität in Führungspersonen entwickelt werden sollten (z. B. in der Personalentwicklung; Clapp-Smith, Hammond, Lester, & Palanski, 2019; Haslam et al., 2017). Eine Studie von Johnson und Kolleg/innen (2012) zeigte beispielsweise, dass eine dominante persönliche Identität mit missbrauchendem Führungsverhalten (z. B. beleidigenden und aggressivem Verhaltensweisen), eine dominante soziale Identität jedoch mit wertschätzendem und unterstützendem Führungsverhalten in Beziehung stand.

Drittens: Das Verständnis von Führung als das Ergebnis einer Interaktion rückt die Geführten in den Fokus der Forschung (Epitropaki et al., 2017). Auf der sozialen Ebene der Identität gilt es weiter zu untersuchen, wie Identitätsmanagement (Haslam et al., 2011; Steffens et al., 2014) sich auf die Identität (z. B. Stärke und Klarheit) und das Verhalten der Geführten auswirkt. Des Weiteren kann zukünftige Forschung unser Verständnis vertiefen, wie sich das Selbstverständnis der Geführten sich auf ihr Verhalten im Führungsprozess auswirkt (z. B. Peters & Haslam, 2018).

## Literaturverzeichnis

Mit einem Sternchen (\*) markierte Quellen werden ausschließlich in der Zusammenfassung zitiert.

- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14, 20–39. doi:10.2307/258189
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16, 315–338. doi:10.1016/j.leaqua.2005.03.001
- Barreto, N. B., & Hogg, M. A. (2017). Evaluation of and support for group prototypical leaders: A meta-analysis of twenty years of empirical research. *Social Influence*, 12, 41–55. doi:10.1080/15534510.2017.1316771
- Brewer, M. B., & Gardner, W. (1996). Who is this "we"?: Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71, 83–93. doi:10.1037/0022-3514.71.1.83
- Chatterjee, A., & Hambrick, D. C. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52, 351–386. doi:10.2189/asqu.52.3.351
- \*Chrobot-Mason, D., Gerbasi, A., & Cullen-Lester, K. L. (2016). Predicting leadership relationships: The importance of collective identity. *The Leadership Quarterly*, 27, 298–311. doi:10.1016/j.leaqua.2016.02.003
- \*Clapp-Smith, R., Hammond, M. M., Lester, G. V., & Palanski, M. (2019). Promoting identity development in leadership education: A multidomain approach to developing the whole leader. *Journal of Management Education*, 43, 10–34. doi:10.1177/1052562918813190
- \*DeRue, D. S., & Ashford, S. J. (2010). Who will lead and who will follow? A social process of leadership identity construction in organizations. *Academy of Management Review*, 35, 627–647. doi:10.5465/amr.35.4.zok627
- Epitropaki, O., Kark, R., Mainemelis, C., & Lord, R. G. (2017). Leadership and followership identity processes: A multilevel review. *The Leadership Quarterly*, 28, 104–129. doi:10.1016/j.leaqua.2016.10.003
- Fischer, T., Dietz, J., & Antonakis, J. (2017). Leadership process models: A review and synthesis. *Journal of Management*, 43, 1726–1753. doi:10.1177/0149206316682830
- Gardner, W. L., Coglisier, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly*, 22, 1120–1145. doi:10.1016/j.leaqua.2011.09.007

- Gill, C., & Caza, A. (2018). An investigation of authentic leadership's individual and group influences on follower responses. *Journal of Management*, 44, 530–554.  
doi:10.1177/0149206314566461
- Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the “COR”: Understanding the role of resources in conservation of resources theory. *Journal of Management*, 40, 1334–1364. doi:10.1177/0149206314527130
- Haslam, S. A., Reicher, S. D., & Platow, M. J. (2011). *The New Psychology of Leadership: Identity, Influence and Power*. Hove: Psychology Press.
- Haslam, S. A., Steffens, N. K., Peters, K., Boyce, R. A., Mallett, C. J., & Fransen, K. (2017). A social identity approach to leadership development. *Journal of Personnel Psychology*, 16, 113–124. doi:10.1027/1866-5888/a000176
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300.  
doi:10.1037//0003-066X.52.12.1280
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524. doi:10.1037/0003-066X.44.3.513
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*, 50, 337–421.  
doi:10.1111/1464-0597.00062
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307–324. doi:10.1037/1089-2680.6.4.307
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 103–128. doi:10.1146/annurev-orgpsych-032117-104640
- \*Hollander, E. P. (1985). Leadership and power. In G. Lindzey & E. Aronson (Eds.), *Handbook of Social Psychology* (3rd ed., pp. 485–537). New York: Random House.
- Jensen, S. M., & Luthans, F. (2006). Relationship between entrepreneurs' psychological capital and their authentic leadership. *Journal of Managerial Issues*, 18(2), 254–273.
- \*Johnson, R. E., Venus, M., Lanaj, K., Mao, C., & Chang, C.-H. (2012). Leader identity as an antecedent of the frequency and consistency of transformational, consideration, and abusive leadership behaviors. *Journal of Applied Psychology*, 97, 1262–1272. doi:10.1037/a0029043
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83, 17–34.  
doi:10.1037/0021-9010.83.1.17



- Lemoine, G. J., Hartnell, C. A., & Leroy, H. (2019). Taking stock of moral approaches to leadership: An integrative review of ethical, authentic, and servant leadership. *Academy of Management Annals*, 13, 148–187. doi:10.5465/annals.2016.0121
- \*Lord, R. G., & Brown, D. J. (2004). *Leadership Processes and Follower Self-Identity*. Mahwah: Lawrence Erlbaum.
- Luthans, F., & Avolio, B. J. (2003). Authentic leadership development. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive Organizational Scholarship* (pp. 241–261). San Francisco: Berrett-Koehler.
- McClellan, S. T., Barnes, C. M., Courtright, S. H., & Johnson, R. E. (2019). Resetting the clock on dynamic leader behaviors: A conceptual integration and agenda for future research. *Academy of Management Annals*. Advance online publication. doi:10.5465/annals.2017.0081
- McCormick, B. W., Reeves, C. J., Downes, P. E., Li, N., & Ilies, R. (2018). Scientific contributions of within-person research in management: Making the juice worth the squeeze. *Journal of Management*. Advance online publication. doi:10.1177/0149206318788435
- Neider, L. L., & Schriesheim, C. A. (2011). The Authentic Leadership Inventory (ALI): Development and empirical tests. *The Leadership Quarterly*, 22, 1146–1164. doi:10.1016/j.leaqua.2011.09.008
- \*Peters, K., & Haslam, S. A. (2018). I follow, therefore I lead: A longitudinal study of leader and follower identity and leadership in the marines. *British Journal of Psychology*, 109, 708–723. doi:10.1111/bjop.12312
- Petersen, K., & Youssef-Morgan, C. M. (2018). The “left side” of authentic leadership: Contributions of climate and psychological capital. *Leadership & Organization Development Journal*, 39, 436–452. doi:10.1108/LODJ-06-2017-0171
- Peus, C., Wesche, J. S., Streicher, B., Braun, S., & Frey, D. (2012). Authentic leadership: An empirical test of its antecedents, consequences, and mediating mechanisms. *Journal of Business Ethics*, 107, 331–348. doi:10.1007/s10551-011-1042-3
- \*Ramarajan, L. (2014). Past, present and future research on multiple identities: Toward an intrapersonal network approach. *Academy of Management Annals*, 8, 589–659. doi:10.1080/19416520.2014.912379
- Steffens, N. K., & Haslam, S. A. (2013). Power through 'us': Leaders' use of we-referencing language predicts election victory. *PloS one*, 8, e77952. doi:10.1371/journal.pone.0077952
- Steffens, N. K., Haslam, S. A., Reicher, S. D., Platow, M. J., Fransen, K., Yang, J., . . . Boen, F. (2014). Leadership as social identity management: Introducing the Identity Leadership Inventory

(ILI) to assess and validate a four-dimensional model. *The Leadership Quarterly*, 25, 1001–1024.  
doi:10.1016/j.leaqua.2014.05.002

\*Tajfel, H. (1972). Social categorization. English manuscript of 'La catégorisation sociale'. In S. Moscovici (Ed.), *Introduction à la Psychologie Sociale* (Vol. 1, pp. 272–302). Paris: Larousse.

\*Turner, J. C. (1982). Towards a redefinition of the social group. In H. Tajfel (Ed.), *Social Identity and Intergroup Relations* (pp. 15–40). Cambridge: Cambridge University Press.

van Dick, R., Hirst, G., Grojean, M. W., & Wieseke, J. (2007). Relationships between leader and follower organizational identification and implications for follower attitudes and behaviour. *Journal of Occupational and Organizational Psychology*, 80, 133–150.  
doi:10.1348/096317905X71831

van Dick, R., Lemoine, J. E., Steffens, N. K., Kerschreiter, R., Akfirat, S. A., Avanzi, L., . . . Haslam, S. A. (2018). Identity leadership going global: Validation of the Identity Leadership Inventory across 20 countries. *Journal of Occupational and Organizational Psychology*, 91, 697–728.  
doi:10.1111/joop.12223

van Knippenberg, D., & Hogg, M. A. (2003). A social identity model of leadership effectiveness in organizations. *Research in Organizational Behavior*, 25, 243–295. doi:10.1016/S0191-3085(03)25006-1

Victor, B., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly*, 33, 101–125. doi:10.2307/2392857

## Part 1: Who Am I?

## Why resources matter: A multi-study exploration of how managers' positive psychological capacities and ethical organizational climates relate to authentic leadership

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## 1. Abstract

Authentic leadership is a valued resource in today's business world, which managers strive for, but also struggle to acquire. Building on conservation of resources theory, we predict that positive psychological capacities and ethical organizational climates facilitate managers' authentic leadership in general and on a day-to-day basis. In addition, we argue that managers' promotion focus partly explains the link between positive psychological capacities and authentic leadership. We provide empirical evidence from two studies: an experience sampling study with 89 managers surveyed on 10 consecutive work days (Study 1), and 130 managers surveyed at two points in time (Study 2). Results of Study 1 supported that authentic leadership varied significantly from day to day, and that managers indicated higher levels of authentic leadership on days when they had more positive psychological capacities available. Study 2 provided evidence that managers' self-regulatory promotion focus links positive psychological capacities to authentic leadership. In both studies, managers' perceptions of a principled (but not a benevolent) ethical organizational climate related positively to authentic leadership. We discuss the implications of our findings for current management research and practice.

*Keywords:* Authentic leadership, ethical organizational climates, experience sampling, positive psychological capacities, resources, self-regulatory focus

## 2. Introduction

*Each day, as you are tested in the world, you yearn to look at yourself in the mirror and respect the person you see and the life you have chosen to lead. Some days will be better than others, but as long as you are true to who you are, you can cope with the most difficult circumstances that life presents.* (George, 2007, p. xxiii)

Authentic leadership is a valued resource in today's business world as it relates to many desirable outcomes for individuals (e.g., well-being, job satisfaction, work engagement) and organizations (e.g., organizational commitment, financial performance; Gardner, Coglisier, Davis, & Dickens, 2011; Gill & Caza, 2018). In his book *True North*, Bill George (2007) uncovered the experiences of 125 managers from various areas of corporate and political life, finding that most of them struggled to achieve the ideal of authentic leadership at some point during their careers. Thus, while being seen as “the gold standard for leadership” (Ibarra, 2015, p. 4), authentic leadership also represents a major challenge for managers.

The dynamic nature of authentic leadership in practice resonates with recent developments in the management literature. Luthans and Avolio (2003) introduced authentic leadership as a dynamically evolving process in which managers draw from “positive psychological capacities *and* a positive, highly developed organizational context and culture...in which he or she is embedded over time” (pp. 257-258; emphasis in original). May, Chan, Hodges, and Avolio (2003) argued that authentic leadership “is ultimately about the leader knowing him- or herself, and being transparent in linking inner desires, expectations, and values to the way the leader behaves every day, in each and every interaction.” (p. 248). Cooper, Scandura, and Schriesheim (2005) echoed this view, suggesting that “the fragility of authentic leadership should probably be studied over time” (p. 482).

Despite important theoretical implications for the understanding of managers' authentic leadership, its antecedents and dynamic nature have received very limited empirical attention to date.

The purpose of this work is to address some of the shortcomings in the current research by exploring the links between managers' positive psychological capacities, ethical organizational climates, and authentic leadership from the perspective of conservation of resources theory (COR)—a key theory in the management literature developed in over 3 decades of research (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, Halbesleben, Neveu, & Westman, 2018). We propose that authentic leadership is a valued resource, which managers seek to acquire, as it contributes to desirable individual and organizational outcomes (Gardner et al., 2011; Gill & Caza, 2018). We argue that managers (a) invest personal resources in the form of positive psychological capacities (Luthans & Avolio, 2003), but also (b) draw from contextual resources in the form of ethical organizational climates (Victor & Cullen, 1988) when they strive for authentic leadership generally as well as on a day-to-day basis. Further, we posit based on the principles set out in COR theory that managers' self-regulatory strategy, specifically their promotion focus, in part explains why their positive psychological capacities relate positively to authentic leadership (Brockner & Higgins, 2001; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008).

The few existing studies which investigated facilitating factors of authentic leadership suffer from a number of conceptual and methodological shortcomings (Jensen & Luthans, 2006; Petersen & Youssef-Morgan, 2018; Peus, Wesche, Streicher, Braun, & Frey, 2012). First, none of these studies assessed variations of authentic leadership or related variables over time, precluding insights into the dynamic nature of authentic leadership (Cooper et al., 2005; Luthans & Avolio, 2003; May et al., 2003). The dearth of time related research in management has been deemed highly problematic (Fischer, Dietz, & Antonakis, 2017; McClean, Barnes, Courtright, Johnson, & McClean, 2019; Shamir, 2011) as it ignores that leadership fluctuates from day to day and thereby predicts relevant outcomes (Breevaart et al., 2014; Ohly, Sonnentag, Niessen, & Zapf, 2010).

Second, current findings do not explain *why* managers' positive psychological capacities relate to authentic leadership. Luthans and Avolio (2003) suggested that authentic leadership occurs

through self-regulated positive behaviors. Self-regulatory theory explains “how individuals allocate volitional, cognitive, and affective resources across multiple tasks” (Lord, Diefendorff, Schmidt, & Hall, 2010, p. 544). Sparrowe (2005) emphasized that self-regulatory processes “are everywhere implicit” (p. 422) in authentic leadership theory. Self-regulation represents “the process through which leaders align their behavior with their true selves (implicitly, George, 2003; explicitly, Luthans & Avolio, 2003)” (Sparrowe, 2005, p. 432). Accordingly, we propose that managers’ self-regulation, specifically their promotion focus, enables managers to draw from their positive psychological capacities to achieve authentic leadership.

Third, we concur with the view that “to date [authentic leadership’s] contextual antecedents remain largely undertheorized” (Petersen & Youssef-Morgan, 2018, p. 439). Previous research did not assess contextual variables (Peus et al., 2012) or treated them inconsistently: Jensen and Luthans (2006) integrated two ethical organizational climate dimensions directly into their measure of authentic entrepreneurial leadership. Petersen and Youssef-Morgan (2018) used an independent psychological climate measure. However, despite a positive correlation, in the subsequent regression analysis only managers’ psychological capital but not organizations’ psychological climate predicted authentic leadership significantly. Authentic leaders work with “their own moral compass, rather than on other people’s opinions of ethics” (Lemoine, Hartnell, & Leroy, 2019, p. 166), but they also rely on the ethical organizational climates to support their decision-making (May et al., 2003). Ethical organizational climates emphasize “core and unassailable principles as a basis for making difficult decisions, over [...] self-serving considerations” (May et al., 2003, p. 251). We therefore explore whether managers’ authentic leadership not only occurs in line with the resources available to them personally, but also those resources provided within the organizational context, specifically *benevolent* and *principled* ethical organizational climates (Martin & Cullen, 2006; Victor & Cullen, 1988).



To summarize, our research makes three core contributions to the management literature.

First, we contribute to the understanding of the dynamic nature of authentic leadership as reflected in previous theory (Cooper et al., 2005; Luthans & Avolio, 2003; May et al., 2003) and observations of managerial practice (George, 2007). Our first study employs an experience sampling design, measuring variations in managers' positive psychological capacities on a day-to-day basis and linking them to authentic leadership on the day. McCormick, Reeves, Downes, Li, and Ilies (2018) noted a "meteoric rise in the number of management studies focused on within-person phenomena" (p. 19; see also: McClean et al., 2019) with the potential to provide enhanced temporal precision. Second, above and beyond previous research (Jensen & Luthans, 2006; Petersen & Youssef-Morgan, 2018), we test theory suggesting that self-regulation enables managers to invest their personal resources in order to achieve authentic leadership (Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Ilies, Morgeson, & Nahrgang, 2005; Luthans & Avolio, 2003). In our second study, we assess whether managers' promotion focus links their positive psychological capacities to authentic leadership. Third, we explore implications of ethics for authentic leadership (Lemoine et al., 2019), conceptualizing managers' perceptions of benevolent and principled ethical organizational climates as contextual resources for authentic leadership across both studies to complement previous findings on the role of the organizational climate for authentic leadership (Jensen & Luthans, 2006; Petersen & Youssef-Morgan, 2018).

### 3. Theoretical Background

#### 3.1 Authentic Leadership

Authentic leadership means that managers enact their true selves in the leadership role, and requires "being honest with oneself [...], being sincere with others [...], and behaving in a way that reflects one's personal values" (Leroy, Anseel, Gardner, & Sels, 2015, p. 1678). Authentic leaders demonstrate *self-awareness* when striving to understand their own personal values, strengths and weaknesses as well as their impact on others. Their *internalized moral perspective* manifests in

actions guided by personal values even in the face of external pressures. Through *balanced processing* authentic leaders encourage others to voice opposing points of view and carefully consider all relevant information before reaching conclusions. Authentic leaders show *relational transparency* as they openly share information and express their true thoughts and feelings (Avolio & Gardner, 2005; Neider & Schriesheim, 2011; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Luthans and Avolio (2003) introduced authentic leadership as a dynamic process that draws from managers' positive psychological capacities and the organizational context. Its dynamic nature is reflected in Cooper et al. (2005), who argued that authentic leadership should be studied over time, as well as May *et al.* (2003), who put forward that fluctuations in authentic leadership can be observed on a day-to-day basis. Yet, the majority of empirical studies conceptualized authentic leadership as a relatively stable inter-individual difference factor (Gardner et al., 2011; Neider & Schriesheim, 2011; Walumbwa et al., 2008), neglecting possible intra-individual variations over time. While generating important insights into how authentic leadership affects employees and organizations (Gardner et al., 2011; Gill & Caza, 2018), the "left side" of authentic leadership remains theoretically and empirically underdeveloped.

Jensen and Luthans (2006) collected data in a sample of 76 entrepreneurs leading small businesses primarily located in the Midwest of the USA. No validated measure of authentic leadership was available at the time. Therefore, the authors developed an ad-hoc measure of *authentic entrepreneurial leadership* including items from (a) the Multifactor Leadership Questionnaire (Bass & Avolio, 1993), (b) the Ethical Work Climate Questionnaire (Victor & Cullen, 1988), and (c) the Firm Entrepreneurial Orientation scale (Knight, 1997). Study results indicated positive relationships between authentic entrepreneurial leadership and managers' psychological capital as well as its three sub-dimensions (optimism, hope, and resiliency). While supporting the view that managers' positive psychological capacities matter in the specific context of authentic

entrepreneurial leadership, these initial findings also called for future research using further conceptual distinctions between authentic leadership and the ethical context as well as more specific instruments to measure authentic leadership.

Peus et al. (2012) assessed employee perceptions of their managers' authentic leadership with the Authentic Leadership Questionnaire (ALQ; Walumbwa et al., 2008) and their perceptions of managers' self-knowledge and self-consistency in a subsample of 157 employees working in Germany. Employees were more likely to ascribe authentic leadership when they saw their managers as possessing self-knowledge about own values and expressing these values in a consistent manner. However, the cross-sectional study did not account for temporal dynamics, the organizational context or how managers saw their own authentic leadership.

Recently, Petersen and Youssef-Morgan (2018) collected data from a sample of 74 managers of two US-based organizations. In this study, the overall measure of managers' psychological capital related positively to self-rated authentic leadership measured with the ALQ (Walumbwa et al., 2008), lending further credibility to the role of managers' positive psychological capacities for authentic leadership (Jensen & Luthans, 2006). However, results only partly supported the link between perceptions of the organization's psychological climate and authentic leadership. Despite a positive correlation, in a subsequent regression, organizational psychological climate did not predict authentic leadership significantly.

### 3.2 Conservation of Resources (COR) Theory

Over three decades, COR theory (Hobfoll, 1989, 2001) "has moved to a central reference in organizational behavior" (Halbesleben et al., 2014). The central tenet of COR theory (Hobfoll, 1989, 2001) is that people strive to secure their current resources as well as to acquire new resources (Hobfoll et al., 2018). Resources are broadly defined as entities (e.g., objects, states, conditions) which individuals perceive to support their goal attainment (Halbesleben et al., 2014). People generally strive to 'be themselves' (Lenton, Bruder, Slabu, & Sedikides, 2013; Schmader &

Sedikides, 2018). Enacting one's true self in their leadership role is a specific valued end for managers (George, 2007; Ibarra, 2015) and the organizations they work for (Gardner et al., 2011). According to COR "people must invest resources in order to protect against resource loss, recover from losses, and gain resources" (Hobfoll et al., 2018, p. 105). We posit that managers will invest resources towards authentic leadership as this facilitates further resource gain.

Resources have different origins (Hobfoll, 2002; ten Brummelhuis & Bakker, 2012): Personal resources are proximate to the self and include aspects like personal characteristics and energies. Contextual resources are external to the individual and instead part of their social context. Dynamic variation of resources over time is a central element of COR theory (Halbesleben et al., 2014; Hobfoll, 2002). Dynamically varying resources influence how managers see themselves (Hobfoll, 2002) and how they interact with others (Judge, Locke, Durham, & Kluger, 1998). Managers are likely to adapt their behaviors to the current level of available resources. That is, they will act defensively when resources are low (e.g., reject critical feedback) and growth-oriented when resources are high (e.g., invite critical feedback) which will relate to their authentic leadership. Resources differ in volatility (Hobfoll, 2001; ten Brummelhuis & Bakker, 2012), with contextual resources (e.g., ethical organizational climates) being seen as more stable and personal resources (e.g., positive psychological capacities) as more variable over time.

### 3.3 Positive Psychological Capacities and Authentic Leadership

Three central positive psychological capacities are *self-efficacy*, *self-esteem*, and *optimism* (Halbesleben et al., 2014; Hobfoll, 2002; ten Brummelhuis & Bakker, 2012; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). *Self-efficacy* incorporates individuals' beliefs about their ability to mobilize the motivation, cognitive resources, and courses of action necessary to execute behavior in a given context (Stajkovic & Luthans, 1998). *Self-esteem* is defined as "the degree to which an individual believes him/herself to be capable, significant, and worthy as an organizational member" (Pierce & Gardner, 2004, p. 593). *Optimism* represents the cognitive appraisal of events, especially

the reappraisal of potentially negative or neutral situations (Seligman, 2006), also affecting contingency planning for the future (Luthans, Youssef-Morgan, & Avolio, 2015).

As Hobfoll et al. (2018) pointed out, resources “do not exist individually but travel in packs, or caravans” (p. 106; see also: Hobfoll, 2011). While representing distinct psychological constructs, they share common processes driving motivation and behavior (Luthans, Avolio, Avey, & Norman, 2007; Luthans & Youssef-Morgan, 2017). The three positive psychological capacities self-efficacy, self-esteem, and optimism are highly correlated (Hobfoll, 2011). Several previous studies justified combining these indicators into a single factor (e.g., Judge et al., 1998; Luthans et al., 2007; Xanthopoulou et al., 2007) and argued that synergies between them enhanced predictive power (cf. Luthans et al., 2007; Petersen & Youssef-Morgan, 2018). In business contexts, individuals draw from their resources to increase desirable, but resource intensive behaviors such as speaking up at work (Ng & Feldman, 2012) and helping others (Halbesleben & Wheeler, 2015). Byrne and colleagues (2014) demonstrated that managers’ resources depletion (i.e., depressive symptoms, anxiety, and alcohol consumption) was positively related to abusive leadership and negatively related to transformational leadership.

We argue that managers invest their positive psychological capacities to achieve authentic leadership. In contrast, when managers lack positive psychological capacities, they will protect their remaining resources and not invest them towards achieving authentic leadership (Halbesleben et al., 2014; Hobfoll et al., 2018). When managers’ self-efficacy beliefs are high, they seek accurate information about their own abilities but also potential for development (Luthans et al., 2015). Managers who experience high levels of self-efficacy are also better able to regulate their interpersonal behavior (e.g., to overcome self-serving biases; Vohs & Ciarocco, 2004). When managers experience high self-esteem, they are less susceptible to external influences, which could otherwise keep them from enacting true values (Pierce & Gardner, 2004). Optimism enables managers to reinterpret challenging situations, rendering them more likely to see personal development as

‘work in progress’ (Luthans & Youssef-Morgan, 2017), and to seek out opportunities for learning when faced setbacks (Luthans et al., 2015).

In contrast, when self-efficacy is low, managers are more likely to protect their self-worth through self-enhancement and defensiveness (Kernis, 2003; Vohs & Ciarocco, 2004), thus reducing their self-awareness of strengths and weaknesses as well as balanced processing also of opposing points of view. Individuals who experience low levels of self-efficacy are more prone to external influences, preventing them from acting in accordance with their inner values (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003). Low self-esteem also limits expressing one's true thoughts and feelings out of fear of social judgment (Neider & Schriesheim, 2011; Walumbwa et al., 2008). When their optimism is low, managers will be more concerned with their own vulnerabilities and weaknesses and less able to reinterpret challenges to their authentic leadership positively (Seligman, 2006). On this basis, we suggest that, positive psychological capacities are personal resources that managers can invest to achieve authentic leadership.

*Hypothesis 1.* Managers’ positive psychological capacities are positively related to authentic leadership.

### 3.4 Managers’ Self-Regulatory Promotion Focus

Promotion focus describes a self-regulatory strategy that is attuned to individuals’ hopes and aspirations (Brockner & Higgins, 2001; Higgins, 1997). According to Brockner and Higgins (2001), a promotion focus motivates individuals “to bring their actual selves (their behaviors and self-conceptions) in alignment with their ideal selves (self-standards based on wishes and aspirations of how they would like to be)” (p. 35). In contrast, a self-regulatory focus on prevention implies goals in accordance with ought selves. Ought selves regulate thoughts and actions in line with “felt duties and responsibilities” (Brockner & Higgins, 2001), that is, the expectations from specific others and the wider environment.

Self-regulatory foci are malleable and can be affected by situational cues (Higgins, 1997, 2000), such as fluctuations in available resources (Lanaj, Chang, & Johnson, 2012). Positive psychological capacities facilitate positive appraisals of challenging situations (Luthans & Youssef-Morgan, 2017; Petersen & Youssef-Morgan, 2018). Through this framing of challenging situations as opportunities, managers will be more likely to remain perseverant and invest their resources, even after failures and setbacks (Hobfoll, 2001, 2011). In contrast, low positive psychological capacities trigger self-protection and the avoidance of opportunities for self-development (e.g., Heimpel, Elliot, & Wood, 2006). We argue that managers who draw from a surplus of personal resources in the form of positive psychological capacities will be more likely to self-regulate in line with a promotion focus (Halbesleben et al., 2014). This aligns with COR theory, which proposes that individuals with more resources “are in a better position to invest those resources” (Halbesleben et al., 2014, p. 1336). Two meta-analyses support this argument: Gorman et al. (2012) found positive relationships of self-esteem and optimism with promotion focus. Lanaj et al. (2012) demonstrated a positive association of self-esteem and self-efficacy with promotion focus.

We further argue that managers’ self-regulatory focus on promotion facilitates authentic leadership because it means setting personal goals in alignment with ideal selves. A promotion focus enables greater resilience in the light of obstacles and setbacks that would otherwise prevent managers from achieving the ideal ‘authentic self’ as a leader that he/she aspires to (Brockner & Higgins, 2001; Kark & van Dijk, 2007; Neubert et al., 2008). Promotion-focused managers are fueled by their motivation to fulfil their ideal selves (Christian, Garza, & Slaughter, 2011). In line with authentic leadership, a promotion focus helps managers achieve higher levels of self-awareness by reflecting on discrepancies between their actual and ideal selves while maintaining a growth orientation (Kark & van Dijk, 2007). Promotion-focused managers are more likely to take risks to attain their ideals and follow their personal beliefs (Brockner & Higgins, 2001) consistent with an internalized moral perspective. A promotion focus enables them to explore alternative routes before

reaching decisions (Tuncdogan, van den Bosch, & Volberda, 2015), to listen to multiple perspectives, and to be open to new information (Kark & van Dijk, 2007). In sum, we argue that managers who draw on their positive psychological capacities are more likely to self-regulate towards their ideal selves, which in turn facilitates authentic leadership.

*Hypothesis 2.* Managers' positive psychological capacities have an indirect effect on authentic leadership through managers' promotion focus.

### 3.5 Ethical Organizational Climates and Authentic Leadership

Organizational climates define what constitutes right and expected behavior in an organization (Schneider, Ehrhart, & Macey, 2013). Several scholars suggested that they serve as contextual resource for organizational members (Halbesleben et al., 2014; Hobfoll et al., 2018). It has also been argued that organizational climates facilitate authentic leadership (Avolio & Gardner, 2005; Eagly, 2005; Luthans & Avolio, 2003; May et al., 2003; Walumbwa et al., 2008). To test the relationships between specific elements of the organizational climate and authentic leadership, we build on theory which emphasizes the importance of ethicality and morality for authentic leadership (Avolio & Gardner, 2005; Lemoine et al., 2019; Luthans & Avolio, 2003; May et al., 2003). May et al. (2003) noted that authentic leadership “presumes an organizational climate that is developed to support ethical behavior” (p. 255). We argue that ethical organizational climates, which imply clear expectations and ethical standards (Martin & Cullen, 2006; Victor & Cullen, 1988), provide managers with ethical guidelines and interpersonal support for authentic leadership (May et al., 2003; Shamir & Eilam, 2005). Several types of ethical organizational climates exist (Victor & Cullen, 1988) and can be present in an organization at the same time (Kish-Gephart, Harrison, & Treviño, 2010; Martin & Cullen, 2006).

*Benevolent* ethical organizational climates imply an overarching concern for individual well-being. Employees in benevolent climates share a mutual sense of care and concern for others (Victor & Cullen, 1988). They are valued as individuals with personal strengths and weaknesses.



Experiencing appreciation from close others is a valuable resource for individuals as interpersonal connections give rise to feelings of ‘being in the right place’ (Hobfoll, Freedy, Lane, & Geller, 1990; Sarason & Sarason, 2009). Even when they encounter setbacks and struggle to achieve authentic leadership, managers in benevolent ethical organizational climates will feel accepted and supported by the people they work with. Thereby, the benevolent climate fulfils motivational purposes in the quest for authentic leadership, for example, being able to draw on one’s positive relationships with others in the organization when managers are forced to make difficult decisions (George, 2007; Ibarra, 2015). We therefore propose that benevolent ethical organizational climates are a contextual resource that facilitates managers’ authentic leadership.

*Hypothesis 3a.* A benevolent ethical organizational climate relates positively to authentic leadership.

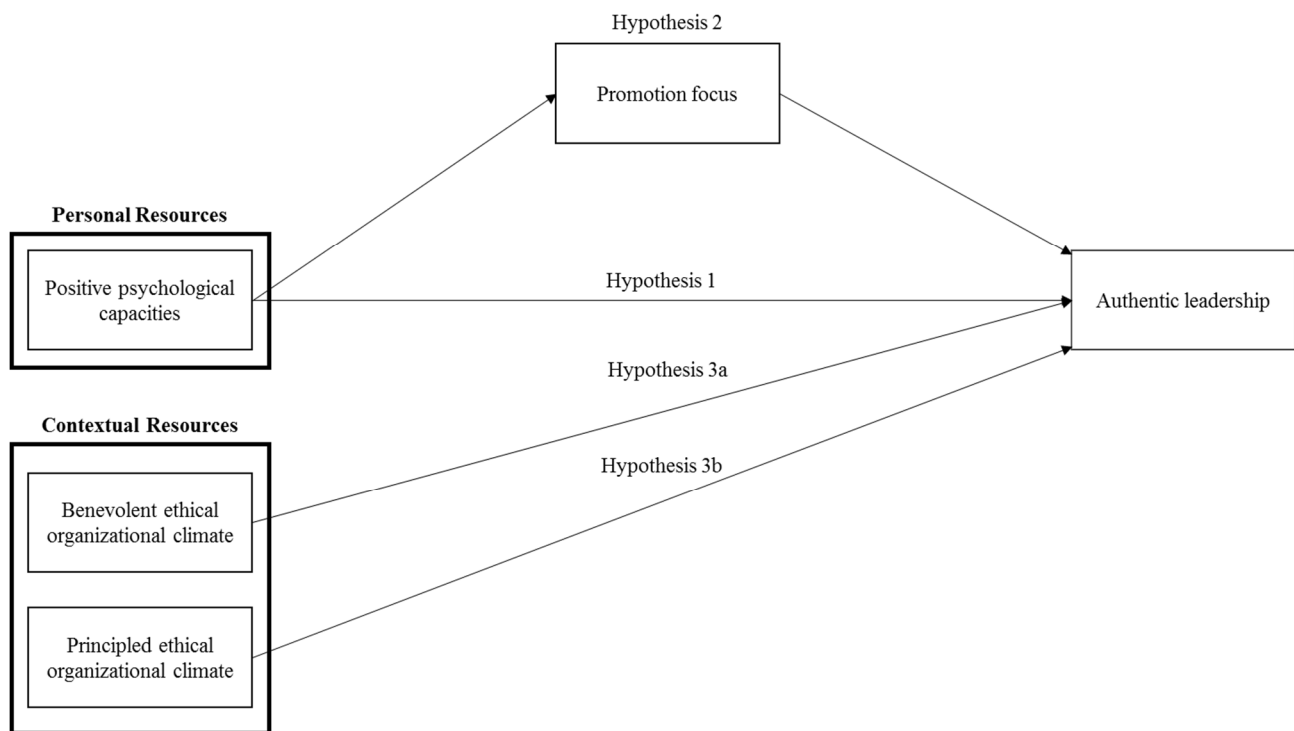
*Principled* ethical organizational climates provide ethical rules and policies for ethical behavior such as codes of conduct (Martin & Cullen, 2006). Actions are considered ethical when they comply with moral guidelines (Barnett & Vaicys, 2000). Codes of conduct raise managers’ awareness of ethical and unethical behavior (Schminke, Ambrose, & Neubaum, 2005; van Sandt, Shepard, & Zappe, 2006) and encourage them to reflect their own values (Shamir & Eilam, 2005). Ethical codes also reduce uncertainty and accentuate personal accountability when making difficult decisions (May et al., 2003). Managers in principled ethical organizational climates will feel a sense of certainty and guidance provided by the environment. The principled climate is a guiding light in the quest for authentic leadership, for example, enabling managers to draw on codes of conduct when faced with moral dilemmas and struggling to make the right decision (Lemoine et al., 2019). We therefore propose that principled ethical organizational climates are a contextual resource that supports managers who strive to achieve authentic leadership.

*Hypothesis 3b.* A principled ethical organizational climate relates positively to authentic leadership.

Figure 1 summarizes the conceptual model of the present research.

#### 4. Study 1

The first study tested managers' positive psychological capacities (Hypothesis 1) and perceptions of benevolent and principled ethical organizational climates (Hypotheses 3a & 3b) in relation to their day-to-day authentic leadership.



**Figure 1.** Conceptual Model of Present Research.

*Note.* In Study 1, the role of positive psychological capacities as antecedent of authentic leadership was measured on the day level (within-person design). In Study 2, the role of positive psychological capacities as antecedent of authentic leadership was measured on the general level (between-person design).

#### 4.1 Method

##### 4.1.1 Sample and Procedure

We recruited 134 German-speaking managers in collaboration with Bilendi, a professional research panel. Bilendi assists in the collection of data in line with quality norms for online research by multiple European research associations (e.g., German Society of Online Research). The managers first completed a general survey that assessed their general levels of authentic leadership, positive psychological capacities, positive affect, and perceptions of their organizations' benevolent

and principled ethical organizational climates as well as demographic information. On the following Monday, managers were invited to respond to two daily surveys on 10 consecutive workdays. The morning survey was sent at 6 am to be filled in before work. It assessed day-level positive psychological capacities and positive affect. The afternoon survey was sent at 4 pm to be filled in after work. It assessed day-level authentic leadership. Participation was incentivized (5.60 € for the general survey and 1.17 € per daily survey).

To assess data quality, we used a self-report item that indicated participants' levels of attentiveness when responding to the surveys. Single surveys were excluded when participants reported 'very low' or 'low' levels of attentiveness (i.e., ratings of 1 or 2 on a 5-point scale; DeSimone, Harms, & DeSimone, 2015). Forty-five managers were excluded from subsequent analyses because of providing less than three pairs of morning and afternoon surveys. Of the remaining 89 managers, 65.17% were male with a mean age of 42.08 years ( $SD = 9.64$ ). They comprised team managers (34.83%), department managers (32.58%), divisional managers (25.84%), or senior executives (6.74%). Their average management experience was 10.15 years ( $SD = 8.08$ ). The number of direct reports ranged from 2 to 72 ( $M = 18.82$ ,  $SD = 17.33$ ). They worked for organizations in different sectors, with manufacturing (23.60%), finance (19.10%), communications (12.40%), and health services (11.20%) being most strongly represented.

Managers in the final sample completed 552 paired morning and afternoon surveys on the same day, and 63% of the managers provided at least six pairs of valid data (i.e., completed morning and afternoon surveys at least six out of ten days). In addition, managers completed 155 morning and 102 afternoon surveys (i.e., one but not the other). The average response time was 1.5 minutes for the morning survey and 2 minutes for the afternoon survey. The average time between the completion of the morning and afternoon surveys was 10 hours and 20 minutes.

#### 4.2.2 Measures

**Positive psychological capacities.** We assessed positive psychological capacities with six items from Xanthopoulou and colleagues (2009) in the general survey ( $\alpha = .82$ ) and the ten morning surveys (average  $\alpha = .89$ ). Ratings covered the positive psychological capacities *self-efficacy* (e.g., “When I think about work today, I feel I could deal efficiently with unexpected events”), *self-esteem* (e.g., “When I think about work today, I feel valuable”), and *optimism* (e.g., “When I think about work today, I feel very optimistic about my future”) with two items each. Participants responded on a 5-point scale from 1 = *does not apply at all* to 5 = *fully applies*.

**Benevolent ethical organizational climate.** We assessed benevolent ethical organizational climate with four items ( $\alpha = .85$ ) from Victor and Cullen (1988). An example item is: “The most important concern is the good of all people in the company.” Participants responded on a 5-point scale from 1 = *does not apply at all* to 5 = *fully applies*.

**Principled ethical organizational climate.** We assessed principled ethical organizational climate with four items ( $\alpha = .66$ ) from Victor and Cullen (1988). An example item is: “In this company, people are expected to strictly follow legal or professional standards.” Participants responded on a 5-point scale from 1 = *does not apply at all* to 5 = *fully applies*.

**Authentic leadership.** In the general survey, we assessed managers’ authentic leadership with 14 items ( $\alpha = .85$ ) from the Authentic Leadership Inventory (ALI; Neider & Schriesheim, 2011; German translation by Hörner, Weisweiler, & Braun, 2015). Participants responded on a 5-point scale from 1 = *does not apply at all* to 5 = *fully applies*. In the afternoon surveys, we used eight items (average  $\alpha = .86$ ) that had been adapted for daily measurement. We selected items with the highest factor loadings and contents appropriate for day-level measurement (cf. Bolger, Davis, & Rafaeli, 2003; Gabriel et al., 2018). An example item from the afternoon survey is: “Today, I encouraged a work group member to voice an opposing point of view (*balanced processing*).” Participants responded on a 6-point frequency scale from 1 = *never* to 6 = *five or more times*.

**Control variables.** The day of study was recorded to control for time-based effects (Ohly et al., 2010). In addition, previous research has shown that individuals feel more authentic when they are in a positive mood (Lenton, Slabu, Sedikides, & Power, 2013). We therefore assessed positive affect with five items from the Positive and Negative Affect Schedule (PANAS) short form (Mackinnon et al., 1999; German translation by Krohne, Egloff, & Kohlmann, 1996) in the general survey ( $\alpha = .86$ ) and in each of the ten morning surveys (average  $\alpha = .88$ ). Neither general positive affect nor daily positive affect were significantly related to day-level authentic leadership. Therefore, we did not include positive affect as statistical control in the subsequent analyses (Becker, 2005).

#### 4.2.3 Analytical Strategy

Missing data is a common phenomenon in experience sampling studies (Ohly et al., 2010). While the data of the general survey was complete, the ten daily surveys showed missing values for 20.6% of day-level positive psychological capacities (i.e., 183 of 890 data points) and 26.3% of day-level authentic leadership (i.e., 236 of 890 data points). Recent insights into multiple imputation in multilevel research demonstrated that multiple imputation is preferable over listwise deletion (Grund, Lüdtke, & Robitzsch, 2016, 2018). We applied a reversed multiple imputation procedure for missing day-level data with the *mice* package (van Buuren & Groothuis-Oudshoorn, 2011) taking into account the multilevel structure (Grund et al., 2018). Following the recommendations by Graham, Olchowski, and Gilreath (2007), 20 datasets were imputed. Results were pooled with the *mitml* package (Grund, Robitzsch, & Lüdtke, 2015).

Before testing our hypotheses, we examined the factor structure of all items with multilevel confirmatory factor analysis (Muthén & Muthén, 2017; cf. Zacher & Wilden, 2014). A model with two factors on the day level (i.e., authentic leadership and positive psychological resources) and two factors on the person level (i.e., benevolent and principled ethical organizational climates) demonstrated a good fit:  $\chi^2(89) = 252.67, p < .001$ ; CFI = .948; TLI = .931; RMSEA = .045; SRMR<sub>within</sub> = .057; SRMR<sub>between</sub> = .098. In contrast, a one-factor model did not fit the data well:

$\chi^2(97) = 2355.22, p < .001$ ; CFI = .283; TLI = .121; RMSEA = .162; SRMR<sub>within</sub> = .190; SRMR<sub>between</sub> = .131. We therefore deemed the theoretically assumed measurement model appropriate for hypothesis testing.

We used hierarchical linear modeling to test the research model and hypotheses as daily observations (Level-1) were nested within persons (Level-2). We centered the Level-1 predictor variable—positive psychological capacities—at the person’s mean across days to control between-person confounds (group-mean centering). Level-2 variables—benevolent and principled ethical organizational climates—were standardized and grand-mean centered for interpretation (i.e., relative to the sample average; Nezlek, 2012; Ohly et al., 2010). We ran the analysis in the *lme4* package (Bates, Mächler, Bolker, & Walker, 2015) in R (R Core Team, 2017).

## 4.2 Results

### 4.2.1 Within-Person Variance of Day-Level Variables

We first determined the proportion of variance that was explained in the day-level variables by calculating the intra-class correlations from an intercept-only model. The proportion of within-person variation was 38% for positive psychological capacities and 37% for day-level authentic leadership. This finding provides strong evidence for day-to-day fluctuations of both authentic leadership and positive psychological capacities. It empirically supports our approach to differentiate between effects at the person level (Level-2) and the day level (Level-1) through hierarchical linear modeling.

### 4.2.2 Descriptive Statistics and Correlations

Table 1 displays means, standard deviations, and zero-order correlations of the study variables at the person level (above the diagonal) and the day level (below the diagonal).

### 4.2.3 Hypotheses Testing

Table 2 summarizes the hierarchical linear modeling results in relation to our hypotheses. Day-level positive psychological capacities related positively and significantly to day-level authentic

leadership,  $\gamma_{10} = .11$ ,  $t = 1.70$ ,  $p = .046$ . The result indicated that managers reported more authentic leadership on days with higher levels of positive psychological capacities. Thus, the data supported Hypothesis 1.

The expected relationship between managers' perceptions of benevolent ethical organizational climates and authentic leadership was not significant,  $\gamma_{01} = .04$ ,  $t = 0.36$ ,  $p = .322$ . Hypotheses 3a was not supported. However, managers' perceptions of principled ethical organizational climates displayed a significant positive relationship with authentic leadership,  $\gamma_{02} = .19$ ,  $t = 1.98$ ,  $p = .024$ . This result indicated that managers were more likely to report authentic leadership in organizations where ethical climates were guided by clear rules and standards. Thus, the data supported Hypothesis 3b.<sup>1</sup>

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<sup>1</sup> We tested a moderation model for exploratory purposes. Benevolent and principled ethical organizational climates did not interact with positive psychological capacities to predict authentic leadership.

**Table 1.** Study 1: Within and Between Person Descriptive Statistics and Correlations

| Variable                                      | <i>M</i> | <i>SD</i> | 1      | 2      | 3     | 4      | 5      | 6      | 7      | 8      |
|---|----------|-----------|--------|--------|-------|--------|--------|--------|--------|--------|
| 1 Day-level positive psychological capacities | 3.66     | .75       | -      | .62*** | .35** | .61*** | .38*** | .44*** | .36*** | .39*** |
| 2 Day-level positive affect                   | 3.09     | .81       | .59*** | -      | .33** | .38*** | .38*** | .37*** | .24*   | .06    |
| 3 Day-level authentic leadership              | 3.45     | 1.04      | .05    | .06    | -     | .20    | .13    | .33**  | .09    | .22*   |
| 4 General positive psychological capacities   | 3.98     | .54       | .61*** | .38*** | .20   | -      | .57*** | .49*** | .34**  | .32**  |
| 5 General positive affect                     | 3.76     | .67       | .38*** | .38*** | .13   | .57*** | -      | .43*** | .29**  | .16    |
| 6 General authentic leadership                | 4.03     | .43       | .44*** | .37*** | .33** | .49*** | .43*** | -      | .31**  | .36*** |
| 7 Benevolent ethical organizational climate   | 3.28     | .82       | .36*** | .24*   | .09   | .34*   | .29**  | .31**  | -      | .34**  |
| 8 Principled ethical organizational climate   | 4.06     | .56       | .39*** | .06    | .22*  | .32*   | .16    | .36**  | .34**  | -      |
| 9 Study day                                   | 5.50     | .00       | -.03   | .01    | .06   | -      | -      | -      | -      | -      |

*Note.* Variables 1 to 3 and 10 are day level variables (Level 1) and variables 4 to 8 are person level variables (Level 2). Study day is a monotonic variable representing the day of the study (ranging from 1 to 10). Day-level positive psychological capacities and day-level positive affect were assessed in the morning. Day-level authentic leadership was assessed in the afternoon. Within-person correlations are shown below the diagonal and are based on within-person scores ( $n = 552$  days); between-person correlations are shown above the diagonal and are based on between person scores ( $N = 89$  persons). Correlations for between-person variables are based on between-person scores. All means ( $M$ ) and standard deviations ( $SD$ ) are based on between-person scores. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



**Table 2.** Study 1: Results for Research Model Predicting Day-Level Authentic Leadership

| Variable  | Estimates | SE  | <i>t</i> | <i>p</i> |
|---|-----------|-----|----------|----------|
| Intercept ( $\gamma_{00}$ )                                   | 3.42      | .09 | 37.57    | <.001    |
| <i>Level 1 Predictor</i>                                      |           |     |          |          |
| Day-level positive psychological capacities ( $\gamma_{10}$ ) | 0.11      | .07 | 1.70     | .046     |
| <i>Level 2 Predictors</i>                                     |           |     |          |          |
| Benevolent ethical organizational climate ( $\gamma_{01}$ )   | 0.04      | .10 | 0.36     | .322     |
| Principled ethical organizational climate ( $\gamma_{02}$ )   | 0.19      | .10 | 1.98     | .024     |
| $\sigma^2$ (Level 1 Variance)                                 | .39       |     |          |          |
| $\tau^2$ (Level 2 Variance)                                   | .68       |     |          |          |

*Note.* Pooled estimates of 20 imputed datasets. Sample size after imputation: Level 1  $n = 890$  days; Level 2

$N = 89$  persons. Level 1 predictor is group-mean centered. Level 2 variables are standardized and grand-mean centered.

### 4.3 Discussion

Theory suggests that authentic leadership is dynamic (Luthans & Avolio, 2003) as it depends on how managers behave “every day, in each and every interaction” (May et al., 2003, p. 248). In this first study, the variation in managers’ authentic leadership found over ten days was substantive. This new empirical insight has implications for the development of models of authentic leadership (e.g., to include day-level outcomes for managers and employees) and its measurement (e.g., day-level self-report and other-ratings) in future research. We saw that when managers experienced high levels of positive psychological capacities in the morning, they reported a higher frequency of authentic leadership displayed during the day. This finding aligns with the resource investment principle of COR theory which proposes that individuals with more resources are better positioned for resource gains (Halbesleben et al., 2014); in our case managers were able to invest their positive psychological capacities towards achieving authentic leadership (George, 2007; Ibarra, 2015). These results speak to the need for time related theorizing and measurement in management research (Fischer et al., 2017; McClean et al., 2019; Shamir, 2011).

Furthermore, we positioned benevolent and principled ethical organizational climates as contextual resources that feed into managers’ authentic leadership. This expands upon previous research, which either conceptualized ethical organizational contexts as part of authentic leadership (Jensen & Luthans, 2006) or did not find the predicted relationships above and beyond managers’ positive psychological capacities (Petersen & Youssef-Morgan, 2018). However, in this first study, only principled but not benevolent ethical organizational climates predicted authentic leadership positively. When managers indicated that their work environments provided them with clear ethical guidelines, they were more likely to engage in authentic leadership (May et al., 2003). We suspect that stable structures (e.g., codes of conduct) facilitate managers’ sense of organizational support for moral behavior (e.g., van Prooijen & Ellemers, 2015), whereas caring norms may partly conflict with

aspects of authentic leadership such as transparency and seeking out critical feedback (e.g., Hewlin, Dumas, & Burnett, 2017).

## 5. Study 2

Study 2 tested the role of managers' promotion focus as an underlying mechanism linking managers' positive psychological capacities to authentic leadership (Hypotheses 1 & 2). It also served as a constructive replication of the previous findings on benevolent and principled ethical organizational climates (Hypotheses 3a & 3b).

### 5.1 Method

#### 5.1.1 Sample and Procedure

We surveyed 230 German-speaking managers recruited via the ISO-certified panel provider respondi at two points in time with a time lag of 10 days to reduce method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). The first questionnaire ( $t_1$ ) assessed managers' positive psychological capacities, positive affect, perceptions of benevolent and principled ethical organizational climates, and demographic information. The second questionnaire ( $t_2$ ) assessed their promotion focus and authentic leadership.

One hundred forty-eight (64.35%) managers responded to the survey at both time points. We excluded the 18 managers who reported low levels of attentiveness (i.e., ratings of 1 or 2 on a 5-point scale; (DeSimone et al., 2015). All subsequent analyses were based on the responses collected from 130 managers. 56.92% of participants were male and their average age was 43.75 years ( $SD = 10.48$ ). Participants worked as team managers (31.54%), department managers (36.15%), divisional managers (18.46%) or senior executives (13.85%). They had an average management experience of 11.58 years ( $SD = 8.70$ ). The number of direct reports ranged from 1 to 97 ( $M = 15.77$ ,  $SD = 15.99$ ). They worked in different sectors, with manufacturing (19.23%), finance (16.92%), public administration (10.77%), communications (10.00%), and health services (7.69%) being most strongly represented.

### 5.1.2 Measures

We used the same scales as in the general survey of Study 1 to measure *positive psychological capacities* ( $\alpha = .88$ ; Xanthopoulou et al., 2009), *benevolent ethical organizational climate* ( $\alpha = .85$ ) and *principled ethical organizational climate* ( $\alpha = .82$ ; Victor & Cullen, 1988), *authentic leadership* ( $\alpha = .92$ ; Neider & Schriesheim, 2011; German translation by Hörner et al., 2015), and *positive affect* ( $\alpha = .90$ ; Mackinnon et al., 1999; German translation by Krohne et al., 1996). We added a nine-item measure of *promotion focus* (Neubert et al., 2008), translated into German following a standard procedure (Brislin, 1980). An example item is: “At work, I am motivated by my hopes and aspirations”. Participants responded on a 5-point scale from 1 = *does not apply at all* to 5 = *fully applies*. Internal consistency was high ( $\alpha = .91$ ). The measure of positive affect was used to control for inter-individual differences that may contribute to promotion focus (Neubert et al., 2008) and authentic leadership (Lenton, Slabu et al., 2013).

## 5.2 Results

### 5.2.1 Descriptive Statistics, Correlations and Analytical Strategy

Table 3 displays descriptive statistics of the study variables.

Our analytical strategy was threefold: First, we tested the higher-order factor structure of the ALI based on recommendations by Credé and Harms (2015), which pointed to the appropriateness of conceptualizing authentic leadership as a higher-order factor with four first-order factors (cf. Neider & Schriesheim, 2011; Steffens, Mols, Haslam, & Okimoto, 2016). Detailed results are available in the appendix.

Second, we used confirmatory factor analysis implemented in the *lavaan* package (Rosseel, 2012) in R (R Core Team, 2017). The hypothesized model with six factors (i.e., positive psychological capacities, positive affect, promotion focus, benevolent and principled ethical organizational climate as well as authentic leadership) had a good fit:  $\chi^2(794) = 1189.10$ ,  $p < .001$ ; CFI = .886; TLI = .876; RMSEA = .062 [90% CI: .054, .069]; SRMR = .068. In contrast, a one-

factor model did not fit the data well:  $\chi^2(819) = 2380.16, p < .001$ ; CFI = .548; TLI = .525; RMSEA = .121 [90% CI: .115, .127]; SRMR = .109.

Third, for hypotheses testing, we applied latent structural equation modeling (Kline, 2015) using the *lavaan* package (Rosseel, 2012) with bootstrapping to determine 95%-confidence intervals for each parameter (Kline, 2015). When the confidence interval did not include zero, we interpreted the parameter as statistically significant at the .05 level.

### 5.2.2 Hypotheses Testing

Table 4 provides the effect estimates of the hypothesized structural model. In line with our first hypothesis, positive psychological capacities were positively related to authentic leadership ( $\beta = .378, SE = .168, p = .008$ ). Hypothesis 2 proposed an indirect effect of managers' positive psychological capacities on authentic leadership through managers' promotion focus. Positive psychological capacities were positively related to promotion focus ( $\beta = .666, SE = .167, p < .001$ ), which in turn related positively to authentic leadership ( $\beta = .280, SE = .108, p = .010$ ). The indirect effect was significant ( $\beta = .186, SE = .087, p = .011$ ). Thus, the data supported Hypothesis 2.

Again, only principled ethical organizational climate displayed a significant positive relationship with authentic leadership ( $\beta = .235, SE = .072, p = .008$ ). For benevolent ethical organizational climate, the relationship was not significant ( $\beta = .007, SE = .095, p = .950$ ). Thus, parallel to Study 1, the data supported Hypothesis 3b, but not Hypothesis 3a.

**Table 3.** Study 2: Descriptive Statistics and Correlations

|   | Variable   | <i>M</i> | <i>SD</i> | 1      | 2      | 3      | 4      | 5      | 6     |
|---|--|----------|-----------|--------|--------|--------|--------|--------|-------|
| 1 | Positive psychological capacities <sub>1</sub>         | 4.12     | .61       | (.88)  |        |        |        |        |       |
| 2 | Benevolent ethical organizational climate <sub>1</sub> | 3.36     | .82       | .46*** | (.85)  |        |        |        |       |
| 3 | Principled ethical organizational climate <sub>1</sub> | 3.99     | .74       | .35*** | .46*** | (.82)  |        |        |       |
| 4 | Positive affect <sub>1</sub>                           | 3.82     | .72       | .57*** | .60*** | .42*** | (.90)  |        |       |
| 5 | Promotion focus <sub>2</sub>                           | 3.48     | .77       | .48**  | .41*** | .08    | .48*** | (.91)  |       |
| 6 | Authentic leadership <sub>2</sub>                      | 3.98     | .53       | .64**  | .50*** | .43*** | .60*** | .51*** | (.92) |

*Note.*  $N = 130$ . Subscripts indicate point of measurement. Internal consistency (Cronbach's alpha) in parentheses on the diagonal. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 4.** Study 2: Effect Estimates of Structural Model

| Structural Paths  | <i>B</i> [95% <i>CI</i> ] | $\beta$ | <i>SE</i> | <i>CR</i> | <i>p</i> |
|---|---------------------------|---------|-----------|-----------|----------|
| Positive psychological capacities <sub>1</sub> → Promotion focus <sub>2</sub>                                     | 0.792 [0.465, 1.118]      | .666    | .167      | 4.75      | <.001    |
| Positive psychological capacities <sub>1</sub> → Authentic leadership <sub>2</sub>                                | 0.447 [0.118, 0.776]      | .378    | .168      | 2.66      | .008     |
| Benevolent ethical organizational climate <sub>1</sub> → Authentic leadership <sub>2</sub>                        | 0.006 [-0.181, 0.193]     | .007    | .095      | 0.062     | .950     |
| Principled ethical organizational climate <sub>1</sub> → Authentic leadership <sub>2</sub>                        | 0.192 [0.050, 0.334]      | .235    | .072      | 2.654     | .008     |
| Positive affect <sub>1</sub> → Authentic leadership <sub>2</sub>  | 0.093 [-0.090, 0.276]     | .118    | .094      | 0.995     | .320     |
| Promotion focus <sub>2</sub> → Authentic leadership <sub>2</sub>  | 0.278 [0.066, 0.491]      | .280    | .108      | 2.568     | .010     |
| Positive psychological capacities <sub>1</sub> → Promotion Focus <sub>2</sub> → Authentic leadership <sub>2</sub> | 0.220 [0.050, 0.390]      | .186    | .087      | 2.539     | .011     |

*Note.* Subscripts indicate point of measurement. *B* = Unstandardized coefficients. 95% *CI* = 95% confidence intervals.  $\beta$  = Standardized coefficients.

*SE* = Standard error. *CR* = Critical ratio. Global fit indices:  $\chi^2(797) = 1205.22, p < .001$ , *CFI* = .882, *TLI* = .872, *RMSEA* = .063 [90% *CI* = 0.055, 0.070], *SRMR* = .073

### 5.3 Discussion

Study 2 supported and extended our previous findings. Pointing to homologous effects on within- and between-person levels (Chen, Bliese, & Mathieu, 2005; McCormick et al., 2018), managers with higher levels of positive psychological capacities reported more authentic leadership. One underlying mechanism of this relationship was managers' promotion focus (Brockner & Higgins, 2001; Halbesleben et al., 2014). Above and beyond existing research, our results help to better understand the importance of personal resources for managers' authentic leadership. In line with COR theory, positive psychological capacities are resources which managers can invest in self-regulation processes towards growth, aspirations, and ideals to then acquire the resource of authentic leadership (Halbesleben et al., 2014; Hobfoll et al., 2018; Kark & van Dijk, 2007).

Results also replicated findings from Study 1 confirming that principled (but not benevolent) ethical organizational climates related positively to managers' authentic leadership. This enhances our confidence in the initial findings. Managers seemed to draw from ethical guidelines and codes of conduct (Lemoine et al., 2019; May et al., 2003), while norms of care and consideration appeared to be less relevant for authentic leadership according to these results.

## 6. General Discussion

This research contributes three key insights to the management literature, which advance the current theorizing of authentic leadership in light of COR theory. First, we demonstrated that managers' authentic leadership fluctuated significantly from day-to-day and depended on the availability of managers' positive psychological capacities on the given day (Study 1). On days when managers were able to tap into their personal resources, they were also more likely to express their authentic selves to others and build positive relationships. In contrast, when managers suffered from resources depletion, they appeared to conserve their remaining resources at the expense of authentic leadership. This is a genuinely new insight, supporting that incorporating time-based theorizing and



within-person variation in measurement approaches makes meaningful contributions to management research (McClellan et al., 2019; McCormick et al., 2018).

Moreover, our research advanced the understanding of underlying mechanisms by incorporating self-regulatory theory, which is a crucial albeit largely untested element of authentic leadership theory (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Luthans & Avolio, 2003; Sparrowe, 2005). Managers' promotion focus linked their positive psychological capacities to authentic leadership (Study 2). This finding suggests that managers can achieve authentic leadership when they use their positive psychological capacities and invest them to self-regulate behavior towards their ideal selves. By focusing on their personal hopes and aspirations, managers accumulate further resources (Halbesleben et al., 2014). Our findings support that personal resources lead to further gains, in this case to engage in authentic leadership (i.e., a gain spiral; Hobfoll, 2001, 2011).

Our findings also speak to the importance of virtue ethics for authentic leadership (Lemoine et al., 2019). Results across both studies indicated that only specific aspects of ethical climates in organizations served as additional contextual resources for managers to draw on, above and beyond their personal resources. While morality and ethics generally play a vital role for organizational functioning (Barraquier, 2011; van Prooijen & Ellemers, 2015), they are essential for authentic leadership (Eagly, 2005; May et al., 2003). Our data were supportive of the role of principled ethical organizational climates, which incorporate moral reference points to establish ethical guidelines and standards in organizations (Victor & Cullen, 1988). However, running counter to our hypotheses, managers' perceptions a benevolent ethical organizational climate were not significantly related to their authentic leadership. Benevolent ethical organizational climates attune organizational members to the good of individuals within the organization and the collective as the basis for ethical judgements (Kish-Gephart et al., 2010; Martin & Cullen, 2006). We suspect that focusing on what is 'good for us' as opposed to what is 'right' creates moral tensions for managers. In benevolent climates, managers may find themselves caught between doing the best for others (e.g., colleagues,

direct reports, superiors) and acting in line with their moral values (Hewlin et al., 2017; Koerner, 2014). In this regard, authentic leadership sets itself apart from other positive leadership styles by “a markedly distinct theoretical approach to normative morality” (Lemoine et al., 2019, p. 159).

Compared to being a servant leader, for example, authentic leadership may be less about caring and focusing on others, and more about acting on the basis of one’s personal values (Lemoine et al., 2019).

## 6.1 Limitations and Directions for Future Research

The research presented here has limitations, which need to be considered when interpreting its findings. To measure authentic leadership as a day-level construct, we adapted an eight-item version of the ALI (Neider & Schriesheim, 2011). We found a positive relationship between the ALI (i.e., measuring authentic leadership as a relatively stable inter-individual difference factor) and the day-level measure ( $r = .33, p < .01$ ), the latter of which also captured significant variations across days (37% within-person variance). The results speak to the validity of the day-level measure (Gabriel et al., 2018; Ohly et al., 2010). However, McCormick et al. (2018) found that scale length related significantly to within-person variability (with four or fewer items yielding less variability than five to nine item scales). We readily acknowledge that future research should validate the day-level measurement of authentic leadership further and possibly compare measures of different length.

Both studies reported here comprised self-report measures. It is important to note that self-reports were an appropriate data source for the core constructs of our study, personal resources and authentic leadership (Hewlin et al., 2017; Weiss, Razinskas, Backmann, & Hoegl, 2018). We also took measures to control potential method biases (Podsakoff et al., 2012). In Study 1, we assessed the predictor and criterion variables across 10 days and person-mean centered Level-1 variables (Gabriel et al., 2018). In Study 2, we separated the assessment of predictor and criterion variables with two points of measurement. In both studies, we followed recommendations for data screening to enhance quality (DeSimone et al., 2015). Nevertheless, further longitudinal investigation of the

fluctuations of authentic leadership and the interplay with resources will be an important endeavor. Future research should also include follower outcomes of day-level authentic leadership (Gill & Caza, 2018).

The use of online panels to recruit research participants is common in organizational research (Buhrmester, Kwang, & Gosling, 2011; Peer, Brandimarte, Samat, & Acquisti, 2017). Enhancing the confidence in the present findings, we recruited two comparable yet diverse samples of managers from two different, certified online panels. However, non-naivety among frequent participants and self-selection into study panels may pose threats to the generalizability of results (Chandler, Mueller, & Paolacci, 2014). While this concern applies to many forms of sampling (e.g., snowball or network samples), we readily acknowledge the limitations of our sampling approach.

The present research examines a limited number of variables in relation to managers' authentic leadership, which we selected carefully based on COR theory. For future work it will be valuable to extend the suite of antecedents of authentic leadership providing a more comprehensive picture. Other personal resources may be of importance for authentic leadership as well. For example, courage as a personal resource could help managers resist external influences and successfully handle moral issues (May et al., 2003).

## 6.2 Practical Implications

The findings presented here have important implications for management practice. Managers' positive psychological capacities matter for authentic leadership, not only generally, but also on a day-to-day basis. Hence, employers are called upon to foster managers' personal resources consistently. We strongly recommend that businesses introduce micro-interventions to strengthen managers' positive psychological capacities throughout the working week (cf. Luthans, Avey, Avolio, Norman, & Combs, 2006). In addition, managerial training should include exercises to reflect on one's life experiences and how they feed into personal values as well as the resources to draw from in difficult situations (e.g., decisions that threaten personal values; George, 2007).

The finding that promotion focus links positive psychological capacities to authentic leadership suggests that interventions targeting self-regulation toward ideal selves will benefit the process. Promotion focus can be fostered through priming of gains (e.g., how striving for personal growth and development at work enhances a sense of self-fulfillment) and positive behavioral role modeling (Kark & van Dijk, 2007). Managers who act morally are also role models for employees to speak up when they witness unethical behavior (Monzani, Braun, & van Dick, 2016).

This research also positioned principled ethical organizational climates as facilitators of managers' authentic leadership. This finding aligns with previous insights into effective ethics and compliance management (Treviño, Weaver, Gibson, & Toffler, 1999). We recommend that businesses reinforce ethical guidelines and standards for behavior (e.g., codes of conduct) through a consistent moral framework for all internal stakeholders (Kish-Gephart et al., 2010).

### 6.3 Conclusion

Authentic leadership is a valued resource in today's business world. However, in the spirit of the passage from Bill George's book *True North* quoted at the outset of this paper, we need to acknowledge that managers often struggle to act in line with their authentic selves and personal values at work. According to our research, two sets of resources—positive psychological capacities and principled ethical organizational climates—will guide managers on their path to achieving authentic leadership.

## 7. References

- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16, 315–338.  
doi:10.1016/j.leaqua.2005.03.001
- Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly*, 15, 801–823. doi:10.1016/j.leaqua.2004.09.003
- Bandura, A., Caprara, G. V., Barbaranelli, C., Gerbino, M., & Pastorelli, C. (2003). Role of affective self-regulatory efficacy in diverse spheres of psychosocial functioning. *Child Development*, 74, 769–782. doi:10.1111/1467-8624.00567
- Barnett, T., & Vaicys, C. (2000). The moderating effect of individuals' perceptions of ethical work climate on ethical judgments and behavioral intentions. *Journal of Business Ethics*, 27, 351–362. doi:10.1023/A:1006382407821
- Barraquier, A. (2011). Ethical behaviour in practice: Decision outcomes and strategic implications. *British Journal of Management*, 22, S28-S46. doi:10.1111/j.1467-8551.2010.00726.x
- Bass, B. M., & Avolio, B. J. (1993). *Manual: The Multifactor Leadership Questionnaire*. Palo Alto: Consulting Psychologist Press.
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67, 1–48. doi:10.18637/jss.v067.i01
- Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8, 274–289. doi:10.1177/1094428105278021
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, 54, 579–616. doi:10.1146/annurev.psych.54.101601.145030
- Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014). Daily transactional and transformational leadership and daily employee engagement. *Journal of Occupational and Organizational Psychology*, 87, 138–157. doi:10.1111/joop.12041
- Brislin, R. W. (1980). Translation and content analysis of oral and written material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of Cross-Cultural Psychology* (Vol. 1, pp. 389–444). Boston: Allyn and Bacon.

- Brockner, J., & Higgins, E.T. (2001). Regulatory focus theory: Implications for the study of emotions at work. *Organizational Behavior and Human Decision Processes*, 86, 35–66. doi:10.1006/obhd.2001.2972
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6, 3–5. doi:10.1177/1745691610393980
- Byrne, A., Dionisi, A. M., Barling, J., Akers, A., Robertson, J., Lys, R., . . . Dupré, K. (2014). The depleted leader: The influence of leaders' diminished psychological resources on leadership behaviors. *The Leadership Quarterly*, 25, 344–357. doi:10.1016/j.leaqua.2013.09.003
- Chandler, J., Mueller, P., & Paolacci, G. (2014). Nonnaïveté among Amazon Mechanical Turk workers: Consequences and solutions for behavioral researchers. *Behavior Research Methods*, 46, 112–130. doi:10.3758/s13428-013-0365-7
- Chen, G., Bliese, P. D., & Mathieu, J. E. (2005). Conceptual framework and statistical procedures for delineating and testing multilevel theories of homology. *Organizational Research Methods*, 8, 375–409. doi:10.1177/1094428105280056
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64, 89–136. doi:10.1111/j.1744-6570.2010.01203.x
- Cooper, C. D., Scandura, T. A., & Schriesheim, C. A. (2005). Looking forward but learning from our past: Potential challenges to developing authentic leadership theory and authentic leaders. *The Leadership Quarterly*, 16, 475–493. doi:10.1016/j.leaqua.2005.03.008
- Credé, M., & Harms, P. D. (2015). 25 years of higher-order confirmatory factor analysis in the organizational sciences: A critical review and development of reporting recommendations. *Journal of Organizational Behavior*, 36, 845–872. doi:10.1002/job.2008
- DeSimone, J. A., Harms, P. D., & DeSimone, A. J. (2015). Best practice recommendations for data screening. *Journal of Organizational Behavior*, 36, 171–181. doi:10.1002/job.1962
- Eagly, A. H. (2005). Achieving relational authenticity in leadership: Does gender matter? *The Leadership Quarterly*, 16, 459–474. doi:10.1016/j.leaqua.2005.03.007
- Fischer, T., Dietz, J., & Antonakis, J. (2017). Leadership process models: A review and synthesis. *Journal of Management*, 43, 1726–1753. doi:10.1177/0149206316682830
- Gabriel, A. S., Podsakoff, N. P., Beal, D. J., Scott, B. A., Sonnentag, S., Trougakos, J. P., & Butts, M. M. (2018). Experience Sampling Methods: A discussion of critical trends and considerations

- for scholarly advancement. *Organizational Research Methods*. Advance online publication. doi:10.1177/1094428118802626
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. O. (2005). "Can you see the real me?": A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16, 343–372. doi:10.1016/j.leaqua.2005.03.003
- Gardner, W. L., Coglisier, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly*, 22, 1120–1145. doi:10.1016/j.leaqua.2011.09.007
- George, B. (2007). *True North: Discover Your Authentic Leadership*. San Francisco: Jossey-Bass.
- Gill, C., & Caza, A. (2018). An investigation of authentic leadership's individual and group influences on follower responses. *Journal of Management*, 44, 530–554. doi:10.1177/0149206314566461
- Gorman, C. A., Meriac, J. P., Overstreet, B. L., Apodaca, S., McIntyre, A. L., Park, P., & Godbey, J. N. (2012). A meta-analysis of the regulatory focus nomological network: Work-related antecedents and consequences. *Journal of Vocational Behavior*, 80, 160–172. doi:10.1016/j.jvb.2011.07.005
- Graham, J. W., Olchowski, A. E., & Gilreath, T. D. (2007). How many imputations are really needed? Some practical clarifications of multiple imputation theory. *Prevention Science*, 8, 206–213. doi:10.1007/s11121-007-0070-9
- Grund, S., Lüdtke, O., & Robitzsch, A. (2016). Multiple imputation of missing covariate values in multilevel models with random slopes: A cautionary note. *Behavior Research Methods*, 48, 640–649. doi:10.3758/s13428-015-0590-3
- Grund, S., Lüdtke, O., & Robitzsch, A. (2018). Multiple imputation of missing data for multilevel models. *Organizational Research Methods*, 21, 111–149. doi:10.1177/1094428117703686
- Grund, S., Robitzsch, A., & Lüdtke, O. (2015). mitml: Tools for multiple imputation in multilevel modeling. Retrieved from <https://cran.r-project.org/web/packages/mitml/mitml.pdf>
- Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR": Understanding the role of resources in conservation of resources theory. *Journal of Management*, 40, 1334–1364. doi:10.1177/0149206314527130
- Halbesleben, J. R. B., & Wheeler, A. R. (2015). To Invest or not?: The role of coworker support and trust in daily reciprocal gain spirals of helping behavior. *Journal of Management*, 41, 1628–1650. doi:10.1177/0149206312455246

- Heimpel, S. A., Elliot, A. J., & Wood, J. V. (2006). Basic personality dispositions, self-esteem, and personal goals: An approach-avoidance analysis. *Journal of Personality*, 74, 1293–1320. doi:10.1111/j.1467-6494.2006.00410.x
- Hewlin, P. F., Dumas, T. L., & Burnett, M. F. (2017). To thine own self be true?: Facades of conformity, values incongruence, and the moderating impact of leader integrity. *Academy of Management Journal*, 60, 178–199. doi:10.5465/amj.2013.0404
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300. doi:10.1037//0003-066X.52.12.1280
- Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55, 1217–1230. doi:10.1037/0003-066X.55.11.1217
- Hobfoll, S. E., Freedy, J., Lane, C., & Geller, P. (1990). Conservation of social resources: Social support resource theory. *Journal of Social and Personal Relationships*, 7, 465–478. doi:10.1177/0265407590074004
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524. doi:10.1037/0003-066X.44.3.513
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*, 50, 337–421. doi:10.1111/1464-0597.00062
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307–324. doi:10.1037/1089-2680.6.4.307
- Hobfoll, S. E. (2011). Conservation of resource caravans and engaged settings. *Journal of Occupational and Organizational Psychology*, 84, 116–122. doi:10.1111/j.2044-8325.2010.02016.x
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 103–128. doi:10.1146/annurev-orgpsych-032117-104640
- Hörner, K. N., Weisweiler, S., & Braun, S. (2015). Authentic leadership and follower stress perception: Model testing and validation of the Authentic Leadership Inventory. *Academy of Management Proceedings*, 10922. doi:10.5465/ambpp.2015.10922abstract
- Ibarra, H. (2015). The authenticity paradox: Why feeling like a fake can be a sign of growth. Retrieved from <https://hbr.org/2015/01/the-authenticity-paradox>



- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes. *The Leadership Quarterly*, 16, 373–394. doi:10.1016/j.leaqua.2005.03.002
- Jensen, S. M., & Luthans, F. (2006). Relationship between entrepreneurs’ psychological capital and their authentic leadership. *Journal of Managerial Issues*, 18(2), 254–273.
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83, 17–34. doi:10.1037/0021-9010.83.1.17
- Kark, R., & van Dijk, D. (2007). Motivation to lead, motivation to follow: The role of the self-regulatory focus in leadership processes. *Academy of Management Review*, 32, 500–528. doi:10.5465/AMR.2007.24351846
- Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, 14, 1–26. doi:10.1207/S15327965PLI1401\_01
- Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, 95, 1–31. doi:10.1037/a0017103
- Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling* (4<sup>th</sup> ed.). New York: Guilford Publications.
- Knight, G. A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12, 213–225. doi:10.1016/S0883-9026(96)00065-1
- Koerner, M. M. (2014). Courage as identity work: Accounts of workplace courage. *Academy of Management Journal*, 57, 63–93. doi:10.5465/amj.2010.0641
- Krohne, H. W., Egloff, B., & Kohlmann, C. W. (1996). Untersuchungen mit einer deutschen Version der “Positive and Negative Affect Schedule” (PANAS) [Investigations with a German version of the Positive and Negative Affect Schedule” (PANAS)]. *Diagnostica*, 42(2), 139–156.
- Lanaj, K., Chang, C.-H. D., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: A review and meta-analysis. *Psychological Bulletin*, 138, 998–1034. doi:10.1037/a0027723
- Lemoine, G. J., Hartnell, C. A., & Leroy, H. (2019). Taking stock of moral approaches to leadership: An integrative review of ethical, authentic, and servant leadership. *Academy of Management Annals*, 13, 148–187. doi:10.5465/annals.2016.0121

- Lenton, A. P., Bruder, M., Slabu, L., & Sedikides, C. (2013). How does “being real” feel? The experience of state authenticity. *Journal of Personality*, *81*, 276–289. doi:10.1111/j.1467-6494.2012.00805.x
- Lenton, A. P., Slabu, L., Sedikides, C., & Power, K. (2013). I feel good, therefore I am real: Testing the causal influence of mood on state authenticity. *Cognition & Emotion*, *27*, 1202–1224. doi:10.1080/02699931.2013.778818
- Leroy, H., Anseel, F., Gardner, W. L., & Sels, L. (2015). Authentic leadership, authentic followership, basic need satisfaction, and work role performance: A cross-level study. *Journal of Management*, *41*, 1677–1697. doi:10.1177/0149206312457822
- Lord, R. G., Diefendorff, J. M., Schmidt, A. M., & Hall, R. J. (2010). Self-regulation at work. *Annual Review of Psychology*, *61*, 543–568. doi:10.1146/annurev.psych.093008.100314
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior*, *27*, 387–393. doi:10.1002/job.373
- Luthans, F., & Avolio, B. J. (2003). Authentic leadership development. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive Organizational Scholarship* (pp. 241–261). San Francisco, CA: Berrett-Koehler.
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, *60*, 541–572. doi:10.1111/j.1744-6570.2007.00083.x
- Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 339–366. doi:10.1146/annurev-orgpsych-032516-113324
- Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2015). *Psychological Capital and Beyond*. New York, NY: Oxford University Press.
- Mackinnon, A., Jorm, A. F., Christensen, H., Korten, A. E., Jacomb, P. A., & Rodgers, B. (1999). A short form of the Positive and Negative Affect Schedule: Evaluation of factorial validity and invariance across demographic variables in a community sample. *Personality and Individual Differences*, *27*, 405–416. doi:10.1016/S0191-8869(98)00251-7
- Martin, K. D., & Cullen, J. B. (2006). Continuities and extensions of ethical climate theory: A meta-analytic review. *Journal of Business Ethics*, *69*, 175–194. doi:10.1007/s10551-006-9084-7

- May, D. R., Chan, A. Y. L., Hodges, T. D., & Avolio, B. J. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics*, 32, 247–260. doi:10.1016/S0090-2616(03)00032-9
- McClean, S. T., Barnes, C. M., Courtright, S. H., Johnson, R. E., & McClean, S. (2019). Resetting the clock on dynamic leader behaviors: A conceptual integration and agenda for future research. *Academy of Management Annals*. Advance online publication. doi:10.5465/annals.2017.0081
- McCormick, B. W., Reeves, C. J., Downes, P. E., Li, N., & Ilies, R. (2018). Scientific contributions of within-person research in management: Making the juice worth the squeeze. *Journal of Management*. Advance online publication. doi:10.1177/0149206318788435
- Monzani, L., Braun, S., & van Dick, R. (2016). It takes two to tango: The interactive effect of authentic leadership and organizational identification on employee silence intentions. *German Journal of Human Resource Management*, 30, 246–266. doi:10.1177/2397002216649896
- Muthén, B. O., & Muthén, L. K. (2017). *Mplus User's Guide* (8<sup>th</sup> ed.). Los Angeles: Muthén & Muthén. Retrieved from [http://statmodel.com/download/usersguide/MplusUserGuideVer\\_8.pdf](http://statmodel.com/download/usersguide/MplusUserGuideVer_8.pdf)
- Neider, L. L., & Schriesheim, C. A. (2011). The Authentic Leadership Inventory (ALI): Development and empirical tests. *The Leadership Quarterly*, 22, 1146–1164. doi:10.1016/j.leaqua.2011.09.008
- Neubert, M. J., Kacmar, K. M., Carlson, D. S., Chonko, L. B., & Roberts, J. A. (2008). Regulatory focus as a mediator of the influence of initiating structure and servant leadership on employee behavior. *Journal of Applied Psychology*, 93, 1220–1233. doi:10.1037/a0012695
- Nezlek, J. B. (2012). *Diary Methods for Personality and Social Psychology*. Los Angeles: Sage.
- Ng, T. W. H., & Feldman, D. C. (2012). Employee voice behavior: A meta-analytic test of the conservation of resources framework. *Journal of Organizational Behavior*, 33, 216–234. doi:10.1002/job.754
- Ohly, S., Sonnentag, S., Niessen, C., & Zapf, D. (2010). Diary studies in organizational research. *Journal of Personnel Psychology*, 9, 79–93. doi:10.1027/1866-5888/a000009
- Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, 70, 153–163. doi:10.1016/j.jesp.2017.01.006
- Petersen, K., & Youssef-Morgan, C. M. (2018). The “left side” of authentic leadership: Contributions of climate and psychological capital. *Leadership & Organization Development Journal*, 39, 436–452. doi:10.1108/LODJ-06-2017-0171

- Peus, C., Wesche, J. S., Streicher, B., Braun, S., & Frey, D. (2012). Authentic leadership: An empirical test of its antecedents, consequences, and mediating mechanisms. *Journal of Business Ethics*, 107, 331–348. doi:10.1007/s10551-011-1042-3
- Pierce, J. L., & Gardner, D. G. (2004). Self-esteem within the work and organizational context: A review of the organization-based self-esteem literature. *Journal of Management*, 30, 591–622. doi:10.1016/j.jm.2003.10.001
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569. doi:10.1146/annurev-psych-120710-100452
- R Core Team. (2017). R: A language and environment for statistical computing: R Foundation for Statistical Computing. Retrieved from <http://www.R-project.org/>
- Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48. doi:10.18637/jss.v048.i02
- Sarason, I. G., & Sarason, B. R. (2009). Social support: Mapping the construct. *Journal of Social and Personal Relationships*, 26, 113–120. doi:10.1177/0265407509105526
- Schmader, T., & Sedikides, C. (2018). State authenticity as fit to environment: The implications of social identity for fit, authenticity, and self-segregation. *Personality and Social Psychology Review*, 22, 228–259. doi:10.1177/1088868317734080
- Schminke, M., Ambrose, M. L., & Neubaum, D. O. (2005). The effect of leader moral development on ethical climate and employee attitudes. *Organizational Behavior and Human Decision Processes*, 97, 135–151. doi:10.1016/j.obhdp.2005.03.006
- Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology*, 64, 361–388. doi:10.1146/annurev-psych-113011-143809
- Seligman, M. E. P. (2006). *Learned Optimism: How to Change Your Mind And Your Life*. New York: Random House.
- Shamir, B. (2011). Leadership takes time: Some implications of (not) taking time seriously in leadership research. *The Leadership Quarterly*, 22, 307–315. doi:10.1016/j.leaqua.2011.02.006
- Shamir, B., & Eilam, G. (2005). “What’s your story?”: A life-stories approach to authentic leadership development. *The Leadership Quarterly*, 16, 395–417. doi:10.1016/j.leaqua.2005.03.005
- Sparrowe, R. T. (2005). Authentic leadership and the narrative self. *The Leadership Quarterly*, 16, 419–439. doi:10.1016/j.leaqua.2005.03.004

- Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, 124, 240–261. doi:10.1037/0033-2909.124.2.240
- Steffens, N. K., Mols, F., Haslam, S. A., & Okimoto, T. G. (2016). True to what we stand for: Championing collective interests as a path to authentic leadership. *The Leadership Quarterly*, 27, 726–744. doi:10.1016/j.leaqua.2016.04.004
- ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work-home interface: The work-home resources model. *American Psychologist*, 67, 545–556. doi:10.1037/a0027974
- Treviño, L. K., Weaver, G. R., Gibson, D. G., & Toffler, B. L. (1999). Managing ethics and legal compliance: What works and what hurts. *California Management Review*, 41, 131–151. doi:10.2307/41165990
- Tuncdogan, A., van den Bosch, F., & Volberda, H. (2015). Regulatory focus as a psychological micro-foundation of leaders' exploration and exploitation activities. *The Leadership Quarterly*, 26, 838–850. doi:10.1016/j.leaqua.2015.06.004
- van Buuren, S., & Groothuis-Oudshoorn, K. (2011). mice: Multivariate imputation by chained equations in R. *Journal of Statistical Software*, 45, 1–67. doi:10.18637/jss.v045.i03
- van Prooijen, A.-M., & Ellemers, N. (2015). Does it pay to be moral?: How indicators of morality and competence enhance organizational and work team attractiveness. *British Journal of Management*, 26, 225–236. doi:10.1111/1467-8551.12055
- van Sandt, C. V., Shepard, J. M., & Zappe, S. M. (2006). An examination of the relationship between ethical work climate and moral awareness. *Journal of Business Ethics*, 68, 409–432. doi:10.1007/s10551-006-9030-8
- Victor, B., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly*, 33, 101–125. doi:10.2307/2392857
- Vohs, K. D., & Ciarocco, N. J. (2004). Interpersonal functioning requires self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of Self-Regulation. Research, Theory, and Applications* (pp. 392–407). New York, NY: Guilford Press.
- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34, 89–126. doi:10.1177/0149206307308913

- Weiss, M., Razinskas, S., Backmann, J., & Hoegl, M. (2018). Authentic leadership and leaders' mental well-being: An experience sampling study. *The Leadership Quarterly*, 29, 309–321. doi:10.1016/j.leaqua.2017.05.007
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14, 121–141. doi:10.1037/1072-5245.14.2.121
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Work engagement and financial returns: A diary study on the role of job and personal resources. *Journal of Occupational and Organizational Psychology*, 82, 183–200. doi:10.1348/096317908X285633
- Zacher, H., & Wilden, R. G. (2014). A daily diary study on ambidextrous leadership and self-reported employee innovation. *Journal of Occupational and Organizational Psychology*, 87, 813–820. doi:10.1111/joop.12070

## 8. Appendix: Test of Higher-Order Structure of Authentic Leadership

In this research, we built on an existing scale to measure authentic leadership. The Authentic Leadership Inventory (ALI) has undergone extensive testing in recent years (Neider & Schriesheim, 2011; Steffens et al., 2016). Concurring with the suggestions of these scholars, we inspected the factor structure of our adapted measure of authentic leadership with confirmatory factor analysis. Parallel to Steffens et al. (2016), we adopted Credé and Harms' (2015) guidelines for testing the appropriateness of higher-order models. This includes examining five different sets of information: (1) the absolute fit of the higher-order model, (2) the comparison of the higher-order model with competing models, (3) the reproduction of covariances among first-order factors and their ability to explain variation in the (4) first-order and (5) manifest variables (Credé & Harms, 2015).

First, we inspected the absolute fit indices of the higher-order model. As shown in Table A, the significant  $\chi^2$  value for the higher-order model suggests some misspecifications. At the same time, the  $\chi^2/df$  ratio as well as the comparative fit indices (RMSEA, CFI, SRMR) point to a reasonable fit of the model to the data.

Second, the higher-order model was compared to four alternative models using the  $\chi^2$  difference test. We tested the higher-order model against two more parsimonious models (i.e., orthogonal first-order model and single-factor model) and two less parsimonious models (i.e., oblique lower-order model and bi-factor model). A summary of the confirmatory factor analysis results for competing models is presented in Table A1. The higher-order model should ideally have a better fit than the more parsimonious models. This was the case in our study providing support for a higher-order model. Additionally, it should not have worse fit than the less parsimonious models. In our study, the higher-order model fitted the data as good as the oblique lower-order model (providing support for a higher-order model) but worse than the bi-factor model (providing no support for a high-order model). However, the bi-factor model produced negative error variance estimates for two manifest variables ('Heywood case'). As suggested by Gerbing and Anderson (1987) the parameters

were fixed at a small positive value, which produced another improper solution. Employing an alternative strategy suggested by Gerbing and Anderson (1987), error variances were then pre-determined at a larger positive value (i.e., .15), which resulted in proper parameter estimates. The comparison of the global fit indices shows that the higher-order model fit the data either similar or better than the alternative models. Overall, this indicates support for a higher-order model of authentic leadership.

Third, we computed the effect size target coefficient (TC) to inspect the model's ability to reproduce covariances among first-order factors. The high value of .981 indicates that almost all covariation among the lower-order factors can be accounted for by the higher-order factor. This provides support for a higher-order model.

Fourth, Credé and Harms suggest testing whether the higher-order factor accounts for a substantial amount of the total variance in the lower-order factors. Therefore, we calculated the average variance extracted (AVE). Loadings of the four dimensions of authentic leadership self-awareness, internalized moral perspective, balanced processing, and relational transparency were high and uniform (.994, .958, .907, .958, respectively). The AVE was .888 a score above the recommended value of .50. This indicates that almost all variance in the lower-order factors can be accounted for by the higher-order factor providing evidence for a high-order model.

Fifth, we examined the ability of the higher-order factor to account for variance in the manifest variables. The average amount of variance in the manifest variables that was accounted for by the higher-order factor was .444 (Min = .260; Max = .625). This value is well above the expected value of .240, providing support for the higher-order model. In sum, based on the analysis of the factor structure of the ALI in our sample and in line with previous research (Gardner et al., 2011; Steffens et al., 2016), we conceptualized authentic leadership as a higher-order factor with four first-order factors.



## References

- Credé, M., & Harms, P. D. (2015). 25 years of higher-order confirmatory factor analysis in the organizational sciences: A critical review and development of reporting recommendations. *Journal of Organizational Behavior*, 36, 845–872. doi:10.1002/job.2008
- Gardner, W. L., Coglisier, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly*, 22, 1120–1145. doi:10.1016/j.leaqua.2011.09.007
- Gerbing, D. W., & Anderson, J. C. (1987). Improper solutions in the analysis of covariance structures: Their interpretability and a comparison of alternate respecifications. *Psychometrika*, 52, 99–111. doi:10.1007/BF02293958
- Neider, L. L., & Schriesheim, C. A. (2011). The Authentic Leadership Inventory (ALI): Development and empirical tests. *The Leadership Quarterly*, 22, 1146–1164. doi:10.1016/j.leaqua.2011.09.008
- Steffens, N. K., Mols, F., Haslam, S. A., & Okimoto, T. G. (2016). True to what we stand for: Championing collective interests as a path to authentic leadership. *The Leadership Quarterly*, 27, 726–744. doi:10.1016/j.leaqua.2016.04.004

**Table A1.** Study 2: Test of Higher-Order Structure of Authentic Leadership

| Model                        | $\chi^2$ | <i>df</i> | <i>p</i> | $\chi^2/df$ | $\Delta \chi^2$ | $\Delta df$ | <i>p</i> | RMSEA [90% CI]       | CFI   | SRMR  |
|------------------------------|----------|-----------|----------|-------------|-----------------|-------------|----------|----------------------|-------|-------|
| Higher-order model           | 149.021  | 73        | <0.001   | 2.041       | -               | -           | -        | 0.091 [0.070, 0.111] | 0.911 | 0.056 |
| More parsimonious models     |          |           |          |             |                 |             |          |                      |       |       |
| Orthogonal first-order model | 452.504  | 77        | <0.001   | 5.877       | 303.483         | 4           | <0.001   | 0.196 [0.179, 0.214] | 0.559 | 0.377 |
| Single-factor model          | 166.253  | 77        | <0.001   | 2.159       | 17.232          | 4           | .002     | 0.096 [0.076, 0.115] | 0.895 | 0.059 |
| Less parsimonious models     |          |           |          |             |                 |             |          |                      |       |       |
| Oblique first-order model    | 143.064  | 71        | <0.001   | 2.015       | 5.957           | 2           | 0.051    | 0.089 [0.068, 0.111] | 0.915 | 0.056 |
| Bi-factor model <sup>a</sup> | 97.490   | 61        | 0.002    | 1.598       | 51.531          | 12          | <0.001   | 0.069 [0.042, 0.093] | 0.957 | 0.050 |

*Note.* *N* = 130; RMSEA = root mean square error of approximation, 90% CI = 90% confidence intervals, CFI = comparative fit index, SRMR = standardized root mean square residual

<sup>a</sup> In the original bi-factor model error variances for the items ALI\_5 and ALI\_11 were estimated to be negative ('Heywood case'). A model with the two error variances fixed at .00 produced another improper solution. Therefore, in the present model the error variances for these two items were specified to have a small positive value of 0.15.

## Part 2: Who Are We?

## The value of speaking for 'us': The relationship between CEOs' use of I- and we-referencing language and subsequent organizational performance

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*Manuscript under review.*

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## 1. Abstract

CEOs have been argued to play a critical role for organizational performance. However, CEOs cannot achieve success singlehandedly. They heavily rely on other organizational members to execute and implement their agenda and to contribute to organizational success. In the present research, we propose that CEOs serve as identity leaders of their organization who are able to enhance organizational performance by representing and cultivating a sense of shared collective identity ('us') with those they lead. One way for leaders to do so is through the use of we-referencing (opposed to I-referencing) language. We examine this idea in a pre-registered study of organizations listed in the DAX (i.e., leading German stock index) between 2000 and 2016, assessing the impact of CEOs' use of we- and I-referencing language in letters to the stakeholders ( $N=378$ ) on objective indicators of organizational financial performance. In line with hypotheses, results show a positive relationship between CEOs' use of we-referencing language and key indicators of financial performance: return on assets and sales per employee (while there was no evidence of an association with return on sales). At the same time, results indicate that the use of I-referencing language was unrelated to organizational performance. These findings advance the literature on strategic leadership and on the social identity approach to leadership by suggesting that CEOs thinking and acting in collective terms is associated with greater organizational performance.

*Keywords:* CEO leadership, identity entrepreneurship, financial performance, social identity approach to leadership, we-referencing language, linear mixed-modeling

## 2. Introduction

“The leaders who work most effectively, it seems to me, never say ‘I’. And that’s not because they have trained themselves not to say ‘I’. They don’t *think* ‘I’. They think ‘team’. They understand their job to be to make the team function... There is an identification (very often quite unconsciously) with the task and with the group.” (Drucker, 1992, p. 14).

CEOs are the figureheads of their organization. Their choices and behaviors have been argued to be critical for the performance of organizational members and the organization as a whole (Boal & Hooijberg, 2001; Finkelstein, Hambrick, & Cannella, 2009; Hambrick & Mason, 1984). Although CEOs have direct influence on strategic decisions (e.g., acquisitions), they rely on *other* organizational members to execute and implement their agenda. Accordingly, without the engagement and support of followers, CEOs’ visions and goals will count for little because they will not be translated into material reality (Bennis, 1999; Haslam & Platow, 2001). In simple terms, this is because it is not a CEO’s vision that makes and sells products and services, but the hard work of the people they employ.

So how do CEOs win the support of their followers? One answer, suggested by social identity theorizing, is by cultivating a sense of shared social identity—a shared sense of ‘us’—among organizational members (Haslam, Reicher, & Platow, 2011; Steffens, Haslam, Reicher et al., 2014). This is argued to encourage the internalization of group membership (Ellemers, de Gilder, & Haslam, 2004; Haslam, Postmes, & Ellemers, 2003) by those followers in ways that restructure their perceptions and behavior so as to align them with the interests and goals of the group and ultimately lead them to contribute to the achievement of shared group goals (Ellemers et al., 2004; Turner, 1991). In the present paper, we advance the social identity approach to leadership by examining the relationship between CEOs’ representation and cultivation of a sense of ‘us’ through the use of *we-referencing language* (opposed to *I-referencing language*) and the financial performance of the organizations they

lead. This study also contributes to the strategic leadership literature by extending the scope of strategic leadership theories beyond characteristics of the CEO as an *individual* to consider and understand the CEO as a *member* of a social group (i.e., their organization; e.g., Boal & Hooijberg, 2001). In this way, the present study addresses Hambrick's (2007) call for the strategic leadership literature not to "glorif[y] elites" (p. 341) by focusing on the characteristics that set leaders apart from their followers but rather to advance the understanding of what enables strategic leaders to connect to followers.

## 2.1 The Social Identity Approach to Leadership

Traditionally, the strategic leadership literature has focused on what makes leaders special as individuals (i.e., as 'great I's'; Boal & Hooijberg, 2001; Booth, Murray, Overduin, Matthews, & Furnham, 2016; Finkelstein et al., 2009; Hambrick, 2007; Hambrick & Mason, 1984). More recently, though, researchers have increasingly seen leadership as a social group process (a 'we-thing'; Dinh et al., 2014; Yammarino, Salas, Serban, Shirreffs, & Shuffler, 2012). According to this perspective leaders have been argued to be influential not because they are special as individuals (e.g., highly charismatic) or because they hold a particular position of power, but rather because they think and act in terms of a bigger 'we' and are able to cultivate a shared identity with those they seek to influence (Ellemers et al., 2004; Haslam et al., 2011; Hogg, 2001; Hogg, van Knippenberg, & Rast III, 2012; Steffens, Haslam, Reicher et al., 2014; van Knippenberg & Hogg, 2003).

Informed by principles set out in both *social identity theory* (Tajfel & Turner, 1979) and *self-categorization theory* (Turner, 1991; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987; see Haslam, 2004), the social identity approach to leadership sees this as an influence process that is grounded in a sense of shared social identity between leaders and followers (Ellemers et al., 2004; Haslam et al., 2003; Haslam et al., 2011; van Knippenberg & Hogg, 2003). In line with these claims, extensive research points to the importance of leaders being seen to be *prototypical* of the group they want to lead (Barreto & Hogg, 2017; Haslam et al., 2011; Hogg et al., 2012; van Knippenberg, 2011) such

that they embody the norms, values, and ideals that make the group special and distinct from other groups (van Knippenberg, 2011; van Knippenberg & Hogg, 2003). In particular, perceived group prototypicality has been shown to underpin (a) endorsement of leaders (Steffens, Haslam, Ryan, & Kessler, 2013; Ullrich, Christ, & van Dick, 2009), (b) trust in leaders (Giessner & van Knippenberg, 2008), (c) perceived leader effectiveness (Giessner, van Knippenberg, & Sleebos, 2009; van Knippenberg & van Knippenberg, 2005), and (d) perceived leader charisma (Platow, van Knippenberg, Haslam, van Knippenberg, & Spears, 2006; Steffens, Haslam, & Reicher, 2014).

At the same time, scholars have asserted that successful leaders do not simply accept received social identities as given but instead actively seek to create and promote a particular version of group identity (Augoustinos & de Garis, 2012; Huettermann, Doering, & Boerner, 2017; Reicher, Haslam, & Hopkins, 2005; Reicher & Hopkins, 2001). In other words, “leaders have to be masters of identity, not merely slaves to it” (Haslam et al., 2011, p. 162). Amongst other things, this means that, as *identity entrepreneurs*, leaders work hard to construct social identity in ways that enhance both a sense of shared identity within the groups they lead as well as their own prototypicality. They do this, for example, by defining shared norms, values, and ideals that align group members with their own agenda (Reicher et al., 2005). This, in turn, is likely to render the social identity more accessible and explicit for group members, promoting social identification (Riantoputra, 2010). In this way, identity entrepreneurship facilitates collaboration between organizational members (e.g., *inter alia* stimulating trust and helping behavior; Ellemers et al., 2004; van Knippenberg & Hogg, 2003) making organizational success more likely (Carton, Murphy, & Clark, 2014; Castanias & Helfat, 1991; Fiol, 2001). Yet if leaders neglect the power of social identities, for example, by promoting their individual authority rather than their collective interests, their attempts to lead a group in a particular direction (or any direction at all) are likely to fail (Haslam & Reicher, 2007).



## 2.2 CEOs' I- and We-Referencing Language and Organizational Performance

In line with the preceding points, social identity theorizing suggests that as strategic leaders of an organization, CEOs are more likely to be effective to the extent that they express and develop a sense of shared social identity ('us'; Haslam et al., 2011; Reicher & Hopkins, 2001). One potential way in which CEOs can express, create, and shape a shared social identity is through *we-referencing language* (by referring to 'we', 'us', 'our', or 'ours'), which stands in contrast to *I-referencing language* (by referring to 'I', 'me', 'my', or 'mine') as a means to express and stress their *personal* identity. Language carries meaning that organizational members use to make sense of organizational life and their part in it (Finkelstein et al., 2009; Fiol, 2002; Haslam & Reicher, 2007). For example, using collective pronouns has been shown to induce a shift in individuals from a personal to a more collective self-definition (e.g., as a member of a group; Brewer & Gardner, 1996). More particularly, there is likely to be a dual process at play such that leaders' use of we-referencing language serves both (a) to signal the leader's own social identification with the collective (Rousseau, 1998; van Dick, Hirst, Grojean, & Wieseke, 2007) and (b) to define and clarify who we are, what we stand for, and who we want to be in the future (Haslam et al., 2011; Huettermann et al., 2017; Riantoputra, 2010).

Supporting these ideas, research on leaders' use of we- and I-referencing language has shown that this matters for a range of important follower and organizational outcomes. Speaking to the importance of we-referencing language, experimental studies by Platow and colleagues (2006) showed that leaders were more likely to be perceived as charismatic when they used we-referencing language (see also: Hornsey, Blackwood, & O'Brien, 2005). Furthermore, recent research by Weiss, Kolbe, Grote, Spahn, and Grande (2018) shows that the extent to which leaders of health care teams used we-referencing language was positively associated with team members' voice behavior. There is also evidence for positive effects of leaders' we-referencing language from the political domain. For example, an analysis of Australian federal elections has shown that candidates' use of we-

referencing language is positively related to followers' support (with 80% of elections being won by the candidate who uses we-referencing language the most; Steffens & Haslam, 2013). At the same time, the candidates' use of I-referencing language was unrelated to the election outcome. Relatedly, in the business domain, research by Chatterjee and Hambrick (2007) showed that CEOs' use of I-referencing language in interviews (referencing "me, myself & I")—as indicator of their self-preoccupation and narcissism—was unrelated to organizational performance.

Even though there is a growing body of research on the relevance of leaders' we- and I-referencing language, our knowledge is limited in at least two important ways. First, prior research that has explored the use of we-referencing language has tended to focus on settings of supervisory leadership (Platow et al., 2006; Weiss et al., 2018) and political leadership (Steffens & Haslam, 2013; see also Augoustinos & de Garis, 2012; Gleibs, Hendricks, & Kurz, 2017) rather than strategic leadership in organizations. We therefore know little about the extent to which processes implicated in we-referencing language have any bearing on the leadership success of senior leaders of organizations. In addition, while exploring a range of outcomes (e.g., perceptions of charisma and voice behavior) little work has examined the relationship of we-referencing language and tangible measures of (organizational) performance. As a result, it is unclear whether CEOs' use of we-referencing language as a means of creating a shared "we" among organizational members relates to organizational functioning and performance—one of (if not *the*) key indicator of CEOs' leadership success. Moreover, it is unclear exactly how the use of I-referencing language is associated with measures of leadership success. Both, Chatterjee and Hambrick (2007) as well as Steffens and Haslam (2013), report statistically non-significant results using null-hypothesis testing which does not allow the inference that I-referencing language does not matter (i.e., null results do not provide evidence in support of the null hypotheses). Using a Bayesian approach, the research presented here tests whether the assumed null-effect is more likely than its alternatives (i.e., a positive or negative relationship).

### 2.3 The Present Research

One common and visible place for CEOs to communicate their narrative about organizational identity is in stakeholder letters in organizations' annual reports (Smith & Taffler, 2000). Such letters are addressed to multiple stakeholders (e.g., shareholders, employees, and customers) and in them CEOs typically seek to explain where the organization currently stands ('who we are') and to delineate future pathways ('who we want to be'). On the basis of social identity theorizing, we propose that CEOs' use of we-referencing language in these letters communicates a sense of shared identity that encourages other members of the organization to identify both with them and with the organization as a whole (Platow et al., 2006; Riantoputra, 2010; Rousseau, 1998; van Dick et al., 2007). Stronger identification among group members, in turn, is likely to encourage more coordinated and cooperative behavior within the organization (Ellemers et al., 2004; van Knippenberg & Hogg, 2003) which is likely to translate into higher organizational performance (Carton et al., 2014; Castanias & Helfat, 1991; Fiol, 2001). It is also likely that, through a cascading effect of social identification, customers and other stakeholders will feel enveloped in a shared sense of we-ness and thereby identify more strongly with the organization in ways that encourage them to contribute to the organization's performance (e.g., by making more use of the organization's products and services; Schuh et al., 2012; Wieseke, Ahearne, Lam, & van Dick, 2009). More formally, then, we hypothesize:

**Hypothesis 1.** *CEOs' use of we-referencing language (i.e., first-person plural pronouns) in letters to the stakeholders will be associated with higher organizational financial performance.*

At the same time, Gupta, Nadkarni, and Mariam (2018) suggest that *I-focused* CEOs "create environments of passive followership" (p. 12) rather than engaged followership within their organization (Haslam & Platow, 2001). In this regard, high levels of CEO's use of I-referencing language (i.e., first-person singular pronouns)—which signals CEOs' strong *personal* identity—

should fail to engage organizational members' and other stakeholders' sense of shared social identity (Fiol, 2002) and thereby fail to engender improved performance. In line with social identity theorizing, we can posit that this is because CEOs who think 'I' will act (and be seen to act) in ways that serve their personal needs rather than those of the organization (Boivie, Lange, McDonald, & Westphal, 2011), and thereby put collective efforts in jeopardy (De Cremer & van Dijk, 2005; Steffens, Haslam, Peters, & Quiggin, 2018). Indeed, Chatterjee and Hambrick (2007) found that high levels of CEOs' personal self-references in interviews were not related to (better or worse) performance (but to greater variance in organizational performance). In the realm of politics, too, there was no evidence that candidates' use of first-person singular pronouns was related to the result (i.e., win or loss) in Australian federal elections (Steffens & Haslam, 2013). This leads to our second hypothesis:

**Hypothesis 2.** *CEOs' use of I-referencing language (i.e., first-person singular pronouns) in letters to the stakeholders will not be associated with higher organizational financial performance.*

### 3. Method

#### 3.1 Open Science Practices

Enhancing the confidence in the present findings (e.g., Banks et al., 2018), the study was pre-registered on the Open Science Framework (i.e., study design, hypotheses, and analysis strategy were pre-registered prior to data collection and analysis). All data and materials are available online: [https://osf.io/znwu5/?view\\_only=e903d90f64134747bc2c16f196100af5](https://osf.io/znwu5/?view_only=e903d90f64134747bc2c16f196100af5)

#### 3.2 Sample

We analyzed a sample of CEOs of large, multi-national corporations listed in the DAX (i.e., Germany's leading stock index; as of November 2017) between 2000 and 2016. We chose this sample for two main reasons: First, in regard to the choice of time frame, annual reports were

available online for a much larger number of organizations after 2000 than in prior years. In our initial sample, the majority (18 of the 30) of organizations provided annual reports for the entire period examined (2000-2016), while all but one organization provided reports for the last ten years (2007-2016) or more. In total, 434 (of 510; 85.1%) annual reports were available. Second, the vast majority of studies on CEOs has been conducted with American samples limiting the generalizability of findings to other countries (e.g., Crossland & Hambrick, 2007). Despite the fact that today's organizations compete in a globalized economy, national differences in informal (e.g., norms and values) and formal (e.g., laws and rules) institutions affect CEOs' leadership (Crossland & Hambrick, 2007, 2011). For example, CEOs of American organizations have greater latitude of action and less constraints in their role than their counterparts in other countries such as Germany (Crossland & Hambrick, 2011). In consequence, due to the limitation of their power as individual, CEOs of German organizations rely even more strongly on winning the support and participation of followers (i.e., creating collective power within their organization; Ellemers et al., 2004). Thus, we selected a sample that matches prior samples in its core characteristics (i.e., publicly traded and multi-national) from an appropriate context for the specific phenomenon under study.

A letter to the stakeholders accompanied 432 annual reports. Twenty-six letters were excluded from the sample for one of the following reasons: 15 letters were co-authored by either two CEOs ( $n = 14$ ; Deutsche Bank 2012-2015, RWE 2002, SAP 2000-2002 and 2008-2013) or the CEO and the chair of the board (Henkel 2008). All reports for Vonovia between 2004 and 2012 were excluded because the organization only turned into a publicly traded company in 2013. The financial data from the first available report of each organization was not matched by a CEO letter and therefore excluded. The final sample encompassed 378 observations. In this final sample, letters were written by 73 different CEOs (all male). An average of 5.18 letters per CEO was included ( $SD = 2.96$ ,  $range = 1-12$ ). These CEOs held their position for an average of 6.97 years ( $SD = 3.98$ ,  $range = 1-16$ ).

### 3.3 Procedure and Measures

Annual reports are typically published three months after the end of the preceding financial year (for 27 of the 30 organizations in our sample the financial year corresponds to the calendar year). For example, Adidas published the annual report corresponding to the financial year 2014 on 5 March 2015. In the present analysis, we therefore used indicators of we- and I-referencing language in a given year as predictors of organizational performance of the subsequent financial year (ending about 9 months after the publication of the preceding annual report). This means that in the present design, there was time lag of 9 months between our independent and dependent variables.

Two sets of information were extracted from each annual report. First, we recorded the number of first-person singular ('I', 'me', 'my', 'mine') and first-person plural pronouns ('we', 'us', 'our', 'ours') within each CEO letter. For this purpose, we specified a word count algorithm in EXCEL that ran over each letter to identify all references (cf. Tausczik & Pennebaker, 2010).<sup>2</sup> All references within a letter were combined to obtain indicators of CEOs' use of I- and we-referencing language, respectively. For example, in the following passage from the 2014 letter to the stakeholders by Siemens CEO Joe Kaeser, seven first-person plural pronouns (i.e., we, us, we, our, our, our, our) and four first-person singular pronouns (I, my, my, my) were recorded:

*"We'll be working on the three areas outlined above. They describe the key factors that are enabling **us** to lead Siemens into a successful future. Throughout this process, **we** will gear all **our** actions to the requirements of **our** customers, **our** owners and **our** employees as well as to the values of society. **I** personally intend to ensure that the next generation will inherit a better Company. That's **my** vision. That's **my** responsibility. That's **my** promise."* (Siemens AG, 2014, p. 9, emphasis added)

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<sup>2</sup> Fifteen CEO letters were presented as written interviews. In these cases, we isolated only those portions that represented the CEO's words.

Second, for each year reported, the following variables were documented: (a) total sales, (b) earnings before interest and tax (EBIT), (c) net profit, and (d) total capital.<sup>3</sup> These were used to obtain two commonly used accounting-based financial performance indicators (e.g., Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Richard, Devinney, Yip, & Johnson, 2009): *Return on assets* (ROA = net profit divided by mean total capital of the current and previous year) and *return on sales* (ROS = EBIT divided by total sales). We focused on ROA and ROS as indicators of financial performance because CEOs have been observed to have greater control over accounting-based indicators, via their decisions and behaviors, than over market-based indicators (Agle et al., 2006; Richard et al., 2009). Not least, this is because market-based performance indicators, such as Tobin's Q, reflect investors' evaluations of the organization's growth prospects rather than their actual performance (Haslam, Ryan, Kulich, Trojanowski, & Atkins, 2010). ROA is an indicator of how efficiently an organization uses its assets to generate earnings, while ROS is known as an organization's operating profit margin. Table 1 provides an overview of descriptive statistics.

**Table 1.** Means, Standard Deviations, and Within-CEO Correlations of Focal Variables.

| Variable                                   | <i>M</i> | <i>SD</i> | 1      | 2      | 3    | 4      | 5    | 6 |
|--|----------|-----------|--------|--------|------|--------|------|---|
| 1 Use of I-referencing language            | 5.37     | 5.37      | –      |        |      |        |      |   |
| 2 Use of we-referencing language           | 62.27    | 29.90     | .21*** | –      |      |        |      |   |
| 3 Total no. of words in letter             | 1132.06  | 507.18    | .32*** | .80*** | –    |        |      |   |
| 4 Return on assets (in %)                  | 3.34     | 4.66      | .00    | .08    | -.04 | –      |      |   |
| 5 Return on sales (in %)                   | 10.36    | 12.74     | -.01   | -.00   | -.01 | .17**  | –    |   |
| 6 Sales per employee<br>(Euro in thousand) | 398.42   | 289.90    | -.03   | .13*   | .08  | .29*** | -.04 | – |

*Note.* *N* = 378 letters by 73 CEOs. Correlations are based on within-CEO scores.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

<sup>3</sup> In all but one case (Fresenius Medical Care) numbers were provided in Euro. For Fresenius Medical Care, figures were converted from US-Dollar to Euro based on the exchange rate at the reporting date.

### 3.4 Analytic Strategy

The study data had a nested (panel) structure: That is, it contains observations of a set of variables obtained over multiple time periods for the same organizations and individuals. In order to account for the nested data structure in our analyses (and hence, the non-independence of our observations), we used linear mixed-effects modeling (Faraway, 2016). We specified the number of I- and we-references in CEOs' letters to the stakeholders as predictors of financial performance at the end of a given financial year (i.e., 9 months after the publication of the annual report). We ran separate analyses for the effect of I-referencing and we-referencing language on each outcome variable (i.e., ROS and ROA, as well as sales per employee). The use of I- and we-referencing language was entered as fixed effect (i.e., systematic predictor), respectively. The total number of words used was entered as covariate (i.e., fixed effect). For 69 CEOs (94.52% of all CEOs;  $M = 5.18$ ,  $SD = 2.96$ ) we had multiple measurements (i.e., different years) in our sample. Accordingly, we included a random intercept for *CEO* to allow for variations between CEOs. Moreover, we had multiple measures for each organization ( $M = 12.60$ ,  $SD = 4.18$ ,  $range = 3-16$ ) and therefore included *organization* as random intercept to model differences between organizations.<sup>4</sup> In a second model, we also tested the generalizability of our results beyond our selected period by introducing *year* as random intercept, which expresses the variation between years.<sup>5</sup>

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<sup>4</sup> Deviating from the pre-registered protocol, we applied this procedure instead of group-mean centering the dependent variable to control for differences between organizations because this procedure is a more consistent application of the linear mixed-effect modeling approach. The pattern of results, however, does not differ across the two approaches.

<sup>5</sup> In a third model, following the pre-registered protocol, we added random slopes by-CEO and by-year to account for inter-individual differences in the effect of use of language. For all dependent variables, this model failed to converge. Diagnostic procedures revealed parameter estimate singularity (i.e., values close to zero) as cause for the convergence problems Bates, Mächler, Bolker, and Walker (2015). Because this analysis suggested that this model was too complex to be estimated properly, we did not test it further.



The internal validity of random effect models is threatened when random effects are specified without testing their statistical justification (Antonakis, Bendahan, Jacquart, & Lalive, 2010). For this reason, prior to estimating our models, we determined the appropriateness of our random effect models using the Breusch-Pagan Lagrangian Multiplier Test (Breusch & Pagan, 1980) and the consistency of the estimator using the Hausman Test (Hausman, 1978) implemented in the *plm* package (Croissant & Millo, 2008) in R (R Core Team, 2017). The Breusch-Pagan Test was significant for all models ( $\chi^2(1) > 133.12, p < .001$ ), justifying the use of random effects. The Hausman Test was non-significant for all models ( $\chi^2(2) < 5.37, p > .068$ ), pointing to the consistency of the estimator. Overall, statistical assumptions for modeling random effects were met.

For each analysis, we specified two models: a null model that excluded, and an alternative model that included, the fixed effect of the predictor *language*. The models were identical in all other respects. We used the likelihood ratio test statistic to compare the two nested models. Parametric bootstrapping ( $n_{\text{bootstrap}} = 1,000$ ) was applied to determine  $p$ -values for the likelihood ratio test (Faraway, 2016). We present marginal  $R^2$  values based on Nakagawa, Johnson, & Schielzeth, 2017, which only consider the variance of the fixed effects. We used the *lme4* package (Bates et al., 2015) in R (R Core Team, 2017) for subsequent analyses.

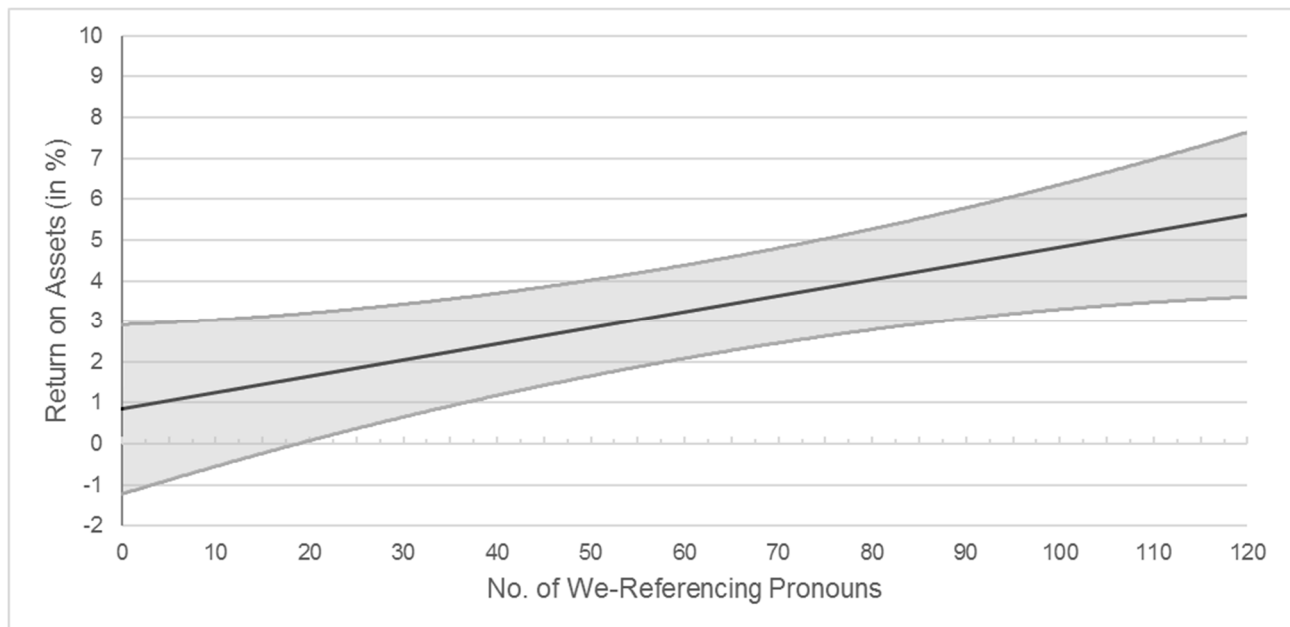
Hypothesis 2 proposes a null effect. This cannot be tested using conventional statistical analysis (i.e., null hypothesis significance testing) because the failure to reject a null hypothesis does not yield evidence in favor of it. We therefore used a Bayesian approach that can compute the odds favoring the null-hypothesis over its alternative hypothesis predicting an effect. Accordingly, to test Hypothesis 2, we additionally determined a Bayes factor (i.e.,  $BF_{01}$ ) for the hypothesis that the regression coefficient for the use of I-referencing language is equal to zero based on a weakly informative prior using the *brms* package (Bürkner, 2017).

## 4. Results

### 4.1 Confirmatory Analyses

#### 4.1.1 Use of we-referencing language.

For our first model, comparison of the null model and the alternative model indicated that CEOs' use of we-referencing language was significantly and positively associated with subsequent ROA ( $\chi^2(1) = 10.676, p = .001, SE = .001, R^2 = .023$ ), raising ROA by 0.047% ( $b \pm .014$  ( $SE\ b$ ) per additional we-referencing pronoun used. This corresponds to an average increase in organizations' net profit of approximately 820,000 EUR ( $SE \approx 245,000$  EUR) per additional we-referencing pronoun. For ROS, the null model and the alternative model did not differ significantly ( $\chi^2(1) = 0.909, p = .344, SE = .015$ ).



**Figure 1.** Relationship Between Use of We-Referencing Language and Return on Assets.

*Note.* Predicted values for return on assets in percent as a function of the number of we-referencing pronouns used in letters to the stakeholders controlled for total number of words. Effects of the random effects of CEO, organization and year (Model 2) are averaged. Upper and lower graphs represent the upper and lower bound of a 95%-confidence interval for the predicted values, respectively.

Model statistics:  $\chi^2(1) = 8.019, p = .003, SE = .002, \Delta R^2 = .017, b = 0.040, SE\ b = .014$

For the second model, we added *year* as random effect. As shown in Figure 1, this yielded substantially identical results. Specifically, comparison of the null model and the alternative model revealed a significant relationship of CEOs' we-referencing language and ROA ( $\chi^2(1) = 8.019$ ,

$p = .003$ ,  $SE = .002$ ,  $\Delta R^2 = .017$ ). Thus, the association between we-referencing language and subsequent ROA was not influenced by the year and can be generalized beyond the period in our sample. The strength and direction of the obtained coefficient is also similar to that of our first analysis ( $b = 0.040$ ,  $SE = .014$ ). Again, the comparison of a null model and the alternative model did not relate to ROS ( $\chi^2(1) = 0.613$ ,  $p = .458$ ,  $SE = .016$ ). The results of the second set of models are summarized in Table 2.

#### 4.1.2 Use of I-referencing language.

We ran the same set of analyses for I-referencing language. For our first model (i.e., random factors for CEO and organization), neither ROA ( $\chi^2(1) = 0.573$ ,  $p = .464$ ,  $SE = .016$ ) nor ROS ( $\chi^2(1) = 0.314$ ,  $p = .573$ ,  $SE = .016$ ) were related to I-referencing language. The  $BF_{01}$  was 10.49 and 1.96, respectively, suggesting that given these data, the null hypothesis (i.e., a null effect) is more likely to be true than the alternative hypotheses (i.e., an effect). Both outcomes were also unchanged when adding *year* as random factor to the model (ROA:  $\chi^2(1) = 1.705$ ,  $p = .174$ ,  $SE = .012$ ,  $BF_{01} = 8.96$ ; ROS:  $\chi^2(1) = 0.630$ ,  $p = .415$ ,  $SE = .016$ ,  $BF_{01} = 2.18$ ).

## 4.2 Exploratory Analyses

We ran additional analyses to test the generalizability of the results. First, we introduced an alternative predictor variable based on the ratio of the total number of words to the number of pronouns. Second, we excluded the years of the financial crisis (2008-2009) from our sample. Third, we identified and excluded outliers. Fourth, we tested the effects of language on an additional accounting-based outcome variable: *sales per employee*. Fifth, we tested the reverse relationship, that is financial performance predicting CEOs' use of we-referencing language.

**Table 2.** Estimated Parameters of Linear-Mixed Effects Models Predicting ROA and ROS from CEOs' Use of We-Referencing Language.

| Variable                         | Outcome        |                |                     |                     |
|----------------------------------|----------------|----------------|---------------------|---------------------|
|                                  | ROA            |                | ROS                 |                     |
|                                  | Model (0)      | Model (1)      | Model (0)           | Model (1)           |
| Intercept                        | 3.979 (0.840)  | 3.789 (0.823)  | 11.359 (2.579)      | 11.168 (2.579)      |
| <i>Fixed Effects</i>             |                |                |                     |                     |
| Use of we-referencing language   | –              | 0.040 (0.014)  | –                   | 0.027 (0.034)       |
| Total no. of words in letter     | -0.001 (0.001) | -0.003 (0.001) | -0.000 (0.001)      | -0.001 (0.002)      |
| <i>Random Effects (Variance)</i> |                |                |                     |                     |
| CEO                              | 8.672 (2.945)  | 9.134 (3.022)  | 22.188 (4.710)      | 21.331 (4.619)      |
| Organization                     | 3.229 (1.797)  | 2.672 (1.635)  | 109.350<br>(10.457) | 109.116<br>(10.446) |
| Year                             | 1.238 (1.113)  | 1.059 (1.029)  | 2.092 (1.446)       | 1.922 (1.386)       |
| Residual                         | 9.876 (3.143)  | 9.663 (3.108)  | 63.345 (7.959)      | 63.540 (7.971)      |
| <i>Evaluation</i>                |                |                |                     |                     |
| -2 LogLik                        | 2089.6         | 2081.4         | 2780.2              | 2779.6              |
| AIC                              | 2101.5         | 2095.5         | 2792.3              | 2793.6              |
| BIC                              | 2125.1         | 2123.0         | 2815.9              | 2821.2              |
| $\Delta\chi^2$ ( $df = 1$ )      |                | 8.019          |                     | 0.613               |
| $p$ ( $SE$ )                     |                | .003 (.002)    |                     | .458 (.016)         |
| $\Delta R^2$                     |                | .017           |                     | .001                |

*Note.*  $N = 378$  letters by 73 CEOs of 30 organizations from a period of 16 years (2000-2016). ROA = return on assets. ROS = return on sales. *Model (0)* refers to the null model. *Model (1)* refers to the final model. For *Fixed Effects* standard error in parentheses. For *Random Effects* standard deviation in parentheses.

#### 4.2.1 Ratio of I- and we-references to total words

To test the robustness of our results, we calculated the number of words in a letter per pronoun by dividing the total number of words by the number of I- and we-referencing pronouns, respectively. For our first model (i.e., the random effect for CEO and organization), as expected, the greater the ratio of total words to number of we-referencing pronouns, the smaller the organization's ROA ( $b = -.089$ ;  $\chi^2(1) = 14.731$ ,  $p = .006$ ,  $SE = .002$ ,  $\Delta R^2 = .025$ ). Again, there was no association with subsequent ROS ( $\chi^2(1) = 7.491$ ,  $p = .530$ ,  $SE = .016$ ). For our second model (i.e., adding a

random factor for year), results were again robust and significant for ROA ( $b = -.086$ ;  $\chi^2(1) = 14.665$ ,  $p = .011$ ,  $SE = .003$ ,  $\Delta R^2 = .021$ ) but non-significant for ROS ( $\chi^2(1) = 7.344$ ,  $p = .612$ ,  $SE = .015$ ).

For I-referencing language, in 50 cases, CEOs did not use first personal pronouns in their letter, which reduced the sample size to 328. The ratio of total words to I-referencing pronouns was not associated with ROA in any of the models ( $\chi^2(1) < 1.010$ ,  $p > .341$ ,  $BF_{01} > 197.87$ ) or ROS ( $\chi^2(1) < 0.850$ ,  $p > .372$ ,  $BF_{01} > 184.26$ ).

#### 4.2.2 Financial crisis

The financial crisis of 2007 and its aftermath resulted in a severe collapse of the global economy that affected all DAX companies. Yet while organizations' financial performance was heavily affected by this crisis it was clearly beyond CEOs' control. For this reason, we excluded the years 2008 and 2009 ( $n = 54$ ) from our sample for this set of analyses ( $n = 324$ ). Overall, however, this had limited impact on the results, and the pattern of findings did not change.

#### 4.2.3 Outliers

We identified outliers for each model based on Cook's distance measure ( $D_i$ ; Cook, 1977). We used cut-off values following Fox (2016; cut-off values for model 1: .0107 and model 2: .0108). Cases identified as outliers were excluded from subsequent analyses.

With respect to we-referencing language, the results for ROA (both models:  $n = 361$ ) were similar in direction and magnitude to the full sample tests (model 1:  $\chi^2(1) = 11.773$ ,  $p < .001$ ,  $SE = 0.0001$ ,  $b = 0.036$ ,  $\Delta R^2 = .020$ ; model 2:  $\chi^2(1) = 6.519$ ,  $p = .009$ ,  $SE = 0.003$ ,  $b = 0.025$ ,  $\Delta R^2 = .010$ ). Again, there was no significant relationship with subsequent ROS (model 1:  $\chi^2(1) = 3.693$ ,  $p = .052$ ,  $SE = 0.007$ ,  $n = 364$ ; model 2:  $\chi^2(1) = 1.684$ ,  $p = .208$ ,  $SE = 0.013$ ,  $n = 360$ ).

In our reduced sample, I-referencing language was significantly and negatively related to subsequent ROA in both sets of analyses (model 1:  $\chi^2(1) = 4.302$ ,  $p = .037$ ,  $SE = 0.006$ ,  $b = -.066$ ,  $\Delta R^2 = .008$ ,  $n = 365$ ; model 2:  $\chi^2(1) = 7.242$ ,  $p = .006$ ,  $SE = 0.002$ ,  $b = -.084$ ,  $\Delta R^2 = .014$ ,  $n = 364$ ). Bayes factors also indicated evidence in favor of the regression coefficient being negative (rather

than null or positive) for both models ( $BF_{01} = 53.05$  and  $209.53$ ). This corresponds to a reduction of organization's net profit of approximately 1.1 and 1.5 million Euro ( $SE \approx 577,000$  Euro) per additional pronoun, respectively. At the same time, I-referencing language did not affect ROS ( $n = 362$ ;  $\chi^2(1) < 0.253$ ,  $p > .603$ ,  $BF_{01} > 3.14$ ).

#### 4.2.4 Sales per employee

We tested one additional indicator of accounting-based organizational performance, namely *sales per employee* (e.g., Bhattacharya, Gibson, & Doty, 2005; Thomas, Litschert, & Ramaswamy, 1991).<sup>6</sup> This constructive replication helps to test the robustness of our results across variations in measurement (Eden, 2002; Richard et al., 2009). We calculated this indicator by dividing the total value of sales (in Euros) by the number of an organization's employees in that year. This analysis revealed a positive and significant effect of we-referencing language on *sales per employee* in both the first ( $\chi^2(1) = 3.814$ ,  $p = .054$ ,  $SE = 0.007$ ,  $\Delta R^2 = .002$ ,  $b = 753.12$ ) and the second model ( $\chi^2(1) = 3.649$ ,  $p = .058$ ,  $SE = 0.007$ ,  $\Delta R^2 = .002$ ,  $b = 724.15$ ). This indicated that *sales per employee* increased by 724 Euros in a year for a CEO's every additional we-referencing pronoun. With an average of about 131,000 employees in DAX organizations ( $\bar{n} = 130.975$ ), this corresponds to an increase of total sales by approximately 99 Million Euros per additional we-reference. I-referencing language, on the other hand, was not associated with subsequent *sales per employee* ( $\chi^2(1) < 0.968$ ,  $p > .372$ ,  $BF_{01} > 1.67$ ).

#### 4.2.5 Test of reverse relationship

Theoretically, it is plausible that recent success influences an individual's identification with a group. Accordingly, CEOs may more strongly identify—and express this through the use of we-referencing language—as a function of financial performance. To test this reverse relationship, we regressed the number of we-references on financial performance in the previous year. The variance of the random effects *year* and *organization* were zero for models with ROA and ROS as predictor.

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<sup>6</sup> This was the only exploratory dependent variable that we tested.

Consequently, these variables were dropped from the models. The relationship of ROA and use of we-referencing language was significantly positive ( $\chi^2(1) = 15.859, p < .001, SE = 0.0001, \Delta R^2 = .013, b = 0.693$ ). However, it was not for ROS ( $\chi^2(1) = .426, p = .525, SE = 0.016$ ) or sales per employee ( $\chi^2(1) = .058, p = .831, SE = 0.012$ ).

## 5. Discussion

This study provides evidence that CEOs' use of we-referencing language is positively associated with higher organizational performance. This association was found across two key accounting-based financial performance indicators: return on assets and sales per employee. There was no evidence of a positive association with return on sales in this sample. Why we obtained evidence for the hypothesized relationship for only two of the three indicators is not clear. One potential reason may be that CEOs' strategies and management practices are more concerned with improving the organization's efficiency (i.e., return on assets) rather than with the revenue on goods sold (i.e., return on sales; Richard et al., 2009). This is an issue that will be important for future research to resolve. Furthermore, results show that CEOs' I-referencing language was not associated with (based on Bayesian statistics) and, in one case (i.e., after exclusion of outliers), was negatively associated with return on assets (based on null hypothesis significance testing). Supporting predictions derived from a growing body of social identity work in organizations (Ashforth & Mael, 1989; Haslam, 2004; Hogg & Terry, 2000), the present findings show that CEOs who think and speak in collective terms lead more successful organizations as indicated by objective financial performance data.

Our research offers a new perspective on strategic leaders and the ways in which they can engage in leadership. Most particularly, it challenges our understanding of what CEOs need to do in order to be effective. In many ways, *as individuals* CEOs may be unlike others and possess unique qualities that they do not share with any of their potential followers (Finkelstein et al., 2009). Yet, while this may be true, our research suggests that this is not necessarily what makes them effective.

Instead, CEOs can also be seen as group members and it is by demonstrating that they are one of ‘us’, they are able to influence other group members in ways that motivate them to contribute to shared group goals (Haslam et al., 2011). These results point to the importance of CEOs acting as *identity entrepreneurs* who represent and create a shared identity (i.e., the shared values, norms, and beliefs of their organization; Reicher et al., 2005). To the extent that leaders define and emphasize a shared sense of organizational identity, this in turn may help make this identity salient for other organizational members (Riantoputra, 2010). This is something CEOs can attempt to do themselves through general communication (of the form studied here) or personal contact, but it is also something that can be achieved by ambassadors who speak to (and for) the group on their behalf (Finkelstein et al., 2009; e.g., other members of their top management team, Voss, Cable, & Voss, 2006).

As well as speaking to the literature on characteristics of effective CEOs, this research expands upon previous work informed by the social identity approach to leadership (e.g., Ellemers et al., 2004; Haslam et al., 2011; van Knippenberg & Hogg, 2003). Previous organizational research in this tradition has tended to focus on followers’ evaluations of leaders (e.g., perceived trust or perceived effectiveness; Barreto & Hogg, 2017) but considerably less on material outcomes of leadership (e.g., organizational performance). At the same time, although research by Steffens and Haslam (2013) has examined the effect of we-referencing language on leader effectiveness (i.e., election victory), studies of identity entrepreneurship have largely involved qualitative studies of political leadership (e.g., Augoustinos & de Garis, 2012; Gleibs et al., 2017; Reicher & Hopkins, 2001). Expanding this approach to the strategic level of business leadership, the current study provides evidence of the impact of CEOs’ social identity-related behavior on material organizational outcomes. The present study advances our understanding of the relationship between social identity and performance by, to our knowledge, being the first study to provide evidence of the contribution of CEOs’ identity leadership to objective organizational performance.



On the basis of the findings, one might infer that CEOs (and other leaders) simply need to use more we-references in their communication to become more effective. Although there is evidence of a positive association between we-referencing language and organizational success, it is possible that by increasing their use of we-referencing language, leaders will not necessarily reap lasting benefits. Although carefully crafting one's pronouncements is important and can be effective, leaders will ultimately also be challenged to turn words into action (Haslam et al., 2011). If they see themselves and speak as individuals, this is unlikely to yield fruitful returns. Moreover, if they speak for a collective that does not exist or for which they are not representative of, then this too seems likely do more harm than good.

Thus, in a first step (see Haslam et al., 2017), it is important for leaders on all organizational levels to reflect on the role that a shared social and organizational identity plays for organizations (Haslam et al., 2003; Haslam, 2004) and for leadership in particular (Haslam et al., 2011; van Knippenberg & Hogg, 2003). Following this, leaders may reflect on who the people are who belong (and who do not belong) to the group they want to lead and what the group is (and is not) about (i.e., its norms, ideals, and values). This should allow leaders to engage in identity entrepreneurship (e.g., through their use of we-referencing language as discussed here) in ways that are more likely to help clarify and shape the group's understanding of goals and aspirations.

## 5.1 Limitations and Directions for Future Research

Three key strengths of this research are that it was pre-registered (such that the study design and hypotheses were specified prior to data collection and analysis), collected data from organizations for a period of sixteen years, and relied on unobtrusive objective measures. However, the archival approach we adopted also has limitations—of which three stand out. First, operationalizing organizational financial performance is not straightforward (Agle et al., 2006; Richard et al., 2009). Indeed, every indicator has its own limitations and each sheds only partial light on organizational performance as a whole. Here, following Agle and colleagues' (2006)

recommendations, we focused on accounting-based indicators of organizational performance as these can be directly influenced by CEOs. Yet, taking this forward, there could be merit in examining market-based (e.g., Tobin's Q) and other (e.g., corporate social performance) indicators of performance. For example, although we believe them to be less relevant to the ideas we were seeking to test in the present research (because our focus was on intra-organizational responses to CEOs), market-based indicators might provide insight into external perceptions of organizations. Relatedly, it would be interesting to explore whether (and how) external stakeholders react to CEOs' use of we-referencing language as a function of their identity-based relationship to the organization—as their reactions might differ from those of employees (König, Mammen, Luger, Fehn, & Enders, 2018).

Second, we were unable to explore the psychological processes that link CEOs' use of we-referencing language to financial performance. Moreover, although the present research provides evidence for a predictive association of CEOs' use of we-referencing language at the beginning and financial performance at the end of a year, as Steffens and Haslam (2013) observe, there is also likely to be a reflexive dimension to this relationship. That is, it seems likely—and our explorative analyses point to this—that leaders who feel as being representative of and supported by the group—and hence more likely to be successful—are also more likely to engage in identity entrepreneurship. This bi-directional process speaks to the fact that leaders not only shape the social reality of organizational members but are also influenced by it (Haslam et al., 2011). This again is a possibility to be further explored in future research.

A third limitation relates to our reliance on CEOs' letters in annual reports as the focus of our analysis. We chose to examine these because the CEOs' letter to stakeholders is part of the non-statutory section of annual reports that is unaudited and therefore gives CEOs the freedom to articulate their agenda for their organization in their own words. Unlike many previous studies (e.g., Smith & Taffler, 2000), our analysis relied on an objective automated word count which is unobtrusive and eliminates researcher bias. Nevertheless, future research could explore additional

aspects of identity-related speech through more fine-grained analysis of CEO pronouncements (e.g., examining linguistic strategies for presenting oneself as prototypical of the group; Augoustinos & de Garis, 2012).

## 5.2 Concluding comment

The present work developed the notion of CEOs as identity leaders—that is, as leaders who inspire positive organizational outcomes by cultivating a sense of ‘we’ among organizational members. Providing support for this idea, results across two core financial performance indicators show that CEOs’ we-referencing language is positively associated with subsequent financial performance of their organization. This suggests that, in line with the quote from Peter Drucker which prefaced this paper, leaders are likely to be effective not by asserting their personal identity through references to ‘I’ but by cultivating collective identity through references to ‘we’ and ‘us’. Ultimately, though, as Drucker intimates, the key to success here seems likely to derive from the fact that the leaders in question are not simply parroting a concern for the group but really mean it.

## 6. References

- Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., & Srinivasan, D. (2006). Does CEO charisma matter?: An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal*, 49, 161–174. doi:10.5465/AMJ.2006.20785800
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, 21, 1086–1120. doi:10.1016/j.leaqua.2010.10.010
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14, 20–39. doi:10.2307/258189
- Augoustinos, M., & de Garis, S. (2012). ‘Too black or not black enough’: Social identity complexity in the political rhetoric of Barack Obama. *European Journal of Social Psychology*, 42, 564–577. doi:10.1002/ejsp.1868
- Banks, G. C., Field, J. G., Oswald, F. L., O’Boyle, E. H., Landis, R. S., Rupp, D. E., & Rogelberg, S. G. (2018). Answers to 18 questions about open science practices. *Journal of Business and Psychology*. Advance online publication. doi:10.1007/s10869-018-9547-8
- Barreto, N. B., & Hogg, M. A. (2017). Evaluation of and support for group prototypical leaders: A meta-analysis of twenty years of empirical research. *Social Influence*, 12, 41–55. doi:10.1080/15534510.2017.1316771
- Bates, D. M., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4 (version 1.1-17). *Journal of Statistical Software*, 67, 1–48. doi:10.18637/jss.v067.i01
- Bennis, W. (1999). The end of leadership: Exemplary leadership is impossible without full inclusion, initiatives, and cooperation of followers. *Organizational Dynamics*, 28, 71–79. doi:10.1016/S0090-2616(00)80008-X
- Bhattacharya, M., Gibson, D. E., & Doty, D. H. (2005). The effects of flexibility in employee skills, employee behaviors, and human resource practices on firm performance. *Journal of Management*, 31, 622–640. doi:10.1177/0149206304272347
- Boal, K. B., & Hooijberg, R. (2001). Strategic leadership research: Moving on. *The Leadership Quarterly*, 11, 515–549. doi:10.1016/S1048-9843(00)00057-6
- Boivie, S., Lange, D., McDonald, M. L., & Westphal, J. D. (2011). Me or we: The effects of CEO organizational identification on agency costs. *Academy of Management Journal*, 54, 551–576. doi:10.5465/amj.2011.61968081

- Booth, T., Murray, A. L., Overduin, M., Matthews, M., & Furnham, A. (2016). Distinguishing CEOs from top level management: A profile analysis of individual differences, career paths and demographics. *Journal of Business and Psychology*, 31, 205–216.  
doi:10.1007/s10869-015-9416-7
- Breusch, T. S., & Pagan, A. R. (1980). The Lagrange Multiplier Test and its applications to model specification in econometrics. *The Review of Economic Studies*, 47, 239–253.  
doi:10.2307/2297111
- Brewer, M. B., & Gardner, W. (1996). Who is this “we”? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71, 83–93.  
doi:10.1037/0022-3514.71.1.83
- Bürkner, P.-C. (2017). brms: An R package for Bayesian multilevel models using Stan. *Journal of Statistical Software*, 80, 1–28. doi:10.18637/jss.v080.i01
- Carton, A. M., Murphy, C., & Clark, J. R. (2014). A (blurry) vision of the future: How leader rhetoric about ultimate goals influences performance. *Academy of Management Journal*, 57, 1544–1570. doi:10.5465/amj.2012.0101
- Castanias, R. P., & Helfat, C. E. (1991). Managerial resources and rents. *Journal of Management*, 17, 155–171. doi:10.1177/014920639101700110
- Chatterjee, A., & Hambrick, D. C. (2007). It’s all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52, 351–386. doi:10.2189/asqu.52.3.351
- Cook, R. D. (1977). Detection of influential observation in linear regression. *Technometrics*, 19(1), 15–18.
- Croissant, Y., & Millo, G. (2008). Panel data econometrics in R: The plm Package. *Journal of Statistical Software*, 27. doi:10.18637/jss.v027.i02
- Crossland, C., & Hambrick, D. C. (2007). How national systems differ in their constraints on corporate executives: A study of CEO effects in three countries. *Strategic Management Journal*, 28, 767–789. doi:10.1002/smj.610
- Crossland, C., & Hambrick, D. C. (2011). Differences in managerial discretion across countries: How nation-level institutions affect the degree to which CEOs matter. *Strategic Management Journal*, 32, 797–819. doi:10.1002/smj.913

- De Cremer, D., & van Dijk, E. (2005). When and why leaders put themselves first: Leader behaviour in resource allocations as a function of feeling entitled. *European Journal of Social Psychology*, 35, 553–563. doi:10.1002/ejsp.260
- Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., & Hu, J. (2014). Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives. *The Leadership Quarterly*, 25, 36–62. doi:10.1016/j.leaqua.2013.11.005
- Drucker, P. F. (1992). *Managing the Non-Profit Organization: Practices and Principles*. Oxford: Butterworth Heinemann.
- Eden, D. (2002). Replication, meta-analysis, scientific progress, and AMJ's publication policy. *Academy of Management Journal*, 45, 841–846. doi:10.5465/AMJ.2002.7718946
- Ellemers, N., de Gilder, D., & Haslam, S. A. (2004). Motivating individuals and groups at work: A social identity perspective on leadership and group performance. *Academy of Management Review*, 29, 459–478. doi:10.5465/AMR.2004.13670967
- Faraway, J. J. (2016). *Extending the Linear Model with R: Generalized Linear, Mixed Effects and Nonparametric Regression Models* (2<sup>nd</sup> ed.). Boca Raton: CRC Press.
- Finkelstein, S., Hambrick, D. C., & Cannella, A. A. (2009). *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards*. New York, NY: Oxford University Press.
- Fiol, C. M. (2001). Revisiting an identity-based view of sustainable competitive advantage. *Journal of Management*, 27, 691–699. doi:10.1177/014920630102700606
- Fiol, C. M. (2002). Capitalizing on paradox: The role of language in transforming organizational identities. *Organization Science*, 13, 653–666. doi:10.1287/orsc.13.6.653.502
- Fox, J. (2016). *Applied Regression Analysis and Generalized Linear Models* (3<sup>rd</sup> ed.). Los Angeles: Sage.
- Giessner, S. R., & van Knippenberg, D. (2008). “License to fail”: Goal definition, leader group prototypicality, and perceptions of leadership effectiveness after leader failure. *Organizational Behavior and Human Decision Processes*, 105, 14–35. doi:10.1016/j.obhdp.2007.04.002
- Giessner, S. R., van Knippenberg, D., & Sleebos, E. (2009). License to fail?: How leader group prototypicality moderates the effects of leader performance on perceptions of leadership effectiveness. *The Leadership Quarterly*, 20, 434–451. doi:10.1016/j.leaqua.2009.03.012

- Gleibs, I. H., Hendricks, K., & Kurz, T. (2017). Identity mediators: Leadership and identity construction in campaign speeches of American presidential candidates' spouses. *Political Psychology, 105*, 564. doi:10.1111/pops.12448
- Gupta, A., Nadkarni, S., & Mariam, M. (2018). Dispositional sources of managerial discretion: CEO ideology, CEO personality, and firm strategies. *Administrative Science Quarterly*. Advance online publication. doi:10.1177/0001839218793128
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review, 32*, 334–343. doi:10.2307/20159303
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*, 193–206. doi:10.2307/258434
- Haslam, S. A. (2004). *Psychology in Organizations: The Social Identity Approach*. London: Sage.
- Haslam, S. A., & Platow, M. J. (2001). The link between leadership and followership: How affirming social identity translates vision into action. *Personality and Social Psychology Bulletin, 27*, 1469–1479. doi:10.1177/01461672012711008
- Haslam, S. A., Postmes, T., & Ellemers, N. (2003). More than a metaphor: Organizational identity makes organizational life possible. *British Journal of Management, 14*, 357–369. doi:10.1111/j.1467-8551.2003.00384.x
- Haslam, S. A., & Reicher, S. (2007). Identity entrepreneurship and the consequences of identity failure: The dynamics of leadership in the BBC prison study. *Social Psychology Quarterly, 70*, 125–147. doi:10.1177/019027250707000204
- Haslam, S. A., Reicher, S. D., & Platow, M. J. (2011). *The New Psychology of Leadership: Identity, Influence and Power*. Hove: Psychology Press.
- Haslam, S. A., Ryan, M. K., Kulich, C., Trojanowski, G., & Atkins, C. (2010). Investing with prejudice: The relationship between women's presence on company boards and objective and subjective measures of company performance. *British Journal of Management, 21*, 484–497. doi:10.1111/j.1467-8551.2009.00670.x
- Haslam, S. A., Steffens, N. K., Peters, K., Boyce, R. A., Mallett, C. J., & Fransen, K. (2017). A social identity approach to leadership development. *Journal of Personnel Psychology, 16*, 113–124. doi:10.1027/1866-5888/a000176
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica, 46*, 1251–1271. doi:10.2307/1913827

- Hogg, M. A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review*, 5, 184–200. doi:10.1207/S15327957PSPR0503\_1
- Hogg, M. A., & Terry, D. J. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review*, 25, 121–140. doi:10.2307/259266
- Hogg, M. A., van Knippenberg, D., & Rast III, D. E. (2012). The social identity theory of leadership: Theoretical origins, research findings, and conceptual developments. *European Review of Social Psychology*, 23, 258–304. doi:10.1080/10463283.2012.741134
- Hornsey, M. J., Blackwood, L., & O'Brien, A. (2005). Speaking for others: The pros and cons of group advocates using collective language. *Group Processes & Intergroup Relations*, 8, 245–257. doi:10.1177/1368430205053941
- Huettermann, H., Doering, S., & Boerner, S. (2017). Understanding the development of team identification: A qualitative study in UN peacebuilding teams. *Journal of Business and Psychology*, 32, 217–234. doi:10.1007/s10869-016-9446-9
- König, A., Mammen, J., Luger, J., Fehn, A., & Enders, A. (2018). Silver bullet or ricochet?: CEOs' use of metaphorical communication and infomediaries' evaluations. *Academy of Management Journal*, 61, 1196–1230. doi:10.5465/amj.2016.0626
- Nakagawa, S., Johnson, P. C. D., & Schielzeth, H. (2017). The coefficient of determination R<sup>2</sup> and intra-class correlation coefficient from generalized linear mixed-effects models revisited and expanded. *Journal of Royal Society Interface*, 14, 20170213. doi:10.1098/rsif.2017.0213
- Platow, M. J., van Knippenberg, D., Haslam, S. A., van Knippenberg, B., & Spears, R. (2006). A special gift we bestow on you for being representative of us: Considering leader charisma from a self-categorization perspective. *British Journal of Social Psychology*, 45, 303–320. doi:10.1348/014466605X41986
- R Core Team. (2017). R: A language and environment for statistical computing: R Foundation for Statistical Computing. Retrieved from <http://www.R-project.org/>
- Reicher, S., & Hopkins, N. (2001). *Self and Nation: Categorization, Contestation, and Mobilization*. London, Thousand Oaks, Calif: Sage.
- Reicher, S. D., Haslam, S. A., & Hopkins, N. (2005). Social identity and the dynamics of leadership: Leaders and followers as collaborative agents in the transformation of social reality. *The Leadership Quarterly*, 16, 547–568. doi:10.1016/j.leaqua.2005.06.007



- Riantoputra, C. D. (2010). Know thyself: Examining factors that influence the activation of organizational identity concepts in top managers' minds. *Group & Organization Management*, 35, 8–38. doi:10.1177/1059601109354804
- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of Management*, 35, 718–804. doi:10.1177/0149206308330560
- Rousseau, D. M. (1998). Why workers still identify with organizations. *Journal of Organizational Behavior*, 19, 217–233. doi:10.1002/(SICI)1099-1379(199805)19:3<217::AID-JOB931>3.0.CO;2-N
- Schuh, S. C., Zhang, X.-a., Egold, N. W., Graf, M. M., Pandey, D., & van Dick, R. (2012). Leader and follower organizational identification: The mediating role of leader behaviour and implications for follower OCB. *Journal of Occupational and Organizational Psychology*, 85, 421–432. doi:10.1111/j.2044-8325.2011.02044.x
- Siemens AG. (2014). *Annual Report 2014: Vision 2020*. We make real what matters. Retrieved from [https://www.siemens.com/annual/14/en/download/pdf/Siemens\\_AR2014.pdf](https://www.siemens.com/annual/14/en/download/pdf/Siemens_AR2014.pdf)
- Smith, M., & Taffler, R. J. (2000). The chairman's statement: A content analysis of discretionary narrative disclosures. *Accounting, Auditing & Accountability Journal*, 13, 624–647. doi:10.1108/09513570010353738
- Steffens, N. K., & Haslam, S. A. (2013). Power through 'us': Leaders' use of we-referencing language predicts election victory. *PloS one*, 8, e77952. doi:10.1371/journal.pone.0077952
- Steffens, N. K., Haslam, S. A., Peters, K., & Quiggin, J. (2018). Identity economics meets identity leadership: Exploring the consequences of elevated CEO pay. *The Leadership Quarterly*. Advance online publication. doi:10.1016/j.leaqua.2018.10.001
- Steffens, N. K., Haslam, S. A., & Reicher, S. D. (2014). Up close and personal: Evidence that shared social identity is a basis for the 'special' relationship that binds followers to leaders. *The Leadership Quarterly*, 25, 296–313. doi:10.1016/j.leaqua.2013.08.008
- Steffens, N. K., Haslam, S. A., Reicher, S. D., Platow, M. J., Fransen, K., Yang, J., . . . Boen, F. (2014). Leadership as social identity management: Introducing the Identity Leadership Inventory (ILI) to assess and validate a four-dimensional model. *The Leadership Quarterly*, 25, 1001–1024. doi:10.1016/j.leaqua.2014.05.002

- Steffens, N. K., Haslam, S. A., Ryan, M. K., & Kessler, T. (2013). Leader performance and prototypicality: Their inter-relationship and impact on leaders' identity entrepreneurship. *European Journal of Social Psychology*, 43, 606–613. doi:10.1002/ejsp.1985
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin (Ed.), *The Social Psychology of Intergroup Relations* (pp. 33–47). Monterey, CA: Brooks/Cole.
- Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, 29, 24–54. doi:10.1177/0261927X09351676
- Thomas, A. S., Litschert, R. J., & Ramaswamy, K. (1991). The performance impact of strategy-manager coalignment: An empirical examination. *Strategic Management Journal*, 12, 509–522. doi:10.1002/smj.4250120704
- Turner, J. C. (1991). *Social Influence*. Milton Keynes: Open University Press.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (Eds.). (1987). *Rediscovering the Social Group: A Self-Categorization Theory*. Oxford: Blackwell.
- Ullrich, J., Christ, O., & van Dick, R. (2009). Substitutes for procedural fairness: Prototypical leaders are endorsed whether they are fair or not. *Journal of Applied Psychology*, 94, 235–244. doi:10.1037/a0012936
- van Dick, R., Hirst, G., Grojean, M. W., & Wieseke, J. (2007). Relationships between leader and follower organizational identification and implications for follower attitudes and behaviour. *Journal of Occupational and Organizational Psychology*, 80, 133–150. doi:10.1348/096317905X71831
- van Knippenberg, B., & van Knippenberg, D. (2005). Leader self-sacrifice and leadership effectiveness: the moderating role of leader prototypicality. *Journal of Applied Psychology*, 90, 25–37. doi:10.1037/0021-9010.90.1.25
- van Knippenberg, D. (2011). Embodying who we are: Leader group prototypicality and leadership effectiveness. *The Leadership Quarterly*, 22, 1078–1091. doi:10.1016/j.leaqua.2011.09.004
- van Knippenberg, D., & Hogg, M. A. (2003). A social identity model of leadership effectiveness in organizations. *Research in Organizational Behavior*, 25, 243–295. doi:10.1016/S0191-3085(03)25006-1
- Voss, Z. G., Cable, D. M., & Voss, G. B. (2006). Organizational identity and firm performance: What happens when leaders disagree about “who we are?”. *Organization Science*, 17, 741–755. doi:10.1287/orsc.1060.0218

- Weiss, M., Kolbe, M., Grote, G., Spahn, D. R., & Grande, B. (2018). We can do it!: Inclusive leader language promotes voice behavior in multi-professional teams. *The Leadership Quarterly*, 29, 389–402. doi:10.1016/j.leaqua.2017.09.002
- Wieseke, J., Ahearne, M., Lam, S. K., & van Dick, R. (2009). The role of leaders in internal marketing. *Journal of Marketing*, 73, 123–145. doi:10.1509/jmkg.73.2.123
- Yammarino, F. J., Salas, E., Serban, A., Shirreffs, K., & Shuffler, M. L. (2012). Collectivistic leadership approaches: Putting the “we” in leadership science and practice. *Industrial and Organizational Psychology*, 5, 382–402. doi:10.1111/j.1754-9434.2012.01467

