



Review

The leadership trilogy: A review of the third decade of *The Leadership Quarterly*

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A B S T R A C T

The present research reviews the most recent ten years, 2010–2019, of the work published in *The Leadership Quarterly* (LQ). We follow on prior decade-focused reviews published in LQ, including the period 1990–1999 (Lowe & Gardner, 2000) and 2000–2009 (Gardner, Lowe, Coglisier, Moss & Mahoney, 2010). The present work complements and expands the first two reviews by documenting how the field has evolved with new characters, methodologies, and theories emerging while others decline and become less relevant. We extend the story of how LQ emerged from a start-up niche journal, evolved into the predominant outlet for leadership research and new theories, gained awareness of a growing need to reduce construct proliferation, and adopted increasingly sophisticated methodological techniques that call into question some of the field's prior research findings.

Introduction

The purpose of this manuscript is to review the most recent ten years, 2010–2019, of the research published in *The Leadership Quarterly*. In preparing this review, we follow on prior decade-focused reviews published in *The Leadership Quarterly* (LQ), including the period 1990–1999 (Lowe & Gardner, 2000) and 2000–2009 (Gardner, Lowe, Moss, Mahoney, & Coglisier, 2010). We maintained key features of past reviews to provide comparability over time while introducing new features and variables, including a revised leadership taxonomy (Meuser et al., 2016), that reflects the evolution of the leadership field over LQ's third decade. In doing so, we address topics and trends which may be of interest to readers of LQ specifically, and more broadly to those who read and publish leadership research across a range of journals.

Ode to the past, prelude to the present

Lowe and Gardner (2000) chronicled, catalogued, and classified the first decade of LQ. Originally conceived by Bernard Bass, Bob House, and Henry Tosi over dinner in 1988, the primary rationales for founding LQ were two-fold. First, it was to provide a focused outlet for the publication of leadership research by scholars from management, psychology, and other disciplines which, at the time, were scattered

over a wide range of journals. Second, it was to provide an interdisciplinary home for leadership research that would create a virtuous cycle of stimulating perspectives across diverse disciplines that would broaden the impact of leadership scholarship to spur cross-disciplinary theoretical and methodological innovations.

In its first decade, LQ published 188 articles ranging from a low of 13 articles in the founding year to a high of 24 articles in the concluding issue of the decade. Nine special issues, spanning a range of topics including 360-degree feedback, diversity, levels of analysis, political leadership, and environmental change, were an important part of attracting manuscripts to LQ in its founding years. Fifty-five percent of the articles were empirical and 46% were theoretical or review pieces. Neo-charismatic approaches (e.g., charismatic leadership, transformational leadership, visionary leadership) were by far the most widely employed theoretical underpinning (34%) in LQ's first decade. The second highest number of articles published in the first ten years did not fall neatly into a specific domain of leadership theory based on the taxonomy in use and thus were classified as “New Directions” (e.g., political leadership, strategic leadership, self-sacrificial leadership). This finding suggested, at least prima facie, that the journal was delivering on the stated purpose of being open to innovation.

In summarizing the progress of LQ over its first decade, Lowe and Gardner (2000) concluded that LQ had: 1) made substantial progress toward its meta-goal of being the leading scholarly journal for

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leadership theory and research (p. 464); and 2) successfully moved from being a new journal to one that was more established for promoting leadership research. The authors suggested that *LQ*'s second decade would offer an important opportunity to solidify the journal's emergent position as a place to publish and obtain the best in leadership research.

In *LQ*'s second decade Gardner et al. (2010) catalogued 353 published articles as compared to 188 in the first decade — an increase of 88%. This significant growth in the number of published articles was achieved by increasing the number of publications per issue and increasing this “quarterly” journal to six issues each year. The number of pages grew from 4501 in the first decade to 7870 in the second decade—an increase of 75%. The increased number of articles and pages did not come at the expense of quality, as the journal's impact factor continued to climb in the second decade, as indicated by the upward trend from 2006 (IF = 1.72), to 2007 (IF = 1.77), and 2008 (IF = 2.21). Once again, special issues played an important role in attracting high quality leadership research to *LQ* with 17 special issues published, a near doubling of the nine in the prior decade. Fifty-five percent of the articles were empirical (it was also 55% in the first decade), and 42% were theoretical or review pieces (as compared to 46% in the first decade), a remarkably consistent pattern over multiple time periods and editors. Neo-charismatic approaches were again the most frequently employed theoretical category with 84 articles published in the second decade as compared to 68 neo-charismatic articles in the first. However, this absolute increase masks the more interesting relative decrease in the influence of the neo-charismatic paradigm which declined to 13% of all articles versus 34% in the first decade. Gardner et al. (2010) observed an even more dramatic change in the proportion of theories categorized as New Directions. The New Directions category exploded from 14% of all articles in the first decade to 44% of all articles in the second. Theoretical perspectives identified as New Directions included: contextual influences on leadership; development and identification of leaders and leadership; ethical, servant, spiritual, and authentic leadership; leading for creativity and innovation; strategic leadership by top executives; leadership in teams and decision groups; political and public leadership; complexity theory of leadership; leadership effects of task, technology, distance, and virtuality; ideological and pragmatic leadership; destructive leadership; and leading change in organizations.

The resurgence of interest in leadership research, spurred in part by the neo-charismatic paradigms, prompted Gardner et al. (2010) to abandon the leadership taxonomy used in the prior decade's review. In an effort to more carefully describe a vibrant field that was experiencing many innovations in theoretical development as well as the methods employed to test those theories, they developed a more contemporary leadership taxonomy, which remains influential in the development of more recent taxonomies of leadership theory (cf. Dinh et al., 2014; Meuser et al., 2016).

The expansion of the journal over its second decade in terms of volume and prominence supports the notion that the journal was delivering on the stated purpose of advancing the understanding of leadership as a phenomenon, how to study it, as well as its practical implications for organizations. In summarizing the progress of *LQ* over its second decade, Gardner et al. (2010) concluded that: 1) the field of leadership was more diverse and robust than at any time in recent decades; 2) there was clear evidence that *LQ* had played an important role in advancing the field theoretically and methodologically; and 3) that *LQ* had solidified its position as the leading outlet focused on publishing rigorous leadership research.

We include this brief overview of *LQ*'s journey over the first two decades because it provides the context for grounding our current review. In this review we seek, as our focal purpose, to describe the content of the journal over the period 2010–2019. While our primary focus is on the content in the most recent decade, we also seek to compare, on several dimensions, the content of the journal's third

decade with that of prior decades. We make this historical comparison because a secondary purpose of our manuscript is to continue telling the story of the evolution of *The Leadership Quarterly*, a story where the first two chapters have been written in ten-year increments (Gardner et al., 2010; Lowe & Gardner, 2000). In doing so, we seek to provide updated answers to the broad research questions we have asked in prior reviews such as: What is published in *LQ* and by whom?; Who has provided editorial leadership for the journal and how has the composition (disciplinary and structurally) changed during the decade? What are the topical characteristics (methods and design) and content (theories and constructs) of the research that appears in *LQ*?; Is *LQ* the primary outlet for quality leadership research? To what extent has *LQ* met its mission? What is the trajectory of the journal and what might that vantage point suggest about the next decade of research that will be published in *LQ*? In addition, we ask new questions, including: Where does leadership data come from? What proportion of articles employ multiple methods/studies?

In preparing this review, we are mindful that the leadership field has been fortunate to have multiple excellent comprehensive reviews of the leadership literature in recent years. Dinh et al. (2014) utilized a process-oriented framework to review 752 leadership articles published in ten leading journals over a thirteen-year period (2000–2012). In doing so, their focus was on developing a better taxonomy of leadership theory that considered both forms of emergence and levels of analysis. Meuser et al. (2016) reviewed 864 leadership articles published in ten top journals over a fourteen-year period (2000–2013). Using graphic network analysis, they drew conclusions about the state of theoretical integration in leadership research and identified theoretical neighborhoods where focal and supporting leadership theories tended to congregate. Zhu, Song, Zhu, and Johnson (2019) conducted a bibliometric analysis of co-citation and co-occurrence in 6528 leadership articles over a 28-year period (1990 to 2017) in an effort to describe the developmental trajectory of leadership research over time in terms of significant authors and journals. Zhao and Li (2019) likewise conducted a bibliographic analysis of leadership theories over the same 28-year time span, but rather than manually coding documents to create a single map of 18 leadership theories, they “used software tools to code and organize 2,115 leadership articles authored by 3,190 authors and published in 10 academic journals.” (p. 396) Next, they used the VOSviewer, version 1.6.6 (van Eck & Waltman, 2017, October 23) to visually represent the inductively-derived taxonomies of 56 popular leadership research topics, as well as the collaboration networks of 160 highly productive leadership scholars. Lord, Day, Zaccaro, Avolio, and Eagly (2017) reviewed leadership research published in the *Journal of Applied Psychology* over a 99-year period (1917 to 2015). Rather than comprehensively including all articles published over that period as was done in the other reviews just described, the approach of Lord et al. was “selective, emphasizing those publications that represented or sparked unique turns and conceptual developments in the literature....a subjective task that drew on our combined experience in the leadership field” (p. 434).

While these reviews are useful and influential, the current review is substantively different in terms of scope, scale, and focus. The scope of this manuscript, in terms of variables of interest, is distinct from these other reviews which focused squarely on developing a theoretical taxonomy (Dinh et al., 2014), providing a network of co-citations (Zhu et al., 2019), mapping the field of leadership using artificial intelligence (Zhao & Li, 2019), examining the level of theoretical integration (Meuser et al., 2016), or looking for seminal inflection points in the long range trajectory of a journal (Lord et al., 2017). In coding for leadership theory, our work resembles that of Dinh et al. (2014), Meuser et al. (2016), and Zhu et al. (2019), but we also code for a range of variables including study design, sample characteristics, methods employed (e.g. CFA, r_{wg} , measure adaption), and author attributes, to name just a few, that were not considered in those reviews. Our article is similar to Lord et al. (2017) in that we focus on a single journal,

highlight some of the most-cited work, and describe the contents of the journal using theoretical themes, but our approach is markedly different as we comprehensively code each article (albeit in a much shorter time frame) and weight each article in a dispassionate manner in our content analysis.

We are able to achieve increased scope, as compared to other reviews through more focus (a single journal) and by reduced scale (coding a decade of articles rather than 13, 14, 28 or 99 years). We also differentiate our review by noting that Dinh et al. (2014) and Meuser et al. (2016) have 2012 and 2013 respectively as their end-of-analysis years. So, our sample periods have relatively little overlap. Collectively, our review is substantially differentiated from other recent reviews of the literature not only in scope and focus, but also by the time period reviewed. Finally, because our review of *LQ*'s third decade follows a similar approach to that of the reviews for its first and second decades, we can report on trends in this journal over a third point in time.

Having situated the current review of *LQ*'s most recent decade in the context of prior decade reviews and recent reviews of the leadership literature, we turn to a description of the approach and content of this review. Multiple methods were used to prepare this review including quantitative techniques and qualitative analyses. Our content analysis examines the type of article (theory, empirical, and methods), contributors (gender, discipline, institutional affiliation, and location), theoretical foundations, research strategies, sample type, data collection measures and methods, and analytical procedures across the decade. Embedded in this discussion are an assessment of the top institutional contributors; the number, focus, and role of special issues; and a citation analysis of the decade's most cited articles. Following from the content analysis, we provide summary-level observations about the content and trajectory of research published in *LQ* over the most recent decade, comparing that to the previous two decades of *LQ*. We conclude with directions for future research by revisiting the recommendations offered in the prior *LQ* decade reviews and assess the extent to which those recommendations have been fulfilled by the field. We also share observations from the three scholars who served as editors during *LQ*'s third decade on the trends in the topics and methods used to extend our knowledge of leadership theory and practice.

Methods

We coded many of the variables found in the Lowe and Gardner (2000), Gardner et al. (2010), and Dinh et al. (2014) reviews, while adding some new features. We coded *article type*, expanding on the typology of Dinh et al. (2014): qualitative, quantitative, theory, method, special issue, and review issue. We utilized a slightly modified version of the Gardner et al. *typology of methods* as expanded by Dinh et al.: computer simulation, content analysis, diary study/experience sampling method (ESM), lab experiment, field study (primary data), field survey (secondary data), field experiment, experimental simulation, quasi-experiment, judgment task, meta-analysis (quantitative review), and review (non-meta-analysis), to which we added convenience sampling, interviews, observation, and archival data. Rather than use the Gardner et al. case study/qualitative study category, we employed the expanded typology of Cresswell and Poth (2018, p. 82) for *qualitative designs*: 1) narrative, 2) phenomenological, 3) grounded theory, 4) ethnographic, and 5) case study. We followed the *quantitative analytical method* typology employed by Scandura and Williams (2000), Gardner et al. (2010), and Dinh et al. (2014). Specifically, we coded for whether the article used: 1) simple statistics only (e.g., correlation); 2) analysis of variance (ANOVA/MANOVA) or analysis of covariance (ANCOVA/MANCOVA); 3) computer simulations (e.g., bootstrapping studies); 4) linear regression; 5) linear techniques for categorical dependent variables; 6) structural equation modeling (SEM)/path analysis; 7) multiple-levels-of analysis techniques (e.g., hierarchical linear modeling [HLM], Multi-level SEM [MSEM]); 8) meta-analytic techniques (e.g., Hunter & Schmidt, 2004); 9) non-parametric techniques; and 10) time

series/event history techniques (e.g., latent growth or change modeling). After an initial round of coding, we expanded this typology to include: 11) two-stage least squares (2SLS; (Antonakis, Bendahan, Jacquart, & Lalive, 2010)); 12) (social) network analyses (e.g., computing network centrality and/or using UCINET); 13) curvilinear analyses (e.g., Edwards & Cable, 2009); and 14) dominance/relative weight analysis.

New to this decade review, we elected to explore *construct validation* over the last decade. For this reason, we moved and separated factor analysis into two categories: 1) confirmatory factor analysis (CFA); and 2) exploratory factor analysis (EFA). To this, we added: 3) internal consistency reliability estimates (e.g., Cronbach's alpha); 4) interrater reliability (IRR); 5) r_{wg} (James, Demaree, & Wolfe, 1984); 6) ICC(1) (Bliese, Halverson, & Schriesheim, 2002); 7) ICC(2) (Bliese et al., 2002); 8) within and between analysis (WABA; Yammarino, 1998); 9) test/retest reliability; 10) split-half reliability; 11) Cohen's kappa; 12) consensus coding. We also coded: 1) convergent, 2) discriminant, 3) face, and 4) predictive validities, but only if the authors discussed these explicitly. We recorded if the authors reported *reliability information* for: 1) all relevant variables, 2) only some relevant variables, or if reliability was 3) not applicable for some or 4) not applicable for all variables. Continuing the trend of interest in *measures*, we also recorded if the authors reported employing: 1) existing measures, 2) modified existing measures, 3) a new measure created for the study, 4) difference scores, or 5) unobtrusive measures.

Another new feature of our review that differentiates it from others involves coding where, when, and from whom authors acquired their data. We develop the following *data source* typology: 1) self/focal (e.g., self-rated personality or performance); 2) peer of focal (e.g., questions about a co-worker who is not a supervisor or subordinate); 3) follower of focal (e.g., leader-rated follower performance); 4) leader of focal (e.g., employee reporting about a supervisor); 5) family of focal (e.g., spouse of an employee, as one might find in work-family conflict research); 6) customer of focal (e.g., emotional contagion spreading from leader to employee to customer); 7) company archival records (e.g., annual report or turnover data); 8) third-party archival records (e.g., a public database or newspaper); 9) (expert) rater provided (e.g., participants responding after watching a video, experts rating team interactions); and when the referent in question is the 10) team or 11) organization. We also coded from which country the sample was drawn. We coded *when these data were collected* using the following typology: 1) cross-sectional (all data collected at one time point); 2) cross sectional with a time lag (e.g., follower rating leader at Time 1, leader rating follower at Time 2 a few weeks later in time), or 3); longitudinal (repeated measures over time and hypothesized/expected change). Our *sample type* typology is: 1) private/company (e.g., Fortune 500 or entrepreneurial entity); 2) public (e.g., government, municipal, or education); 3), military; 4) health care; 5) non-governmental organization (NGO); 6) purpose/theoretical sampling (e.g., where a specific population is targeted because the phenomenon of interest is present or relevant in that population); 7) snowball sampling; 8) MTurk; 9) Qualtrics panel; 10) other online third party sampling tool; 11) undergraduate non-working students, 12) undergraduate working students; 13) graduate/MBA non-working students; or 14) graduate/MBA working students, or 15) sample not reported. In student samples, we recorded the percent of working students when that information was available; student samples where work was not mentioned were coded as non-working.

For leadership theory, we employed the taxonomy provided in Meuser et al. (2016), which is available on the *Journal of Management's* website as supplemental material (<https://journals.sagepub.com/doi/suppl/10.1177/0149206316647099>). This built on the taxonomies in Lowe and Gardner (2000), which Gardner et al. (2010), and Dinh et al. (2014) expanded and refined. We coded the primary leadership theory, which we call the *focal theory*, present in the article. Like Meuser et al., we found that some articles employed an integrated view such that no

Table 1
Associate editors of the Leadership Quarterly (2010–2019).

Name	Discipline/sub-discipline	Institution	Role	Years of service
Francis J. Yammarino	Management/leadership	State University of New York at Binghamton	AE/yearly review editor	2010
Peter Dorfman	Management/leadership	New Mexico State University	AE/theoretical and practitioner letters	2010
Cynthia McCauley	IO psychology/leadership	Center for Creative Leadership	AE/theoretical and practitioner letters	2010
Barbara Crosby	Leadership	University of Minnesota	AE/social sciences studies	2010
Ron Riggio	Psychology/leadership	Claremont McKenna College	AE/social sciences studies	2010–2013
Joanne Ciulla	Philosophy/leadership ethics	University of Richmond	AE/philosophy, ethics and the humanities	2010
David V. Day	IO psychology/leadership	University of Western Australia; Claremont McKenna College	AE/assessment, evaluation and design	2010/2017–2019
David Waldman	IO psychology/leadership	Arizona State University	AE/contemporary leadership	2010
Craig L. Pearce	Management/leadership	Claremont Graduate University	AE/contemporary leadership	2010
John Antonakis	Management/leadership; RM	University of Lausanne	AE	2011–2016
Shelley Dionne	OB/leadership	Binghamton University	AE	2011–2016
Kevin B. Lowe	Business/leadership	The University of Auckland/University of North Carolina at Greensboro/The University of Sydney	AE	2011–2019
Chester A. Schriesheim	Management/leadership	University of Miami	AE/yearly review editor	2011–2016
William Gardner	Business/leadership	Texas Tech University	AE	2013–2019
Stephanie L. Castro	OB/leadership	Florida Atlantic University	AE	2014–2016
Michael Cole	Management/RM	Texas Christian University	AE	2015–2019
Olga Epitropaki	Management/leadership	The American College of Greece/Durham University	AE	2015–2019
Dusya Vera	Business/strategy	University of Houston	AE	2016–2019
Seth M. Spain	IO psychology/personality	Concordia University	SAE	2017–2019
Mark van Vugt	Psychology/evolutionary psychology	Vrije Universiteit Amsterdam	SAE	2017–2019
Alice H. Eagly	Psychology/gender psychology	Northwestern University	AE	2017–2019
Alex Haslam	Psychology/social psychology	University of Queensland	AE	2017–2019
Michael Hogg	Psychology/social identity	Claremont Graduate University	AE	2017–2019
Ronit Kark	Psychology/leadership	Bar-Ilan University	AE	2017–2019
Philip M. Podsakoff	Business/leadership; RM	University of Florida	AE	2017–2019
Rolf van Dick	Psychology/social psychology	Goethe University	AE	2017–2018
Roberto Weber	Economics/behavioral and experimental economics	University of Zurich	AE	2017–2019
Nicolas Bastardoz	Business and economics/RM	University of Zurich	AE and methods advisor	2017–2019
George C. Banks	Management/leadership	University of North Carolina at Charlotte	SAE	2018–2019
Janka I. Stoker	OB/leadership	University of Groningen	SAE	2018–2019
Roseanne Foti	IO psychology	Virginia Tech University	AE	2019
Janaki Gooty	Management	University of North Carolina at Charlotte	AE	2019
Renee B. Adams	Finance	University of Oxford	AE	2019
Philippe Jacquart	Management/RM	Emlyon Business School	AE and methods advisor	2019
Niels van Quaquebeke	Social psychology/leadership	Kuhne Logistics University	AE	2019

Note. RM = Research Methods; AE = Associate Editor; SAE = Senior Associate Editor

single theory was focal, and these were coded as such.

We also recorded author affiliations and locations as given in the article, as well as author gender and discipline in order to explore the composition of authorship teams. We acknowledge that gender was coded in a binary fashion (male/female) for this research. Finally, to ascertain the extent to which the composition of *LQ*'s editorial team leadership reflects the type of diversity of disciplines and international backgrounds that the founding editors sought to achieve (Lowe & Gardner, 2000), we collected information on the disciplines, institutions, and roles of the scholars who served as an Associate Editor (AE) for *LQ* during its third decade (see Table 1).

Editorial leadership of *LQ* in its third decade

Three scholars served as the Editor-in-Chief of *LQ* during its third decade: Michael (Mike) Mumford, Leanne Atwater, and John Antonakis. Mike Mumford took over from Jerry Hunt in 2005 and served as editor during a pivotal period of *LQ*'s development, as he oversaw a sizable increase in submissions (from roughly 80 per year to 250), increases in the number of articles published, special issues on a range of diverse topics (e.g. destructive leadership, team leadership, crisis leadership, and spiritual/authentic leadership), and substantial increases in the impact factor (from 1.75 in 2005 to 2.90 in 2010). The

journal also became more international and embraced a growing diversity of theoretical perspectives and methods (Mumford, 2005; Mumford, 2011). All of the AEs were United States citizens by birth, and reflected the disciplines of management, psychology, and philosophy by training. A complete summary of the disciplines, institutions, roles, and years of appointment for all scholars who served as AEs during *LQ*'s third decade is provided in Table 1.

Leanne Atwater assumed the role of Editor-in-Chief in 2011 and served in that role until 2016 (Atwater, 2011; Atwater, 2016). During her tenure she introduced several innovations, including automated submission and review process, changes to roles and responsibilities of the AEs (see Table 1), and a further increase in the size and international composition of the Editorial Review Board. In addition, the number of submissions continued to grow rapidly, increasing from 361 in 2012 to 688 in 2015 (70% of which came from outside the U.S.), while acceptance rates declined from 16% in 2012 to 8% in 2015. During Atwater's tenure, *LQ* continued to publish high-quality special issues on relevant topics such as cognition, emotion, gender, network approaches, biology, Asian models, and longitudinal studies (see Table 2; discussed further in the Special Issues section). Finally, during her tenure five *LQ* articles were "retracted to protect the integrity of the scientific record" (Atwater, Mumford, Schriesheim, & Yammarino, 2014, p. 1174). The explanation of the reasons for and the process used

Table 2
Special issue topics.

Year	Volume	Issue	Topic	Editor(s)
Forthcoming			Leadership in the digital era: Social media, big data, virtual reality, computational methods, and deep learning	Banks, G.C., Dionne, S.D., Sayama, H., Schmid Mast, M.
Forthcoming			Evolution and biology of leadership: A new synthesis	van Vugt, M., von Rueden, C.
Forthcoming			Economics and leadership	Garretsen H., Stoker J., Weber R.
Forthcoming			Strategic leadership and strategic management	Bonardi, J., Hitt, M.A., Vera, D., Withers, M.C.
Forthcoming			21st century leadership development: bridging science and practice	Day, D., Riggio, R., Conger, J., Tan, S.
Forthcoming			Replication and rigorous retesting of leadership models	Clapp-Smith, R., Carsten, M., Gooty, J., Connelly, S., Haslam, A., Bastardo, N., Spain, S.
Forthcoming			Social identity and leadership	Hogg, M.A., Haslam, S.A., Rast, D.E., Steffens, N.K., Gaffney, A.M.
Forthcoming			Leader power: rigorous insights on its causes and consequences	Sturm, R.E., Hertz, H., Antonakis, J.
2017	28	4	Charisma: new frontiers. A special issue dedicated to the memory of Boas Shamir	Antonakis, J., Gardner, W.L.
2017	28	2	Dynamic viewpoints on implicit leadership and followership theories	Foti, R.J., Hansborough, T.K., Epitropaki, O., Coyle, P.T.
2016	27	3	Gender and leadership	Eagly, A.H., Heilman, M.E.
2016	27	2	Collective and network approaches to leadership	Cullen-Lester, K.L., Yammarino, F.J.
2015	26	4	Leadership and emotions	Connelly, S., Gooty, J.
2015	26	3	Leader cognition	Mumford, M.
2015	26	1	Asian models of leadership	Arvey, R., Dhanaraj, C., Javidan, M., Zhang, Z.
2014	25	1	Leadership Quarterly 25th anniversary issue	Yammarino, F.J.
2013	24	3	Leader integrity	
2012	23	4	Leadership and individual differences	Antonakis, J., Day, D.V., Schyns, B.
2012	23	2	Biology of leadership	Senior, C., Lee, N., Butler, M.
2011	22	3	Longitudinal studies of leadership development	Riggio, R.E., Mumford, M.
2010	21	4	Leadership development evaluation	Hannum, K.M., Craig, S.B.
2010	21	2	Public integrative leadership: Multiple turns of the kaleidoscope	Crosby, B.C., Bryson, J.M.

in issuing these retractions is described in an editorial by Atwater et al. (2014). Mirroring procedures put in place across much of the social sciences, the ultimate consequence of the retractions has been a recommitment to ensuring the rigor and accuracy of research published in *LQ* through a number of refinements to journal review processes (Antonakis, 2017, a), as described below.

John Antonakis has served as the Editor-in-Chief from 2017 to the present. He is the first *LQ* editor to hail from a continent other than North America. Indeed, his background is truly unique as he is “the first European editor in chief, a Swiss who is U.S. trained, having a South African accent and a Greek surname (go figure!)” (Antonakis, 2017, a). Additionally, he again expanded the number of AEs to include “five senior associate editors and nine associate editors, and a junior associate editor³ that assists with article screening” and the size of the editorial board (adding more than 30 members), while further increasing the disciplinary and cultural diversity represented among its members (Antonakis, 2017, a). Disciplines that are represented within the editorial leadership for the first time through the appointment of AEs with significant expertise in these fields include behavioral economics, political science, evolutionary and biological psychology, social psychology, research methods, and strategy and organization theory (see Table 1). In addition, greater international representation is apparent among the AEs, with scholars from Europe and Australia, in addition to North America.

Antonakis also instituted several changes to *LQ*'s policies and processes. He expanded the types of articles that *LQ* publishes to include—in addition to full length articles, *LQ* *Yearly Review of Leadership* articles, and special issue articles—short communications, commentaries of published articles, and research proposals (registered reports and results-masked articles). He initially increased the desk reject rate from the 50% level of the prior editorial team to roughly 70%, to “use editorial and reviewer resources wisely and efficiently” (Antonakis, 2017, a). At the same time, he charged AEs to “spend their time making substantive and constructive comments on manuscripts with potential.”

Further, in a section of a position paper (Antonakis, 2017, b) titled, “How to make a more useful contribution to the research record,” he challenged submitting authors to strive to make more meaningful contributions through “better theorizing, not ignoring endogeneity, designing realistic experiments, conducting rigorous qualitative research, declaring conflicts of interest, being transparent with data, methods and reporting, and being an honest broker” (Antonakis, 2017, a). Finally, prior to an empirical manuscript being accepted, the Methods Advisor AE now conducts a check “to ensure that reporting guidelines are followed, that there are no flaws in reporting and analysis, and that limitations are transparently reported” and hence the manuscript is “squeaky clean” (Antonakis et al., 2019, p. 5).

Early returns on these changes are quite positive, as *LQ*'s impact factor has risen from 3.31 in 2016 to 5.63 in 2018. This impact factor places *LQ* 6th among applied psychology journals and 18th among management journals in the most recent rankings (2019 Release of Journal Citation Reports; <https://clarivate.com/webofsciencegroup/solutions/journal-citation-reports/>). Additionally, analyses in a recent “State of the Journal” editorial indicate that citations to *LQ* articles within management, applied psychology, and outside disciplines (e.g., economics, political science, industrial engineering, nursing, computer science, social psychology, medicine, public administration, hospitality, leisure, sport and tourism) are increasing rapidly and at rates that compare favorably with those of other and more established management and applied psychology top tier journals (Antonakis et al., 2019). However, what matters most to the leadership of *LQ* is not impact factor per se, which, despite its flaws, is used extensively to judge journal quality; instead, “[w]hat we care most about is to ensure that we report on how leadership works by publishing quality science; science that is robust, creative, and will make a difference” (p. 4).

All three of *LQ*'s editors during *LQ*'s third decade identified a goal to increase both the size and the diversity of *LQ*'s editorial board. An examination of changes in the size and composition of the board over the past decade suggests that some progress in achieving this goal has been made. During the decade, the size of the board increased from 73 to 162 members, while the percentage of female members increased from approximately 30 to 36%. The geographic representation of the board has also expanded. In 2010, scholars from the United States and

³ The title Junior Associate Editor no longer exists. It was replaced with Associate Editor and Methods Advisor

Table 3
Article type.

Year/article count	Volume	Qualitative	Quantitative	Theory	Methods	Special issue	Review issue	Total
2010	21	17	44	4	9	15	9	98
68	11.1%	25.0%	64.7%	5.9%	13.2%	22.1%	13.2%	12.1%
2011	22	14	49	24	3	9	8	107
79	12.8%	17.7%	62.0%	30.4%	3.8%	11.4%	10.1%	13.2%
2012	23	3	59	7	7	13	9	98
80	13.0%	3.8%	73.8%	8.8%	8.8%	16.3%	11.3%	12.1%
2013	24	3	45	6	1	6	8	69
61	9.9%	4.9%	73.8%	9.8%	1.6%	9.8%	13.1%	8.5%
2014	25	8	52	4	3	7	7	81
68	11.1%	11.8%	76.5%	5.9%	4.4%	10.3%	10.3%	10.0%
2015	26	8	55	6	0	29	12	110
70	11.4%	11.4%	78.6%	8.6%	0.0%	41.4%	17.1%	13.5%
2016	27	5	45	8	0	21	0	79
55	8.9%	9.1%	81.8%	14.5%	0.0%	38.2%	0.0%	9.7%
2017	28	2	22	13	1	12	13	63
45	7.3%	4.4%	48.9%	28.9%	2.2%	26.7%	28.9%	7.8%
2018	29	3	30	9	0	0	14	56
48	7.8%	6.3%	62.5%	18.8%	0.0%	0.0%	29.2%	6.9%
2019	30	1	26	12	3	0	9	51
41	6.7%	2.4%	63.4%	29.3%	7.3%	0.0%	22.0%	0.0%
Total		64	427	93	27	112	89	812
Total %		10.4%	69.4%	15.1%	4.4%	18.2%	14.5%	

Note: $N = 615$ articles; average number of articles per year = 61.5.

Canada, respectively, composed 76% and 2.7% of the board members versus 59.9% and 2.5% in 2019. Conversely, regions experiencing greater representation include Europe (10.7%), with the Netherlands, United Kingdom, Norway, Switzerland, and Finland increasing (27.2%) and scholars from Germany, Denmark, Sweden, France, Spain, Slovenia and Portugal added (though Norway and Finland are no longer represented). Australia/New Zealand is also more represented (5.3% in 2010 vs. 6.7% in 2019). The Middle East, formerly represented only by Israel (5.3% in 2010), is now represented by Israel and Lebanon (2.5% in 2018). Unrepresented in 2010, Asia, is represented by the countries of Singapore and Turkey (1.2%) in 2019. Through these changes, *LQ* has moved closer to fulfilling the vision of the founding editors to be a global outlet for leadership research.

What has *LQ* published in its third decade and by whom?

Number and types of articles

Next, we investigated the number and mix of article types by year (Table 3). The second decade of *LQ* showed a marked increase in publications over the first decade (from 34 to 62); the number of articles in the third decade remained constant on average (61.5 per year) as compared to the second decade. As Gardner et al. (2010) noted, the increase from the first to second decade reflects the move from four to six volumes per year. We found a large range of published articles per year within the decade. 2011 showed the largest number of published articles (79) and 2019 the smallest (41). Moreover, 2015 and earlier showed significantly more published articles than 2016 to present (average of 71 vs. 47.25 per year). January 2017 corresponds to a change in editorship, with John Antonakis taking over for Leanne Atwater, who concluded her term in December 2016. As previously noted, John Antonakis increased the proportion of desk rejects, producing a reduction in the number of articles published and an increase in rigor.

Overall, 69.4% of articles involved quantitative exploration of phenomena, followed by qualitative (10.4%), theory (15.1%), and methods (4.4%) articles. Membership in these categories is not mutually exclusive. For example, an article could involve a mixed methods approach, employing both qualitative and quantitative exploration techniques. These percentages show a marked change from 2000 to 2010, where theoretical articles accounted for 42.0%. Methods articles

continued to decline, suggesting, as Gardner et al. (2010) did, that editors may wish to stimulate methods-related submissions when this type of scholarship is called for to advance the exploration of a phenomenon. Alternatively, it may be that the reason why methods-oriented articles have declined is that there is now an organization studies journal devoted to publishing methods-oriented articles—*Organizational Research Methods*. While the number and proportion of articles in review issues remains stable (54/15.0% in the prior decade; 89/14.5% currently), the number of special issue articles has remained similar but the proportion has decreased markedly (109/31.0% in the prior decade; 112/18.2% currently). Review issues continue to be highly cited, as two of the top three most cited articles of the decade (see Table 4) were published in this forum.

Special issues

Special issues (Table 2) represent a significant investment of journal resources in a topic area. In total, there were 22 special issues published or initiated during the decade, which is an increase from nine and 17 in the prior two decades, respectively. The diversity of topics reflect many emerging areas of leadership methods and research, including the Biology of Leadership (Lee, Senior, & Butler, 2012), Asian Models of Leadership (Arvey, Dhanaraj, Javidan, & Zhang, 2015), Collective and Network Approaches to Leadership (Cullen-Lester & Yammarino, 2016), Leadership and Economics (Garretsen, Stoker, & Weber, 2017), and Leadership in the Digital Era (Banks, Dionne, Sayama, & Mast, 2019). The variety of these special issue topics demonstrates a continuing commitment to the vision of *LQ*'s founders to advance leadership knowledge through multi- and interdisciplinary research (Lowe & Gardner, 2000).

In their review of *LQ*'s second decade, Gardner et al. (2010) noted that the proliferation of *LQ* special issues was part of a larger trend across top management journals identified by Olk and Griffith (2004). Drawing from archival data and interviews with journal editors, Olk and Griffith collected data on the quality and impact of special issues for five top tier management journals (*Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Strategic Management Journal*, and *Organization Science*). Gardner et al. (2010) observed that the proportion of *LQ* special issues published during the journal's second decade (30.3%) was roughly equivalent to

Table 4
Top 50 highly cited papers.

Rank	Cites/year	Rank	Total	Year	Vol	Issue	Authors	Title	Type	Focal theory	Content
1	76.7	1	690	2010	21	6	Antonakis J., Bendahan S., Jacquart P., Lalive R.	On making causal claims: A review and recommendations	Review	None	Empirical, method, review issue
2	68.6	2	343	2014	25	1	Dinh J.E., Lord R.G., Gardner W.L., Meuser J.D., Liden R.C., Hu J.	Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives	Review	None	Empirical, special issue
6	41.5	3	332	2011	22	6	Gardner W.L., Coglisier C.C., Davis K.M., Dickens M.P.	Authentic leadership: A review of the literature and research agenda	Review	Authentic leadership	Theory, review issue
7	36.3	4	290	2011	22	5	Rosing K., Frese M., Bausch A.	Explaining the heterogeneity of the leadership-innovation relationship: Ambidextrous leadership	Article	Entrepreneurial	Empirical, theory
5	46.5	5	279	2013	24	1	Schyns B., Schilling J.	How bad are the effects of bad leaders? A meta-analysis of destructive leadership and its outcomes	Article	Destructive leadership	Empirical
3	52.8	6	264	2014	25	1	Day D.V., Fleenor J.W., Atwater L.E., Sturm R.E., McKee R.A.	Advances in leader and leadership development: A review of 25 years of research and theory	Review	Leadership development	Special issue
4	49.4	7	247	2014	25	1	Uhl-Bien M., Riggio R.E., Lowe K.B., Carsten M.K.	Followership theory: A review and research agenda	Review	Followership theory	Special issue
11	26.8	8	214	2011	22	1	Tims M., Bakker A.B., Xanthopoulos D.	Do transformational leaders enhance their followers' daily work engagement?	Article	Transformational leadership theory	Empirical
12	25.8	9	206	2011	22	1	Kalshoven K., Den Hartog D.N., De Hoogh A.H.B.	Ethical leadership at work questionnaire (ELW): Development and validation of a multidimensional measure	Article	Ethical leadership theory	Empirical, qualitative
13	22.6	10	203	2010	21	1	Liu W., Zhu R., Yang Y.	I warm you because I like you: Voice behavior, employee identifications, and transformational leadership	Article	Transformational leadership theory	Empirical
9	32.5	11	195	2013	24	1	Braun S., Peus C., Weisweiler S., Frey D.	Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust	Article	Transformational leadership theory	Empirical
15	20.1	12	181	2010	21	6	Gooty J., Connelly S., Griffith J., Gupta A.	Leadership, affect and emotions: A state of the science review	Review	Emotions & leadership	Review issue
18	18.1	13	163	2010	21	3	Carsten M.K., Uhl-Bien M., West B.J., Patena J.L., McGregor R.	Exploring social constructions of followership: A qualitative study	Article	Followership theory	Empirical, qualitative
22	16.0	14	144	2010	21	1	Ladkin D., Taylor S.S.	Enacting the 'true self': Towards a theory of embodied authentic leadership	Article	Authentic leadership	Theory
23	15.7	15	141	2010	21	6	Fleenor J.W., Snither J.W., Atwater L.E., Braddy P.W., Sturm R.E.	Self-other rating agreement in leadership: A review	Review	None	Method, review issue
24	15.6	16	140	2010	21	2	Crosby B.C., Bryson J.M.	Integrative leadership and the creation and maintenance of cross-sector collaborations	Article	(Public) integrative leadership	Empirical, qualitative, theory, special issue
24	15.6	16	140	2010	21	3	Norman S.M., Avolio B.J., Luthans F.	The impact of positivity and transparency on trust in leaders and their perceived effectiveness	Article	Authentic leadership	Empirical
27	15.2	18	137	2010	21	4	Hoppe B., Reinelt C.	Social network analysis and the evaluation of leadership networks	Article	Leadership development	Method, special issue
31	14.2	19	128	2010	21	6	Gardner W.L., Lowe K.B., Moss T.W., Mahoney K.T., Coglisier C.C.	Scholarly leadership of the study of leadership: A review of The Leadership Quarterly's second decade, 2000-2009	Review	None	Empirical, qualitative, review issue
17	18.1	20	127	2012	23	3	Volmer J., Spurr D., Niessen C.	Leader-member exchange (LMX), job autonomy, and creative work involvement	Article	LMX	Empirical
28	15.1	21	121	2011	22	6	Neider L.L., Schriesheim C.A.	The Authentic Leadership Inventory (ALI): Development and empirical tests	Article	Authentic leadership	Empirical, method, review issue
30	14.6	22	117	2011	22	6	Van Knippenberg D.	Embodying who we are: Leader group prototypicality and leadership effectiveness	Review	Social identity theory of leadership	Theory, review issue
20	16.3	23	114	2012	23	6	Fairhurst G.T., Uhl-Bien M.	Organizational discourse analysis (ODA): Examining leadership as a relational process	Review	Relational leadership	Method, review issue
33	13.9	24	111	2011	22	4	Gao L., Janssen O., Shi K.	Leader trust and employee voice: The moderating role of empowering leader behaviors	Article	Participative, shared leadership, delegation and empowerment	Empirical
16	18.2	25	109	2013	24	2	Hunter E.M., Neubert M.J., Perry S.J., Witt L.A., Penney L.M., Weinberger E.	Servant leaders inspire servant followers: Antecedents and outcomes for employees and the organization	Article	Servant leadership theory	Empirical

(continued on next page)

Table 4 (continued)

Rank	Cites/year	Rank cites	Total cites	Year	Vol	Issue	Authors	Title	Type	Focal theory	Content
8	36.0	26	108	2016	27	4	Banks G.C., McCauley K.D., Gardner W.L., Guler C.E.	A meta-analytic review of authentic and transformational leadership: A test for redundancy	Article	Authentic leadership	Empirical
34	13.5	26	108	2011	22	5	Zhang A.Y., Tsui A.S., Wang D.X.	Leadership behaviors and group creativity in Chinese organizations: The role of group processes	Article	Transformational leadership	Empirical
26	15.3	28	107	2012	23	1	Biemann T., Cole M.S., Voelpel S.	Within-group agreement: On the use (and misuse) of r WG and r WG(J) in leadership research and some best practice guidelines	Article	None	Method
42	11.7	29	105	2010	21	3	Cho J., Dansereau F.	Are transformational leaders fair? A multi-level study of transformational leadership, justice perceptions, and organizational citizenship behaviors	Article	Transformational leadership theory	Empirical
42	11.7	29	105	2010	21	3	Vecchio R.P., Justin J.E., Pearce C.L.	Empowering leadership: An examination of mediating mechanisms within a hierarchical structure	Article	Participative, shared leadership, delegation and empowerment	Empirical
35	13.1	29	105	2011	22	6	Hernandez M., Eberly M.B., Avolio B.J., Johnson M.D.	The loci and mechanisms of leadership: Exploring a more comprehensive view of leadership theory	Review	None	Theory, review issue
42	11.7	29	105	2010	21	1	Yang J., Mossholder K.W.	Examining the effects of trust in leaders: A bases-and-foci approach	Article	None	Empirical
36	13.0	33	104	2011	22	1	Vinkenburgh C.J., van Engen M.L., Eagly A.H., Johannesen-Schmidt M.C.	An exploration of stereotypical beliefs about leadership styles: Is transformational leadership a route to women's promotion?	Article	Transformational leadership theory	Empirical
29	14.7	34	103	2012	23	5	Eisenbeiss S.A.	Re-thinking ethical leadership: An interdisciplinary integrative approach	Article	Ethical leadership theory	Theory
37	12.9	34	103	2011	22	2	Shamir B.	Leadership takes time: Some implications of (not) taking time seriously in leadership research	Article	Contextual/complexity/adaptive	Theory
45	11.4	34	103	2010	21	3	Battilana J., Gilmartin M., Sengul M., Pache A.-C., Alexander J.A.	Leadership competencies for implementing planned organizational change	Article	Behavioral approaches (OSU/LBDQ)	Empirical
14	20.6	34	103	2014	25	3	Van Dierendonck D., Stam D., Boersma P., de Windt N., Alkema J.	Same difference? Exploring the differential mechanisms linking servant leadership and transformational leadership to follower outcomes	Article	Servant leadership theory	Empirical
19	16.5	38	99	2013	24	6	Epitropaki O., Sy T., Martin R., Tram-Quon S., Topakas A.	Implicit leadership and followership theories "in the wild": Taking stock of information-processing approaches to leadership and followership in organizational settings	Review	Implicit leadership	Review issue
46	11.0	38	99	2010	21	6	Shondrick S.J., Dinh J.E., Lord R.G.	Developments in implicit leadership theory and cognitive science: Applications to improving measurement and understanding alternatives to hierarchical leadership	Review	Implicit leadership	Review issue
49	10.9	40	98	2010	21	3	Côté S., Lopes P.N., Salovey P., Miners C.T.H.	Emotional intelligence and leadership emergence in small groups	Article	Leadership emergence	Empirical
32	14.0	40	98	2012	23	5	Carlson D., Ferguson M., Hunter E., Whitten D.	Abusive supervision and work-family conflict: The path through emotional labor and burnout	Article	Destructive leadership	Empirical
21	16.2	42	97	2013	24	1	Zhu W., Newman A., Miao Q., Hooke A.	Revisiting the mediating role of trust in transformational leadership effects: Do different types of trust make a difference?	Article	Transformational leadership theory	Empirical
10	32.0	43	96	2016	27	1	Chen A.S.-Y., Hou Y.-H.	The effects of ethical leadership, voice behavior and climates for innovation on creativity: A moderated mediation examination	Article	Ethical leadership theory	Empirical
50	10.6	44	95	2010	21	4	Ely K., Boyce L.A., Nelson J.K., Zaccaro S.J., Hernez-Broome G., Whymen W.	Evaluating leadership coaching: A review and integrated framework	Article	Leadership development	Empirical, qualitative, special issue
41	11.8	45	94	2011	22	2	Harris K.J., Wheeler A.R., Kacmar K.M.	The mediating role of organizational job embeddedness in the LMX-outcomes relationships	Article	LMX	Empirical
38	12.7	46	89	2012	23	3	Cavazotte F., Moreno V., Hickmann M.	Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance	Article	Transformational leadership theory	Empirical
38	12.7	46	89	2012	23	1	Sun L.-Y., Zhang Z., Qi J., Chen Z.X.	Empowerment and creativity: A cross-level investigation	Article	Transformational leadership theory	Empirical

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Table 4 (continued)

Rank cites/year	Cites/year	Year	Vol	Issue	Authors	Title	Type	Focal theory	Content
46	11.0	2011	22	1	Wang H., Tsui A.S., Xin K.R.	CEO leadership behaviors, organizational performance, and employees' attitudes	Article	Strategic	Empirical, qualitative
46	11.0	2011	22	3	Harms P.D., Spain S.M., Hannah S.T.	Leader development and the dark side of personality	Article	Leadership development	Empirical, special issue
40	12.3	2012	23	3	Piccolo R.F., Bono J.E., Heinitz K., Rowold J., Duehr E., Judge T.A.	The relative impact of complementary leader behaviors: Which matter most?	Article	None	Empirical

that of *Organization Science* (30%), which was the highest among the journals Olk and Griffith studied. While the proportion of special issues (23.3%) declined during *LQ*'s third decade, it is clear that they continue to play a pivotal role in introducing new theories and methods to the discipline.

From their analysis, Olk and Griffith (2004) concluded that articles published in special issues are characterized by greater upward variance in quality (more exceptional as opposed to mediocre articles) and significantly higher citation rates than regular issues. These findings are consistent with those obtained by Smith, Leggat, and Araki (2012), who assessed the bibliographic performance and relative impact of a 2007 special issue from the Japanese journal, *Industrial Health*. Specifically, Smith et al. (2012, p. 88) concluded "that special issues can attract more immediate citations and more overall citations than regular issues as well as having a positive effect on its impact factor in the years immediately following publication." Gardner et al. (2010) came to a similar conclusion regarding articles published in special issues during *LQ*'s second decade, as they accounted for 47 of the top 100 most-cited articles, even though they constituted only 30% of the total. However, special issue articles appear to have been less impactful during *LQ*'s third decade, as only 7 of the top 50 most-cited articles (14%) appeared in special issues. Perhaps, as the topics of *LQ* special issues have grown more focused on particularized and nascent streams of research, their appeal to a wider audience of leadership scholars has declined, at least relative to the prior decade. However, it would be premature to conclude that *LQ* special issues are not more impactful than articles published in regular issues. According to SCOPUS data as of December 18, 2019, special issue articles in the third decade have been cited 38.1 times on average compared to 32.7 for regular articles. To further answer this question, a more systematic bibliographic analysis along the lines of that conducted by Smith et al. (2012) is required, which is beyond the scope of the current review. Moreover, as suggested above, we recommend that *LQ* editors continue to publish special issues to help fulfill the journal's ongoing mission to serve as the outlet for cutting edge and multi-disciplinary leadership research.

Review issues

With the dawn of the new millennium, *LQ* Editor Jerry Hunt (2000) launched the inaugural *LQ Yearly Review of Leadership (LQYR)*. "With this series, Jerry displayed his tremendous talent as a visionary and leading edge thinker in bringing us a series of articles from top and emerging scholars not only in leadership, but in other areas Jerry saw that could inform leadership" (Uhl-Bien, 2008, p. 632).¹ From the outset, the purpose of the *LQYR* issue was to provide state-of-the-art coverage of a wide range of content and methodologically-oriented pieces, to be complemented by subsequent special issues for some of the featured topics. It was hoped that over time, a wide range of reviews would be provided and serve as a baseline for future work by leadership scholars and others interested in the field of leadership. "The *LQYR* reviews were not designed to be encyclopedic, though some are more encyclopedic than others, depending on the topic...they needed to have some kind of integrating framework and generally be understandable by both specialists and generalists.... Reviews vary in their breadth but are representative of the topic area selected, and they cover a time period appropriate to tie in with previous work and provide a representative picture of where the topic stands" (Hunt, 2000, p. 432).

A summary of the year, volume, issue, title, editor, and themes of the *LQYR* issues published in *LQ*'s third decade is provided in Table 5. Note that from its inception in 2000 until 2017, the *LQYR* issue appeared in the last issue of the volume, which was Issue 4 until the number of issues expanded to six in 2002. Hence, the first six *LQYR*

¹ Jerry Hunt served as the *LQYR* Editor from 2000 to 2007; Mary Uhl-Bien succeeded him and served as *LQYR* Editor in 2008 and 2009.

Table 5
Yearly review issues.

Year	Volume	Issue	Title	Theme	Editor/citation
2010	21	6	A scholarly tribute to Bernard M. Bass and James G. Hunt	No	Yammarino, F. J. (2010)
2011	22	6	None	No	Schriesheim, C. A. (2011)
2012	23	6	Methodological advances in leadership	Yes	Schriesheim, C. A. (2012)
2013	24	6	Advances in traditional leadership theory (part I)	Yes	Schriesheim, C. A. (2013)
2014	25	6	Advances in traditional leadership theory (part II)	Yes	Schriesheim, C. A. (2014)
2015	26	6	Advances in leadership theory and research	No	Schriesheim, C. A. (2015)
2016 ^a	27				
2017	28	1	Multidisciplinary, multilevel, multisource, multiskilled and multigenerational perspectives	No	Dionne, S. D. (2017)
2018	29	1	Pushing the frontiers of leadership scholarship	No	Day, D. V. (2018)
2019	30	1	State-of-science reviews on leadership theory, methods, and measurement	No	Day, D. V. (2019)

^a The *Yearly Review* issue was moved from Issue 6 of 2016 to Issue 1 of 2017; it is published in Issue 1 every year thereafter.

issues of *LQ*'s third decade appeared in Issue 6. However, with the change of editors from Leanne Atwater to John Antonakis in 2017, Antonakis decided to publish the *LQYR* in Issue 1, where it has appeared every year thereafter. As such, no *LQYR* issue was published in 2016.

For the first decade (2000–2009) of the *LQYR*, each issue included reviews on a diverse set of substantive topics, and hence they did not reflect a theme per se. However, the 2010 issue edited by Fran Yammarino (2010), served as a scholarly tribute to two prominent leadership scholars and former *LQ* Editors – Bernard M. (Bernie) Bass and Jerry Hunt, who had recently passed away. From 2011 to 2015, Chet Schriesheim served as the *LQYR* editor; in 2012, he introduced a theme for the first time, as the *LQYR* focused on methodological advances in leadership research (Schriesheim, 2012). The next two *LQYR* issues likewise had a thematic focus, as both featured articles that advanced traditional leadership theory and research (Schriesheim, 2013, 2014). None of the subsequent *LQYR* issues have had a thematic focus. However, the last three edited by Shelley Dionne and David Day, respectively, reflect “multi-disciplinary, multilevel, multisource, multi-skilled and multigenerational perspectives” (Dionne, 2017, p. 22), and seek to push the “frontiers of leadership scholarship” (Day, 2018, p. 1), through “state-of-the science reviews of leadership theory, methods, and measurement” (Day, 2019, p. 10). Over the years, this “series has become a cornerstone of *LQ*, and the impact is demonstrated by the fact that, since its inception, *LQYR* articles have been regular recipients of the Best Paper Award in *LQ*” making it “a noble endeavor” and an ongoing tribute to Jerry Hunt’s legacy (Uhl-Bien, 2008, p. 632). It is also noteworthy that a disproportionate number of *LQYR* articles (11/22%) are included among the 50 most highly cited articles discussed in the next section (see Table 4), providing further evidence of their impact. Review issue articles in the third decade of *LQ* were cited 43.3 times per article on average compared to 32.7 for regular articles. This finding is also consistent with Antonakis, Bastardo, Liu, and Schriesheim’s (2014) conclusion that articles published in review issues tend to be highly cited (although they have high variance), as are quantitative, theory, and methods articles.

Most cited articles

Following Gardner et al.’s (2010) example, we compiled a list of the most highly cited articles of those published during *LQ*’s third decade (see Table 4). Here, we report the total citations, citations per year, and the rank for each article. The most highly cited article is a *LQYR* methods review on causal claims (Antonakis et al., 2010), suggesting that scholars recognize and appreciate methods articles (Antonakis et al., 2014), even though there were not a large number of these published in *LQ* during the last decade. This particular methods article has been highly impactful because it highlights endogeneity issues that negate the ability of authors to make causal inferences about focal relationships, but also introduces corrective actions for addressing

endogeneity issues to the leadership field. 2010 ranks first in the number of most highly-cited articles (17), followed by 2011 (14), 2012 (eight), 2013 (five), and 2014 (four). With the exception of 2016 (two), the last half of the decade is absent from this list, most likely because insufficient time has passed for citations of these articles to accumulate. With regards to the leadership theories reflected in highly-cited articles, 19 theories are present. Transformational leadership dominates the most-cited list with nine articles focused on its premises. Authentic leadership is second with five articles, followed by leadership development (four), ethical leadership (three), and two articles each for destructive leadership, implicit leadership, leader-member exchange (LMX), servant leadership, followership theory, and participative/shared leadership/delegation and empowerment.

Institutional contributions and authorship teams

We investigated the composition and diversity of authorship teams from the perspective of gender, team size, affiliations, world regions, and how articles, authors, and authorships are distributed across world regions. In order to account for authors who publish multiple papers in *LQ*, we define authorships as the number of papers on which a person is an author.

Regarding gender, 58.3% of authors were male versus 41.7% female; 61.4% of authorships were male versus 38.6% female. Thus, males are more likely to have published more than once versus females. We noticed that some leadership theories seem to be preferred publication topics based on gender. For example, 73.8% and 67.6% of the authorships on articles which focused on charismatic leadership and participative/shared leadership/delegation and empowerment were male, while 61.6%, 59.6%, and 53.3% of the authorships on articles that focused on leadership development, leadership and diversity, and identity and identification processes, respectively, were female.

Author team size varied widely between one and ten authors. Three-author teams were most common (31.4% of articles), followed by two-author teams (25.5%), four-author teams (18.4%), five-author teams (9.4%), and single-author papers (8.0%). Author teams of six to 10 authors accounted for 7% of papers. The author teams drew from one to seven affiliations, with author teams from two affiliations most common (38.4%), followed by single-affiliation articles (27.6%), articles representing three affiliations (21.6%), and articles with four affiliations (9.1%). Articles with five to seven affiliations represented 2.9% of papers. These affiliations span 41 countries (Table 6). Authors affiliated with United States universities contributed to 60.3% of articles, followed by the United Kingdom (14.3%), Australia (9.8%), the Netherlands (9.6%), Germany (7.5%) and Canada (6.7%; see Table 6 for others).

We grouped countries together by geographic region in order to parsimoniously investigate the diversity of contributions and contributors. Articles with authors from a single region dominated *LQ* in the last decade (69.9%), yet a meaningful number (26.7%) came from

Table 6
Contributions by country.

Country	Rank	Articles	
United States	1	371	60.3%
United Kingdom	2	88	14.3%
Australia	3	60	9.8%
Netherlands	4	59	9.6%
Germany	5	46	7.5%
Canada	6	41	6.7%
China	7	34	5.5%
Switzerland	8	20	3.3%
Hong Kong	9	17	2.8%
Israel	10	15	2.4%
South Korea	11	14	2.3%
Singapore	11	14	2.3%
Norway	13	12	2.0%
Taiwan	14	10	1.6%
New Zealand	15	9	1.5%
Portugal	15	9	1.5%
Belgium	17	8	1.3%
Spain	18	5	0.8%
Sweden	18	5	0.8%
Denmark	20	4	0.7%
Malaysia	21	3	0.5%
France	21	3	0.5%
Macau	21	3	0.5%
Brazil	21	3	0.5%
Finland	25	2	0.3%
Turkey	25	2	0.3%
Italy	25	2	0.3%
Slovenia	25	2	0.3%
Austria	25	2	0.3%
Colombia	25	2	0.3%
Cyprus	31	1	0.2%
Egypt	31	1	0.2%
Greece	31	1	0.2%
Ireland	31	1	0.2%
Argentina	31	1	0.2%
Liechtenstein	31	1	0.2%
Pakistan	31	1	0.2%
Philippines	31	1	0.2%
Scotland	31	1	0.2%
United Arab Emirates	31	1	0.2%
Lebanon	31	1	0.2%

Table 7
Contributions by world region.

World region	Articles	Authors	Authorships
Australia/New Zealand	69 11.2%	84 6.1%	121 6.1%
Asia	86 14.0%	120 8.7%	166 8.4%
Central/South America	5 0.8%	9 0.7%	9 0.5%
Europe	226 36.7%	407 29.6%	548 27.7%
Middle East	21 3.4%	25 1.8%	34 1.7%
North America non-US	41 6.7%	69 5.0%	85 4.3%
United States	371 60.3%	663 48.1%	1016 51.3%

two different geographic regions. Articles with authors representing three and four world regions were rare (3.1%). Articles with affiliations from Europe (36.7%) were the second most common after the United States (60.3%), followed by Asia (14.0%), Australia and New Zealand (11.2%), North America non-US (Mexico and Canada; 6.7%), Middle East (3.4%), and Central/South America (0.8%). The percent of authors and authorships by geographic region were similar (see Table 7). So, while the United States was the largest contributor with respect to affiliations, approximately 50% of the authors and authorships came from non-US sources. Further, while US-based University of Oklahoma and Binghamton University (SUNY) topped the list, there were 14 non-US institutions in the top 34 in terms of contributions to articles (41.2%; Table 8), with Erasmus University Rotterdam placing third. These data

suggest that during the third decade, *LQ* has expanded its international footprint to become a more global journal. Finally, corporate/consulting affiliations account for 2% of the authorships. The Center for Creative Leadership leads in terms of number of authors (5), number of articles (11), and affiliations (16).

As noted during the prior discussion of the distribution of disciplines represented among *LQ*'s editorial leadership, one of the primary components of *LQ*'s mission since its inception has been to publish articles from a wide array of disciplines. In their review of *LQ*'s first decade, Lowe and Gardner (2000) noted that the journal had modest success in achieving this goal, as 67% of authors were affiliated with business schools and/or management departments, with psychology a distant second with 16%. Gardner et al. (2010) concluded that progress toward this goal was achieved in *LQ*'s second decade, as the proportion of authors from non-management/business disciplines increased from 33% to 38%. Our findings suggest that this trend was reversed in *LQ*'s third decade, as roughly two-thirds (69.3%) of authorships were again affiliated with management departments, and another 23.6% with psychology departments, leaving only 7.2% from other fields (i.e., 30.7% non-management). However, greater diversity of disciplines is apparent for 2019 (Table 9), where the proportion of psychology-affiliated authorships dropped to 18.6%, and the level of representation from the fields of economics (6.4%), anthropology (2.1%), and other fields (3.6%) increased. Thus, we echo Lowe and Gardner's initial conclusion that only modest success with regard to this element of *LQ*'s mission has been achieved over the past three decades. Nonetheless, there is some preliminary evidence that the strategic decision of the current editor, John Antonakis, to recruit AEs with more diverse disciplinary backgrounds is attracting scholars from disciplines that have not historically been represented among contributing authors. It remains to be seen if this trend will be sustained and perhaps accelerated over the next decade.

Coder agreement

In an effort to ensure consistency in the coding of articles, the six-member author team developed a coding manual. Each article was then coded by one of the authors using the codebook as a point of reference. In a further effort to promote coding consistency, the author team met regularly throughout the coding process to discuss and address any challenges/uncertainties regarding the coding scheme and its application. Following the coding of the 615 articles, interrater reliability was computed by having a different author independently code a subset of 20% of the articles. Interrater reliability was computed for the three main coding categories of focal theory, article type, and study methods and analyses. Note that the article type and focal theory were coded at the article level, whereas the study methods and analysis were coded at the study level, since some articles reported methods and results for multiple studies. The percentage agreement for the focal theory, a single coding item, was 93%. For article type, the percentage agreement was 97% and the pairwise Cohen's kappa was 0.92 with a range of 0.88–0.97. For study methods, the percentage agreement was 98% and Cohen's kappa was 0.89 with a range of 0.81–0.96. Each of these results is indicative of a very high level of rater agreement and hence reliability (Fleiss, 1981), with values of 0.81–1.0 characterized as near perfect agreement (Landis & Koch, 1977). Following the computation of the interrater reliability statistics, all discrepancies were discussed until a consensus was reached.

Leadership theories

A summary of the focal theories reflected in studies published in *LQ* during the last decade, as coded using the aforementioned Meuser et al. (2016) taxonomy (<https://journals.sagepub.com/doi/suppl/10.1177/0149206316647099>), is presented in Table 10. Two important points about how we coded theories merit attention. First, by focal theory, we

Table 8
Contributions by institution.

Institution name	Articles	Rank by articles	Affiliations	Rank by affiliations
University of Oklahoma	37	1	77	1
Binghamton University (SUNY)	25	2	62	2
Erasmus University Rotterdam	20	3	40	3
Pennsylvania State University	19	4	34	4
Arizona State University	15	7	33	5
University of Queensland (UQ)	17	5	33	5
University of Groningen	16	6	32	7
George Mason University	9	18	24	8
University of Warwick	15	7	23	9
University of Washington	13	9	20	10
University of Houston	9	18	20	10
Vrije Universiteit Amsterdam	11	12	19	12
National University of Singapore (NUS)	9	18	19	12
Durham University	13	9	19	12
University of North Carolina At Charlotte	8	26	19	12
University of Miami	9	18	18	16
University of Nebraska	11	12	18	16
Aston University	9	18	17	18
University of Lausanne	8	26	17	18
University of Illinois At Chicago (UIC)	10	15	17	18
University of Central Florida			17	18
Texas Tech University			16	22
Center For Creative Leadership	11	12	16	22
University of Amsterdam	9	18	16	22
Florida State University	8	26	16	22
Michigan State University	12	11	15	26
Xi'an Jiaotong University			15	26
Bi Norwegian Business School	9	18	14	28
California State University, Fullerton			14	28
University of Akron	9	18	14	28
Queen's University			13	31
Peking University	10	15	12	32
University of Toronto			12	32
Australian National University (ANU)			12	32
Ludwig-Maximilians-Universität München			12	32
Claremont Graduate University	10	15	11	36
University of Minnesota			11	36
University of Exeter	8	26	11	36
Bar-Ilan University	8	26	11	36
University of Melbourne			11	36
Georgia Institute of Technology (Georgia Tech)			10	41
University of Alabama			10	41
University of St. Gallen (HSG)			10	41
United States Military Academy			10	41
Claremont Mckenna College	8	26	9	45
Monash University			9	45
Drexel University			9	45
Virginia Polytechnic Institute (Virginia Tech)			9	45
Renmin (People's) University of China			9	45
University of Western Australia (UWA)	8	26	9	45
State University of New York at Binghamton			9	45
Florida International University			8	52
Griffith University			8	52
Katholieke Universiteit Leuven			8	52
University of Haifa			8	52
University of California, Berkeley (UCB)			8	52
University of Notre Dame	8	26	8	52
University of Waterloo			8	52
University of New South Wales (UNSW)			8	52
University of Richmond			8	52

We applied a cutoff of eight for both articles and affiliations.

mean the theory that is most prominent and provides the underlying theoretical foundation for the research. Second, while we also coded supporting theories that complemented the focal theory, for the sake of parsimony, we limit our analysis and discussion to the focal theories. Nonetheless, it is also important to recognize that many leadership theories that were infrequently identified as focal theories nonetheless appeared as supporting theories (e.g., attribution theories, transactional

leadership) that were used in concert with the focal theory to better explicate the nuances and intricacies of dynamic leadership processes.²

Before we examine the focal theories published in *LQ* during its

² A summary of the coding results for secondary leadership theories is available from the first author upon request.

Table 9
Author discipline.

Year	Management	Psychology	Anthropology	Economics	Sociology	Political science	Engineering	Medical	Legal	Philosophy	Mathematics	Physics	Other
2010	125 64.4%	43 22.2%	0 0.0%	1 0.5%	0 0.0%	1 0.5%	2 1.0%	3 1.5%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	19 9.8%
2011	143 61.9%	73 31.6%	1 0.4%	1 0.4%	1 0.4%	1 0.4%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	11 4.8%
2012	181 71.8%	57 22.6%	1 0.4%	2 0.8%	0 0.0%	1 0.4%	1 0.4%	3 1.2%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	6 2.4%
2013	146 75.3%	34 17.5%	0 0.0%	5 2.6%	0 0.0%	4 2.1%	0 0.0%	1 0.5%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	4 2.1%
2014	173 69.8%	64 25.8%	0 0.0%	1 0.4%	0 0.0%	0 0.0%	1 0.4%	2 0.8%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	7 2.8%
2015	165 69.3%	59 24.8%	3 1.3%	5 2.1%	0 0.0%	0 0.0%	1 0.4%	4 1.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.4%
2016	124 73.8%	27 16.1%	0 0.0%	2 1.2%	1 0.6%	7 4.2%	1 0.6%	1 0.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	5 3.0%
2017	103 69.6%	38 25.7%	1 0.7%	2 1.4%	0 0.0%	0 0.0%	0 0.0%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 2.0%
2018	117 68.4%	47 27.5%	0 0.0%	4 2.3%	0 0.0%	0 0.0%	0 0.0%	2 1.2%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 0.6%
2019	97 69.3%	26 18.6%	3 2.1%	9 6.4%	1 0.7%	0 0.0%	0 0.0%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 2.1%
Totals	1374 69.3%	468 23.6%	9 0.5%	32 1.6%	3 0.2%	14 0.7%	6 0.3%	18 0.9%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	60 3.0%

third decade, it is useful to elaborate on the findings from the prior two decades provided in our introduction. [Lowe and Gardner \(2000\)](#) found that neo-charismatic leadership theories, which included transformational leadership, were by far the most common focal theories (34%) employed in *LQ* articles during the journal's first decade, followed by contingency theories (12%), multiple level approaches (9%), and trait theories (8%). However, a full quarter of the theories were classified as Other Approaches and encompassed leadership and diversity, cross-cultural leadership, and managerial work. Moreover, 14% of the articles were classified as New Directions. In *LQ*'s second decade, the focal leadership theories that [Lowe and Gardner \(2000\)](#) categorized as New Directions exploded to encompass a full 44.4% of the articles, with emerging theories such as ethical/servant/spiritual/authentic leadership (5.4%), the development and identification of leaders and leadership (5.5%), and contextual influences on leadership (5.6%) gaining attention. While neo-charismatic (12.6%) approaches remained popular, the proportion of articles focused on these approaches declined, as it did for more traditional leadership theories such as trait theories (3.8%), behavioral theories (4.4%), and contingency theories (1.0%). Slightly more attention was devoted to multiple level approaches (12%) in *LQ*'s second decade.

An examination of [Table 10](#) reveals some interesting trends in terms of the relative prominence of theories represented in *LQ* studies over the past decade. At the outset, it is important to recognize that the focal theory taxonomies used by [Lowe and Gardner \(2000\)](#) and [Gardner et al. \(2010\)](#) included 28 and 29 theories, respectively. In contrast, the [Meuser et al. \(2016\)](#) taxonomy we employed includes 49 focal theories; hence, comparisons of the proportions of articles that adopted a given focal theory are smaller, simply because there are more focal theories. As such, our comparisons across decades focus on the relative proportions of articles using a focal theory, as opposed to the percentage. To facilitate such comparisons, we have sorted the focal theories from most to least commonly used and grouped them into clusters in the table.

The first cluster reflects the most commonly-used focal theories and includes nine that were invoked in more than 4% of the articles coded. As in *LQ*'s first decade, transformational leadership again emerged as the most commonly researched theory, serving as the focal theory in 7.6% of the articles. Note that in their 2010 review, Gardner and colleagues did not distinguish between transformational and charismatic leadership, as both were coded as neo-charismatic theories. Applying the more fine-grained [Meuser et al. \(2016\)](#) taxonomy, however, it becomes apparent that

popularity of these theories has followed different trajectories, as charismatic leadership only served as the focal theory in 3.4% of the articles. Thus, despite pointed criticisms (e.g., [van Knippenberg & Sitkin, 2013](#)), transformational leadership theory remains popular. In contrast, despite [Antonakis, Bastardoz, Jacquart, and Shamir's \(2016\)](#) efforts to strengthen charismatic leadership theory and a special issue devoted to the topic ([Antonakis & Gardner, 2017](#)), the proportion of articles focused on charisma has declined. Nonetheless, we speculate that the refined definition and recommendations for enhancing the rigor of charismatic leadership research advanced by [Antonakis et al. \(2016\)](#) may stimulate renewed interest in the topic in the next decade.

Interestingly, the coding category of "none" tied with transformational leadership as the most commonly selected category at 7.6%. This indicates that many articles published in *LQ*'s third decade lacked a focal theory. Reasons why this category may have been applicable include: a) the inclusion of multiple but no dominant leadership theory (often the case for review articles such as this one); b) a focus on methods rather than theory; and c) a focal theory that reflects a new conceptual perspective that could not be classified using the [Meuser et al. \(2016\)](#) taxonomy. The former case is consistent with Meuser and colleagues' conclusion that many leadership articles draw upon and integrate multiple leadership theories. In the latter case, the "none" category essentially reflects the New Directions category employed in the prior two reviews. Thus, even with a taxonomy of 49 leadership theories, new theories emerged over the last decade that defied classification. This finding documents the theoretical vigor of the field, while simultaneously raising concerns about unnecessary construct proliferation ([Banks, Gooty, Ross, Williams, & Harrington, 2018](#); [Leavitt, Mitchell, & Peterson, 2010](#)).

The next most common focal theory was leadership development at 5.8%. The inclusion of a special issue devoted to leadership development ([Riggio & Mumford, 2011](#)) early in the decade clearly contributed to the relatively high proportion of articles with the publication of articles in subsequent years demonstrating continued interest in the topic. We consider this to be a very positive development as insufficient attention has been devoted to this critical topic in the past. Leader-member exchange (LMX) theory emerged as the third most common focal theory (5.7%), and interest in this topic remained strong throughout the decade. *LQ*'s third decade also saw a resurgence in attention to trait (dispositional) approaches, as this constituted the fourth most common focal theory (5.0%). Perhaps this resurgence is, at least in part, the result of work by Judge and colleagues ([Judge & Bono, 2000](#);

Table 10
Focal leadership theories.

Theory	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total	% of Articles
Transformational Leadership	7	10	6	7	3	11	2	1	0	0	47	7.6%
NONE	5	3	10	3	7	3	0	4	8	4	47	7.6%
Leadership Development	8	10	1	1	6	2	0	4	2	2	36	5.8%
LMX	1	2	9	2	8	2	3	3	4	1	35	5.7%
Trait Theories	0	9	6	3	3	3	1	2	2	2	31	5.0%
Leadership & Diversity	2	1	2	0	0	2	12	2	4	5	30	4.9%
Emotions & Leadership	2	2	4	5	3	9	1	1	1	1	29	4.7%
Strategic Leadership	6	3	3	2	4	2	3	2	1	2	28	4.5%
Destructive Leadership	1	3	4	7	1	2	2	1	2	2	25	4.1%
Leader & Follower Cognitions	2	1	2	0	4	10	1	1	0	1	22	3.6%
Participative/Shared/Delegation/Empowerment	2	2	1	1	4	2	8	1	0	1	22	3.6%
Charismatic Leadership	2	2	2	2	0	0	3	7	1	2	21	3.4%
Ethical Leadership	0	4	2	5	1	3	1	1	4	0	21	3.4%
Authentic Leadership	2	2	4	3	2	0	2	1	2	1	19	3.1%
Implicit Leadership	1	2	1	1	6	1	0	3	1	1	17	2.8%
Contextual/Complexity/Adaptive	2	2	0	0	0	1	3	0	2	2	12	1.9%
Leadership in Teams	1	2	2	0	2	1	2	0	1	1	12	1.9%
Emergence	1	0	1	0	0	2	2	1	1	3	11	1.8%
Identity/Identification Process	1	1	1	1	0	1	1	3	2	0	11	1.8%
Power/Influence/Politics	2	2	1	2	0	2	0	2	0	0	11	1.8%
Public Leadership	8	1	0	0	0	0	0	0	1	1	11	1.8%
Info Processing/Decision Making	3	3	0	0	0	1	2	0	0	0	9	1.5%
Social Identity	0	1	0	1	3	1	1	0	2	0	9	1.5%
Behavioral Theories	1	1	0	0	1	0	0	1	2	2	8	1.3%
Cross-Cultural (GLOBE)	0	0	2	1	0	5	0	0	0	0	8	1.3%
Servant Leadership	0	0	0	2	1	1	2	0	1	1	8	1.3%
Followership Theory	1	0	1	2	1	0	0	0	0	1	6	1.0%
Ideological/Pragmatic Leadership	0	1	1	1	0	1	0	0	0	1	5	0.8%
Relational Leadership	0	0	4	1	0	0	0	0	0	0	5	0.8%
Leadership Skills/Competence	1	1	0	0	0	0	1	1	0	0	4	0.6%
Social Network Approaches	1	1	0	1	0	0	1	0	0	0	4	0.6%
Reward and Punishment Behavior	1	0	0	0	0	1	1	0	0	0	3	0.5%
Entrepreneurial Leadership	1	1	0	0	0	0	0	0	0	0	2	0.3%
Romance of Leadership	0	1	0	0	1	0	0	0	0	0	2	0.3%
Spiritual Leadership	0	0	0	1	1	0	0	0	0	0	2	0.3%
Contingency Theories	0	0	0	1	0	0	0	0	0	0	1	0.2%
E-Leadership	0	0	0	0	1	0	0	0	0	0	1	0.2%
Leader Motive Profile	0	0	0	0	1	0	0	0	0	0	1	0.2%
Pygmalion Effect	0	0	1	0	0	0	0	0	0	0	1	0.2%
Transactional Leadership	1	0	0	0	0	0	0	0	0	0	1	0.2%
Aesthetic Leadership	0	0	0	0	0	0	0	0	0	0	0	0.0%
Attribution Theories	0	0	0	0	0	0	0	0	0	0	0	0.0%
Flexibility	0	0	0	0	0	0	0	0	0	0	0	0.0%
Idiosyncratic	0	0	0	0	0	0	0	0	0	0	0	0.0%
Leadership Substitute	0	0	0	0	0	0	0	0	0	0	0	0.0%
Multiple Linkage Model	0	0	0	0	0	0	0	0	0	0	0	0.0%
Path-Goal Theory	0	0	0	0	0	0	0	0	0	0	0	0.0%
Self-Sacrificing Leadership	0	0	0	0	0	0	0	0	0	0	0	0.0%
Situational Leadership	0	0	0	0	0	0	0	0	0	0	0	0.0%

Judge, Colbert, & Ilies, 2004; Judge, Piccolo, & Kosalka, 2009) which demonstrated that prior reviews were misinterpreted as dismissing the utility of the trait approach (Mann, 1959; Stogdill, 1948). This dismissal is now regarded as premature as traits were shown to have considerable power in predicting leadership emergence and effectiveness. Prominent theories that were previously coded by Lowe and Gardner (2000) and Gardner et al. (2010) as Other Approaches or New Directions that gained increased attention in *LQ*'s third decade include leadership and diversity (4.9%), emotions and leadership (4.7%), strategic leadership (4.5%), and destructive leadership (4.1%), which includes abusive supervision. It is noteworthy that Dinh et al. (2014) reported similar findings with respect to the prominent and emerging theories they identified in their review of the leadership literature published in top management journals between 2000 and 2012.

The next set of focal leadership theories includes 18 that were found in less than 4% but more than 1% of the articles coded. Note that ethical (3.4%), authentic (3.1%), and servant (1.3%) leadership first emerged as focal theories in the Gardner et al. (2010) review, where they were

grouped together with spiritual leadership to account for 5.4% of the focal theories. As a set, it is clear that these theories garnered increased attention over the past decade. Additionally, given that these theories differ in their assumptions and posited processes, the separation of these theories into distinct categories proved to be useful, both for conceptual reasons and to better track their relative influence. The rise of these theories is consistent with trends identified by Dinh et al. (2014), which suggests that the field of leadership and *LQ* in particular continues to be open to new and maturing perspectives, along with empirical tests of theories that emerged during the prior two decades. Additional focal theories that were labeled as Other Approaches and New Directions in prior reviews that fall into this cluster include leadership in teams (1.9%), contextual/complexity/adaptive approaches (1.9%), power/influence/politics (1.8%), public leadership (1.8%), and cross-cultural leadership (1.3%). Interest in these topics has remained relatively steady over the past two decades. Finally, some focal theories (e.g., followership theory; 1%) gained recognition as distinct theories for the first time, while the influence of some theories that were once

Table 11
Research designs.

Year	Vol	Computer sim bootstrap	Content analysis	Diary study ESM	Lab experiment not exp sim	Field survey (primary data)	Field survey (secondary data)	Field experiment	Experimental simulation	Quasi- experiment	Judgment task	Meta- analysis (quant review)	Review (non meta)	Convenience sample	Interview	Observation	Archival data
2010	21	2	6	0	13	32	3	4	1	2	6	0	4	28	9	1	14
2011	22	5	9	2	15	40	5	1	1	0	16	1	17	55	8	3	18
2012	23	0	3	0	14	47	4	0	1	2	2	1	10	34	3	2	7
2013	24	0	2	0	24	29	0	1	0	0	2	2	7	39	3	2	12
2014	25	3	4	0	24	35	1	0	5	2	10	2	8	49	5	1	13
2015	26	2	2	1	22	32	2	1	0	2	2	2	4	39	7	1	13
2016	27	3	3	0	11	24	0	5	0	1	6	2	3	19	4	0	11
2017	28	0	0	0	7	9	2	3	1	0	5	5	10	16	1	0	4
2018	29	0	0	1	19	22	0	0	3	1	10	4	14	29	1	2	3
2019	30	3	4	0	9	10	3	0	2	1	5	2	11	15	1	0	10
Total	18	33	5.5%	0.7%	158	280	20	15	14	11	59	21	88	323	42	12	105
Total %	3.0%	3.0%	5.5%	0.7%	26.4%	46.8%	3.3%	2.5%	2.3%	1.8%	9.9%	3.5%	14.7%	54.0%	7.0%	2.0%	17.6%

dominant (e.g., behavioral approaches; 1.3%) has waned.

The third cluster of theories includes 13 that were found in fewer than 1% but more than 0% of the studies coded. This cluster includes a mixture of theories from relatively young areas of inquiry (e.g., ideological/pragmatic [0.8%], relational [0.8%], social network [0.6%], entrepreneurial [0.3%], spiritual [0.3%], and E-leadership [0.2%]), as well as others that are more mature (e.g., leadership skills/competence [0.6%], reward and punishment behavior [0.5%], romance of leadership [0.3%], transactional [0.2%], leader motive profile [0.2%], Pygmalion effect [0.2%], and contingency [0.2%] approaches).

The final cluster of theories identifies nine theories that are included in our taxonomy but were not indicated as the focal theory in any article published in *LQ* in the most recent decade. These include a mixture of mature theories (e.g., leadership substitute theory, multiple linkage theory, path-goal theory, attribution theories, situational leadership theory, idiosyncratic leadership theory), and several that are relatively narrow in focus (e.g., aesthetic leadership, self-sacrificing, flexibility leadership theory). While a resurgence of interest in some of the mature approaches is certainly possible, as has been the case for the trait approach, we think it is more likely that the decades-long decline in attention to these approaches (Dinh et al., 2014; Gardner et al., 2010; Lowe & Gardner, 2000; Zhao & Li, 2019) will continue, while the trends for the ascending approaches (e.g., authentic, ethical, servant, and strategic leadership; Dinh et al., 2014; Zhao & Li, 2019) will be sustained. Perhaps some of the more narrowly-focused theories are candidates for integration with more general leadership theories, such as contextual/complexity/adaptive approaches to leadership.

Quantitative techniques and designs

A summary of the types of research designs used in quantitative studies is presented in Table 11. As with prior decade reviews, we found that field surveys are still favored when collecting primary data with 46.8% of studies in the present decade employing this technique. One potential concern is the use of convenience samples (e.g., students, online panels, or samples from authors' own social media connections), which accounted for the sample in 54.0% of the 598 quantitative studies, the vast majority of which involved surveys. Laboratory experiments showed a marked increase in usage, ranking second (26.4%) overall; only 5% of quantitative studies used experimental designs in the prior decade. Consistent with prior decade reviews, we find experience sampling, field experiments, quasi-experiments, field surveys with secondary data, and computer simulations to be employed infrequently. Clearly, given the strengths of some of these designs, such as quasi-experimental research (Grant & Wall, 2009), opportunities remain to better capitalize on a wider range of research designs to generate novel and more rigorous findings.

Quantitative analytical techniques

A summary of the analytical/statistical techniques employed in quantitative studies is provided in Table 12. The most common statistical analyses performed in quantitative studies were: 1) linear regression (43.0%); 2) analysis of variance, including both ANOVA, ANCOVA, and MANOVA/MANCOVA (32.6%); 3) structural equation modeling (SEM) and path analysis (16.6%); and 4) multi-level analytical techniques (e.g., hierarchical linear modeling [HLM], and multi-level SEM; 19.2%). Given the inherently multi-level nature of leadership phenomena (e.g., leaders and members within dyads and groups; leaders, members and groups within organizations), it is somewhat surprising that multi-level analytical techniques were not used more often. Nonetheless, they were used more often than was the case in the prior decade (8%), so there is evidence of increasing efforts to evaluate multi-level leadership relationships. Another favorable trend involves the increased use of non-parametric techniques (8.4%) over the prior decade (2%), as such methods have notable advantages over traditional null hypothesis testing (Kruschke, Aguinis, & Joo, 2012).

Table 12
Quantitative techniques.

Year	Vol	Analysis of variance (ANOVA/ MANOVA)	Computer sim	Techniques for categorical DVs (can include MSEM)	Linear regression (single outcome var; not path analysis)	Multiple levels of analysis (HLM, MSEM)	Meta-analysis	Non-parametric techniques	SEM & path analysis	Time series/ event history (LGM)	2SLS	(Social) network analysis	Curvilinear analyses	Domin./ relative weight	PLS
2010	21	23	3	2	19	11	0	0	8	2	0	1	0	0	0
2011	22	22	0	2	22	12	1	3	7	3	0	0	7	0	2
2012	23	18	0	4	33	16	1	7	17	0	1	0	0	4	1
2013	24	22	0	7	23	11	2	12	16	0	1	0	0	2	0
2014	25	32	1	6	37	13	2	19	11	1	2	1	4	1	0
2015	26	27	2	9	32	17	2	4	12	1	1	0	1	0	0
2016	27	12	4	3	25	12	2	2	8	1	1	3	3	0	0
2017	28	15	0	0	20	9	5	0	8	2	1	2	3	1	0
2018	29	19	0	10	24	10	4	1	8	0	6	1	2	0	0
2019	30	5	3	5	22	4	2	2	4	4	12	1	6	0	0
Total	195		13	48	257	115	21	50	99	14	25	9	26	8	3
Total %	32.6%		2.2%	8.0%	43.0%	19.2%	3.5%	8.4%	16.6%	2.3%	4.2%	1.5%	4.3%	1.3%	0.5%

Table 13
Sample type.

Year	Vol	Private (company)	Public (govt/ municipal/edu)	Military	Health care	NGO	UG students (non-working)	Grad/MBA students (non-working)	UG students (working)	Grad/MBA students (working)	Purpose theoretical	Snowball	Mturk	Qualtrics panel	Other online 3rd party source	Sample not reported
2010	21	14	15	4	4	5	15	1	4	5	3	4	0	0	0	0
2011	22	37	25	5	7	8	18	3	0	7	14	4	0	0	7	1
2012	23	27	15	2	9	2	15	1	2	4	1	2	0	0	3	0
2013	24	16	10	3	1	0	18	1	5	1	0	3	0	0	5	0
2014	25	22	8	0	3	0	18	3	5	3	1	1	6	0	5	4
2015	26	29	4	3	4	0	12	4	5	7	1	2	6	1	3	0
2016	27	19	6	2	2	0	11	3	0	1	0	2	3	0	1	0
2017	28	15	5	0	2	0	1	2	1	2	1	2	5	0	3	1
2018	29	12	4	1	2	0	11	1	2	2	4	1	11	1	2	0
2019	30	11	5	0	1	0	6	0	3	2	3	1	4	0	2	2
Total	202		97	20	35	15	125	19	27	34	28	22	35	2	31	8
Total %	31.1%		14.9%	3.1%	5.4%	2.3%	19.3%	2.9%	4.2%	5.2%	4.3%	3.4%	5.4%	0.3%	4.8%	1.2%

Table 14
Sample information.

Year	Vol	Sample sizes			Source of data												
		Sample size (L1)	Sample size (L2)	Meta-analysis N	Meta-analysis k	Self/focal	Peer of focal	Follower of focal	Leader/supervisor/direct report of focal	Family of focal	Customer of focal	Team of focal	Organization of focal	Rater provided	Archive (company data)	3rd party (archive)	Other data source
2010	21	27,952	1068	0	0	27	3	5	11	0	0	0	12	11	3	8	3
68																	
2011	22	46,423	2083	5113	31	44	4	11	52	1	0	6	13	10	9	2	7
79																	
2012	23	31,124	2409	3245	11	59	5	15	38	2	0	6	2	17	3	3	14
80																	
2013	24	21,432	2587	3763	14	56	4	7	36	1	0	3	5	5	3	8	2
61																	
2014	25	46,228	4584	3882	54	57	5	10	23	0	1	3	6	19	5	9	1
68																	
2015	26	59,546	7748	17,920	97	53	4	11	40	0	0	6	7	9	5	6	10
70																	
2016	27	19,816	3271	43,591	140	25	8	6	23	1	0	5	5	10	11	1	6
55																	
2017	28	12,387	2550	234,694	758	24	4	3	19	0	0	4	2	3	2	3	0
45																	
2018	29	12,087	3018	34,308	294	27	2	9	16	0	0	3	4	15	2	4	1
48																	
2019	30	69,819	3147	74,049	238	13	4	6	5	0	0	2	9	7	3	1	7
41																	
Total		346,814	32,465	420,565	1637	385	43	83	263	5	1	38	65	106	46	45	51
Total %						59.3%	6.6%	12.8%	40.5%	0.8%	0.2%	5.9%	10.0%	16.3%	7.1%	6.9%	7.9%

Table 15
Data source location.

Country / Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total	Total %
Australia	0	5	1	1	1	3	4	1	2	1	19	2.9%
Austria	0	0	0	0	0	0	0	0	0	1	1	0.2%
Belgium	0	0	0	1	5	1	0	0	1	0	8	1.2%
Brazil	0	0	1	0	0	0	0	0	1	0	2	0.3%
British	0	0	0	0	1	2	3	0	0	0	6	0.9%
Canada	3	1	2	0	4	1	1	0	2	0	14	2.2%
China	2	6	2	5	6	10	3	3	0	2	39	6.0%
Cyprus	0	0	2	0	0	0	0	1	0	0	3	0.5%
Denmark	0	1	1	0	0	0	1	1	0	0	4	0.6%
Egypt	0	1	0	0	0	0	0	0	0	0	1	0.2%
England	0	0	1	2	1	0	2	0	0	0	6	0.9%
Finland	0	0	0	2	0	0	1	0	0	0	3	0.5%
Germany	1	6	2	8	1	6	2	1	2	3	32	4.9%
Greece	0	0	0	0	2	0	0	0	0	0	2	0.3%
Hong Kong	0	0	0	0	0	0	0	0	1	0	1	0.2%
India	0	0	1	0	1	1	0	0	2	0	5	0.8%
Israel	1	2	3	0	0	0	0	0	0	0	6	0.9%
Jordan	0	0	0	0	1	0	0	0	0	0	1	0.2%
Lebanon	1	0	0	0	0	0	0	0	0	0	1	0.2%
Macau	0	0	1	0	0	1	0	0	0	0	2	0.3%
Netherlands	6	6	9	5	4	7	0	2	1	3	43	6.6%
New Zealand	0	0	0	0	0	1	0	0	0	0	1	0.2%
Norway	0	0	1	3	5	0	2	1	0	0	12	1.8%
Pakistan	0	0	0	0	0	0	1	0	0	0	1	0.2%
Philippines	0	0	2	0	0	0	0	0	0	0	2	0.3%
Portugal	0	1	1	1	0	1	0	1	0	0	5	0.8%
Romania	0	0	0	0	0	1	0	0	0	0	1	0.2%
Singapore	0	0	0	0	0	1	0	0	0	0	1	0.2%
South Korea	1	1	0	1	0	0	1	0	2	0	6	0.9%
Sweden	1	0	2	0	0	0	0	0	0	1	4	0.6%
Switzerland	0	0	0	0	2	3	0	0	1	0	6	0.9%
Taiwan	0	0	0	1	0	0	1	1	1	0	4	0.6%
United Kingdom	4	1	0	1	0	1	0	4	3	4	18	2.8%
United States	38	39	29	24	27	15	25	7	13	10	227	35.0%
Multi-national	1	6	2	3	8	11	5	3	3	5	47	7.2%
Not reported	1	1	8	12	12	13	3	2	14	5	71	10.9%
United States	38	39	29	24	27	15	25	7	13	10	227	35.0%
Europe	12	15	16	21	21	20	6	10	8	12	141	21.7%
Australia/New Zealand	0	5	1	1	1	4	4	1	2	1	20	3.1%
Asia	3	7	6	7	7	13	6	4	6	2	61	9.4%
North America non-US	3	1	2	0	4	1	1	0	2	0	14	2.2%
Middle East	2	3	5	0	1	0	0	1	0	0	12	1.8%
Central/South America	0	0	1	0	0	0	0	0	0	0	1	0.2%
Multi-national	1	6	2	3	8	11	5	3	3	5	47	7.2%
Not reported	1	1	8	12	12	13	3	2	14	5	71	10.9%

Table 16
Measure information.

Year	Vol	Measure type							Timing		
		Existing measure(s)	Modified existing measure(s)	Created measure(s)	Scale development paper	Used different scores	Unobtrusive	Biometric	Cross sectional	Cross sectional time lag	Longitudinal
2010	21	42	26	29	1	0	0	1	41	12	6
2011	22	57	17	35	18	0	0	3	41	15	15
2012	23	62	31	19	0	1	0	4	58	13	3
2013	24	57	25	17	7	3	2	6	53	15	2
2014	25	61	21	30	11	0	0	7	80	5	2
2015	26	59	26	19	4	0	1	3	54	20	7
2016	27	39	20	18	0	0	0	6	30	24	2
2017	28	24	7	2	1	0	0	0	22	6	4
2018	29	29	14	20	4	2	4	1	34	8	1
2019	30	28	9	18	0	0	0	2	22	5	7
Total		458	196	207	46	6	7	33	435	123	49
Total %		70.6%	30.2%	31.9%	7.1%	0.9%	1.1%	5.1%	67.0%	19.0%	7.6%

Sample size and source of data

During *LQ*'s third decade, researchers have primarily relied on data from companies (31.1% of empirical studies), non-working undergraduate students (19.3%), and public entities, such as government,

municipalities, or education institutions (14.9%; see [Table 13](#)). Primary empirical leadership research published in *LQ* from 2010 to 2019 incorporates data ([Table 14](#)) from 346,814 respondents (at level 1 if multi-level) and 32,465 supervisors (in multi-level studies). The 21 examples of meta-analytic research published in *LQ* from 2010 to 2019

Table 17
Reliability information.

Year	Vol	Reliability technique									
		Cronbach alpha	CFA	EFA	Convergent validity	Discriminant validity	Predictive/ criterion validity	Interrater reliability (IRR)	ICC(1)	ICC(2)	WABA
2010	21	41	11	7	2	6	0	22	5	9	3
2011	22	56	26	17	10	17	6	17	15	11	3
2012	23	67	23	12	3	6	3	5	21	14	1
2013	24	53	24	2	6	17	3	4	20	13	1
2014	25	54	31	11	17	20	4	9	15	14	2
2015	26	66	26	4	18	15	1	4	18	14	1
2016	27	34	20	4	4	8	0	10	17	11	0
2017	28	23	11	1	3	1	1	8	9	5	2
2018	29	23	15	4	4	3	0	4	11	7	1
2019	30	19	3	0	0	2	3	2	2	5	0
Total		436	190	62	67	95	21	85	133	103	14
Total %		67.2%	29.3%	9.6%	10.3%	14.6%	3.2%	13.1%	20.5%	15.9%	2.2%

Year	Reliability technique										
	Rwg	Test/retest	Split half	Cohen kappa	Face validity (only if authors discuss)	Consensus coding	Other validation	Appropriate use of reliability			
								All applicable variables	Some applicable variables	No applicable variables	Not applicable for some variables
2010	5	1	0	1	0	0	0	42	5	12	2
2011	9	1	2	2	0	2	0	51	10	3	0
2012	11	2	1	1	2	1	0	67	1	2	26
2013	11	1	1	3	1	2	0	57	0	11	20
2014	11	1	1	0	1	1	0	63	1	15	24
2015	11	1	1	4	0	3	0	63	5	11	23
2016	13	0	1	4	1	2	0	35	3	18	14
2017	6	0	0	2	1	0	0	19	2	4	3
2018	5	0	0	2	0	4	0	32	4	8	2
2019	2	0	2	2	0	2	0	21	0	15	1
Total	84	7	10	21	6	17	0	450	31	99	115
Total %	12.9%	1.1%	1.5%	3.2%	0.9%	2.6%	0.0%	69.3%	4.8%	15.3%	17.7%

Table 18
Qualitative analysis.

Year	Volume	Narrative	Phenomenological	Grounded theory	Ethnographic	Case study
2010	21	3	1	1	0	8
2011	22	1	1	2	2	6
2012	23	1	0	0	0	1
2013	24	0	0	0	0	1
2014	25	2	1	3	0	1
2015	26	0	0	2	0	5
2016	27	3	0	1	0	0
2017	28	1	1	2	0	0
2018	29	0	2	1	0	0
2019	30	0	0	0	0	1
Total		11	6	12	2	23
Total %		21.2%	11.5%	23.1%	3.8%	44.2%

incorporated data from 420,565 participants and 1637 studies. Studies employing self-report data (e.g., personality measures) accounted for 59.3% of studies, while 40.5% captured data about supervisors from followers and 12.8% capture data from leaders about followers. What our sample data do not reveal is the proportion of studies that collected data from dyads (e.g., both the leader and the follower rate the quality of their relationship; (Gooty & Yammarino, 2011). However, given the relatively small proportion of data collected by one half of the potential dyad-leaders—we suspect that such cases of matching data where both parties rate the same variable (e.g., LMX quality) continue to be relatively rare, as found in prior reviews (Gooty, Serban, Thomas, Gavin, & Yammarino, 2012). This supports concerns that leadership research is not adequately capturing the dyadic and reciprocal nature of the relationship. Likewise, researchers may not be adequately addressing the context within which leadership occurs, as team (5.9%) and organization (10.0%) data constitutes a small fraction of the data published in *LQ* between 2010 and 2019. Nearly absent are reports from peers, families, and customers/outside sources, representing an opportunity for expanding both theory and research designs. To further consider the concern that researchers may not be adequately addressing the context of leadership, we coded for the country from which study samples were drawn (Table 15). Most data were sampled from the United States (35.0% of studies) followed by Europe (21.7%) with the Netherlands (6.6%) being the largest contributor, and Asia (9.4%), with China (6.0%) being the largest contributor. Some data were truly multi-national (7.2%). Sample location was not reported in 10.9% of the empirical articles.

Measure information

We also examined measures employed in *LQ* empirical studies (Table 16). An examination of this table reveals that 70.6% studies that collected data using survey measures employed existing measures, while 30.2% used modified measures, and 31.9% created new measures. One point of concern we encountered involves these newly-created measures, where only 46 of the 207 studies (22.2%) employed standard scale development practices (e.g., DeVellis, 2017; Hinkin, 1998). This suggests a gap between best and actual practices in leadership research. We also noted reliability information was missing in some studies (20.0%; Table 17). Researchers publishing in *LQ* rarely employed unobtrusive (1.1%) and biometric measures (5.1%), continuing a trend found in the earlier *LQ* reviews. Thus, there remains an opportunity for novel research designs to explore leadership phenomena. We encountered few instances of the use of difference scores, which are generally seen as poor practice (Edwards, 2001). Regarding the timing of data collection, cross-sectional designs remain a staple of recent research (67.0%). Cross-sectional data collection with a time lag between independent and outcome variables ranks second (19.0%); true longitudinal research characterized by repeated measurement to assess change is still relatively rare (7.6%).

Qualitative techniques

Few studies during *LQ*'s third decade employed qualitative techniques (52 studies, 8.7% of empirical studies; Table 18). Qualitative studies were most common in 2010 (25.0%), followed by 2011 (23.1%), and 2014 and 2015 (13.5%), with the other years accounting for less than 10% of the qualitative studies individually and 28.8% together. Case studies were the most common form of qualitative enquiry (44.2% of qualitative studies), followed by grounded theory (23.1%), narrative (21.2%), phenomenological (11.5%), and ethnographic (3.8%) approaches. Given the complexity of the leadership phenomenon, the dearth of studies that employ these context-rich approaches represents an opportunity for future research. With quantitative inquiry alone, there is a risk of ignoring elements that are required for explaining relationships, as qualitative approaches can enhance understanding of the context of leadership relationships as well as the nature of the relationships themselves, thus generating more meaningful explanations (Sofaer, 1999).

Strengths and limitations

One limitation of our design is the subjective (and error prone) nature of human coding. This limitation is mitigated somewhat by a strength of our design where we entered objective data into a database form, which reduces errors versus entering data into a MS Excel file. The very high degree of interrater agreement also suggests that the use of a coding manual and the evolution (expansion) of the coding manual as we learned from the coding process further reduced the chance of error. Indeed, a strength over prior decade reviews is the use of an expanded coding scheme, though this introduces the weakness of making direct comparisons between decade reviews more difficult. We believe that as the field evolves, the coding scheme used to describe the field must also expand. When entering author gender, we made our decision based on the first name of the author with further exploration using internet images. It is possible that ProQuest has errors in this field, our internet search was faulty, or that we intuited wrongly for some authors. We drew our citation information from SCOPUS on December 18, 2019. It is possible that SCOPUS has errors. This also does not account for the full citation record of 2019, which was not possible due to publication deadlines. Our author team includes early, mid, and later stage scholars allowing for the strength of a variety of viewpoints. One caveat to the reader: this review is by design and intent restricted to *LQ*'s third decade only. As such, trends in the study of leadership that are not represented or proportionally represented in *LQ* publications between 2010 and 2019 are not captured in the present review.

Future directions

In their review of *LQ*'s first decade of publications, Lowe and

Table 19
LQ10 review recommendations revisited in LQ20 and LQ30 reviews.

LQ10 future directions identified	LQ10 future directions revisited in LQ20	LQ10 future directions revisited in LQ30
Strategic leadership	Received considerable attention	Receiving some attention, but more work is needed. Heightened awareness of importance of strategic leadership is apparent from a forthcoming special issue on the topic (Bonardi et al., 2018), as well as the inclusion of AEs with strategy disciplinary backgrounds.
Levels of analysis	Received the most attention	Level of awareness and attention to levels of analysis issues continues to increase.
Leadership development & leadership systems	Received little attention	Attention to leadership development has increased, as apparent from the publication of two special issues (Hannum & Craig, 2010; Riggio & Mumford, 2011), another forthcoming (Day et al., 2018), and appearance of the topic within the most cited articles.
Leadership context	Received considerable attention (in second half of decade)	Continues to receive moderate levels of attention.
Females as leaders	Received little attention	Increased attention to gender is apparent from the special issue on gender and diversity (Eagly & Heilman, 2016). In addition, our coding of articles that focus on “leadership & diversity.” Indeed, even though conceptually this theoretical category includes ethnicity, race, etc., we observed while coding that the vast majority of articles coded focused exclusively on gender.
International leadership	Received little attention	Still receiving little attention, despite LQ's AEs, Editorial Review Board, and authors becoming more international and culturally diverse. This is still an opportunity for future research.
Technology (impact on leadership)	Received little attention	Although our coding scheme did not include a category for technology and leadership per se, a search of technology as a keyword identified few articles. This remains an opportunity for future research.
Transformational/charismatic leadership	Received the most attention	Still receiving considerable attention as one of the most common focal leadership theories, and also among the most cited articles.

Gardner (2000) clearly delineated eight content directions for future research. These were derived from their content analysis of LQ publications, interviews with the founding editors, and personal insights. In their review of LQ's second decade of publications, Gardner et al. (2010) briefly revisited these recommended content directions to see how much progress had been made in pursuing them. After doing so, however, they noted the difficulty of preparing a similar set of content-oriented directions for future leadership research, given the “explosion of leadership theories and novelty of approaches to studying leadership that have emerged in the most recent decade” and hence “handicapping a short list of future topics is more speculative than at any time in recent decades” (p. 951). Instead, Gardner et al. (2010, p. 951) chose to “identify a few study design and methodological aspects that will move the science of the field forward in whatever content domains are revealed to be most in favor over the next decade.”

Table 20
LQ20 review recommendations revisited.

LQ20 future directions identified	LQ20 future directions revisited in LQ30
Expand set of measures	The number of measures employed has definitely expanded with the introduction of several new leadership scales. But, has the expansion come at the cost of rigor? Many articles modified scales and new measures failed to employ standard scale development and validation processes.
Studies within studies (e.g., Study 1, Study 2, Study 3)	We have seen an increase in studies within studies, particularly in the most recent full year of LQ articles, 2018, with an average of 1.35 studies per article, as opposed to a range from 0.78 to 1.24 in prior years. The extent to which this trend extends into future years merits attention.
Interdisciplinary teams	Though the second decade of LQ made progress toward a greater diversity of author disciplines, the third decade saw a reversion with over two thirds of contributing authors being affiliated with management departments and over 90% being affiliated with management or psychology departments. However, perhaps due to the recent increased diversity among the AE team and editorial review board, there is preliminary evidence in the final years of the decade that support an increased representation of authors from other fields. This trend and whether it is sustained should continue to be monitored over the next decade.
Multi-level phenomena	The adoption of multi-level techniques and examinations continued to increase in LQ's third decade. Nonetheless, greater recognition of the multi-level nature of leadership phenomena is warranted, highlighting a need for more multi-level studies.
Controlled experiments	Empirical studies in LQ's third decade included 20% that employed lab experiments, as compared to only 5% in the previous decade. This suggests that authors are responding to calls for more experimental designs, and particularly realistic experiments ((Antonakis, 2017, a, 2017, b)).
Alternative methodologies	Not enough has been done here. Over half of the LQ studies of the last decade employed one of two designs: field surveys and lab experiments. There is definitely room for a greater variety of research designs (e.g., quasi-experiments).
Test competing models	While we did not explicitly code the extent to which LQ studies tested competing models, our impression from coding is that such tests were infrequent.
Cognition studies	Greater attention is apparent from the special issue on leader cognition and neuroscience (Lee et al., 2012), as well as an increase in the occurrence of leader and follower cognitions as a focal leadership theory.
Technology (for studying leadership)	Not enough work has been done to expand the use of technology to study leadership. Relatively few studies employed unobtrusive/biometric measures. This represents an area of opportunity as evolving technology provides ever expanding methods for studying leadership.

Revisiting Lowe and Gardner's (2000) content direction recommendations

Lowe and Gardner's (2000) recommended content directions for future leadership research called for increased attention to the topics of strategic leadership, levels of analysis, leadership development and leadership systems, leadership context, women as leaders, international leadership, technology (impact on leadership), and transformational/charismatic leadership (see Table 19). Gardner et al. (2010) concluded that the most attention was devoted to exploring levels-of-analysis issues and transformational/charismatic leadership. While our third decade review likewise revealed greater recognition and focus on studying leadership as a multi-level phenomenon as evidenced by the increased use of multi-level analytical techniques, we believe that heightened consideration of this fundamental quality of leadership (e.g., individuals, nested in teams, nested in organizations, nested in industries, nested in nations) is still needed. As for theory and research into transformational and charismatic leadership, the former continues to garner high levels of attention, though not as much as in prior decades on a proportional basis, while the latter has experienced a more precipitous decline in attention. Given recent critiques and reorientations of research into transformational (van Knippenberg & Sitkin, 2013) and charismatic (Antonakis et al., 2016) leadership, as well as an LQ special issue (Antonakis & Gardner, 2017) focused on novel and rigorous approaches toward studying the latter topic, we are optimistic that research into these forms of leadership will continue, but in a more productive and theoretically grounded manner that yields more meaningful findings and implications for leadership practice. We also note that alternative forms of inquiry such as qualitative methods might prove useful in enhancing understanding about the context of charismatic leadership events as well as meaningful explanations about the events themselves.

With regards to strategic leadership, Gardner et al. (2010) noted that this topic gained considerable interest during LQ's second decade, as apparent from special issues on strategic leadership that appeared both within and outside LQ (e.g., *Academy of Management Journal*, *Strategic Management Journal*). LQ's third decade saw a further increase in attention to strategic leadership, as it was the eighth most common focal theory, and a special issue was devoted to the topic (Bonardi, Hitt, Vera, & Withers, 2018). Nevertheless, given the importance of strategic leadership to key organizational outcomes including financial performance, innovation, corporate social responsibility, and sustainability (de Kluyver & Pearce, 2015; Yukl & Gardner, 2020), we strongly recommend that even more theoretical and empirical attention should be devoted to this topic.

Gardner et al. (2010) also observed an uptick in attention to contextual influences on leadership (5.6%) and the related topic of complexity perspectives of leadership (1.9%), particularly in the latter half of LQ's second decade. However, we observed only modest interest in contextual/complexity/adaptive leadership perspectives, as these served as the focal theory in only 1.9% of the articles published in LQ's third decade. We recommend that increased attention be devoted to studying the influence of context on leadership (Osborn, Uhl-Bien, & Milosevic, 2014). We consider complexity (Marion & Uhl-Bien, 2001; Uhl-Bien & Marion, 2009) and adaptive leadership (Uhl-Bien & Arena, 2018) theories to be well suited for studying the role of context in leadership processes. As mentioned above, qualitative methodologies may also be beneficial in advancing knowledge about leadership context.

As for their remaining content directions for leadership research, Gardner et al. (2010, p. 951) stated that, from their "viewpoint there was, relative to the need, a disappointing amount of attention paid to Females as Leaders, International leadership, Leadership Systems, and the impact of Technology on Leadership." For two of these topical areas—international leadership and the impact of technology on leadership—such disappointment continues, as these topics were infrequently examined in LQ's third decade. Given the influence of culture

on leadership as documented by the GLOBE study (Chokkar, Brodbeck, & House, 2007; Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1999; Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012; Hanges, Aiken, Park, & Su, 2016; House, Dorfman, Javidan, Hanges, & de Luque, 2014), greater attention to the manifestation and effectiveness of leadership within an international arena is clearly needed. Similarly, as more and more organizations embrace virtual teams (Charlier, Stewart, Greco, & Reeves, 2016) and other forms of technology that facilitates geographically-distributed decision-making or management, the importance of e-leadership (Avolio, Kahai, & Dodge, 2000) expands, warranting greater attention to the topic.

The good news is that the other two content topics recommended by Gardner et al. (2010) have received an upswing in research attention. Specifically, considerable attention has been devoted to leadership development in LQ's third decade, as this served as the second most common focal theory (5.8%) for articles published in the most recent decade. Indeed, two special issues (Hannum & Craig, 2010; Riggio & Mumford, 2011) and another forthcoming (Day, Riggio, Conger, & Tan, 2018) indicate current and continuing research interest in this domain. Similarly, an increase in attention focused on leadership and diversity—the vast majority of which examines gender effects—is apparent from the rise in the number of articles published from 1.9% in LQ's second decade to 4.9% in the third decade. This rise was, in part, aided by a special issue devoted to gender and leadership (Eagly & Heilman, 2016). While we find these trends encouraging, we recommend that greater attention be devoted to the study of leadership systems, as recommended by Lowe and Gardner (2000), as well as other forms of diversity (e.g., ethnicity, race, age, sexual orientation, personality, functional training, cultural background, ability, and religion).

Revisiting Gardner et al.'s (2010) methodological recommendations

A summary of Gardner et al.'s (2010) methodological recommendations is provided in Table 20. The first involved a move away from the field's reliance on a narrow set of retrospective survey measures [e.g., the Multifactor Leadership Questionnaire (Bass & Avolio, 1995) or the LMX-7 (Scandura & Graen, 1984)] as the definition of leadership by expanding the use of real-time measurement (e.g., public opinion polls) and more direct measures of leadership (e.g., content analysis of leader speeches such as those conducted by Bligh, Kohles, & Meindl, 2004, a, 2004, b)).

Our review of LQ's third decade revealed that retrospective surveys continue to be the dominant means of measuring leadership phenomena, as 46.8% of quantitative studies used such measures, which is an increase to that found in the prior decade (31%). Adding to concerns about this methodology are our findings that most of the studies that employed surveys also used convenience samples, raising concerns about the representativeness of the findings. Additionally, we found that it was common practice to introduce new survey measures, or modify existing survey measures, without following best practices for scale development and validation (DeVellis, 2017; Hinkin, 1998). Here, it is noteworthy the current editor of LQ, John Antonakis (2019), predicted that

10 years from now, the typical leadership design using questionnaire measures of leadership style to predict outcomes, whether objective or not, will be used less and less and there will be more of a focus on objectively measured behavior, real-time and archival. At this time overall the field in general does not yet fully recognize or appreciate that typical questionnaire-type designs do not have much to offer in terms of policy implications.

While alternative measures, such as content analysis (5.5%), diary studies, and event sampling (0.7%) continue to be under-utilized, new measures have been introduced to the field that may foreshadow this predicted replacement of survey-based research. These include implicit measures (Chong, Djurdjevic, & Johnson, 2017), facial expression

coding (Trichas, 2017; Trichas, Schyns, Lord, & Hall, 2017), biosensor measures (Cook & Meyer, 2017; Dixon, Webb, & Chang, 2017), computer-assisted textual analysis (CATA; Davis & Gardner, 2012; Short, Broberg, Coglisier, & Brigham, 2010), and social network measures (Cullen-Lester & Yammarino, 2016). Given the availability and promise of such measures, the time is ripe for researchers to heed this call and wean themselves from their overreliance on retrospective surveys. We also expect that the editorial board and the journal's leadership would welcome methodological pieces that introduce why and how these types of novel approaches could advance leadership research.

A second methodological recommendation advanced by Gardner et al. (2010, p. 951) involves conducting more research using multiple studies (e.g., Study 1, Study 2, etc.) "that richly and methodologically demonstrate how a leadership phenomenon unfolds." Our findings revealed progress in reaching this goal during *LQ*'s third decade, particularly during 2018, for which the average was 1.25 studies for every *LQ* article published. We are optimistic that this trend will continue, as reviewers and editors alike call for greater multi-study research to more fully flesh out leadership processes and rule out competing explanations for the relationships identified. This does not mean that we believe articles that answer "big" questions are not called for. Instead, we believe that multi-study work can answer big questions a piece at a time, yielding a stronger demonstration (perhaps even replicated ones) of the leadership phenomenon of interest.

A third recommendation offered by Gardner et al. (2010, p. 951) called for "research teams combining psychologists, sociologists, anthropologists, and cognitive scientists who can bring multiple perspectives and methodologies to the formation of research questions and tests of hypotheses." In this review we coded author discipline, with the results summarized in Table 9. The findings revealed that roughly two-thirds of authors are affiliated with management departments, and 22.1% with psychology departments, leaving only 10% for other disciplines. While we did not code for interdisciplinary teams per se, it is clear that Gardner and colleagues' call for such teams has not been answered, given the over-representation of management and psychology faculty among *LQ* authors. On the one hand, given the increasing diversification of *LQ*'s editorial leadership and review board, it would not be surprising to find that some of these scholars partner to investigate leadership phenomena from a multi-disciplinary perspective in the future, or that authors from diverse disciplines respond to the signal sent by *LQ*'s increasingly diverse disciplinary editorial leadership and editorial board that such research would be welcome. On the other hand, given well-entrenched barriers that exist to discourage interdisciplinary and transdisciplinary research (Hadorn et al., 2008), we also would not be surprised if it remains relatively rare. Regardless of the level of interdisciplinary leadership research conducted, we echo Gardner et al.'s (2010) call for more interdisciplinary teams to produce novel perspectives and approaches to studying leadership.

Gardner et al.'s (2010, p. 951) fourth recommendation called for "the foci of cross-level studies to move toward understanding how leadership is enacted and evaluated at different levels simultaneously." Indeed, Batistič, Černe, and Vogel (2017) found that the leadership field remains fragmented, with only certain leadership models (shared leadership, trust, complexity, context, and emotions/emotional intelligence) currently employing a levels-of-analysis approach for both their leadership conceptualizations and associated outcomes (while other models such as transformational leadership are declining in their multi-level study). Accordingly, while we have witnessed a continuing increase in multi-level research in our review, as our prior discussion of Lowe and Gardner's (2000) suggestions indicated, we believe it is time for the field to take Gardner et al.'s (2010, p. 951) recommendation to "treat cross-level understanding of the *phenomena* as foreground and thereby make partialing the *statistical variance* background when our goal is to understand the effects of leaders and leadership at different levels." This charge to the field is further bolstered by a number of multi-level approach recommendations made more recently in Batistič et al. (2017).

The fifth recommendation made by Gardner et al. (2010) calls for greater use of controlled experiments to tease out causal relationships among the antecedents and consequences of leadership. As noted in our discussion of research methods, *LQ*'s third decade has been characterized by more extensive use of experimental methods, as the proportion of studies that employed such methods rose substantially in *LQ*'s third decade relative to the prior two. Perhaps this increase is in partial response to Antonakis et al.'s (2010) call at the beginning of the decade for more experimental research to address pervasive endogeneity concerns that have plagued the leadership field, as well as the social sciences in general. Nonetheless, we observed little use of the types of quasi-experimental research Antonakis et al. advocated. Given the diversity and the utility of quasi-experimental studies for ascertaining causal relations (Cook & Campbell, 1979), we echo the calls of Antonakis and others (Antonakis, 2017, b; Antonakis et al., 2010; Grant & Wall, 2009) for greater usage of this powerful methodology.

The sixth recommendation made by Gardner et al. (2010) called for the use of alternative methodologies from other fields of study, such as behavioral economics, narrative analytical techniques developed by sociologists, and computer simulations pioneered by psychologists. As we noted in our discussion of measures, the field of leadership has increasingly borrowed from other disciplines to introduce more novel approaches to studying leadership phenomena (Schyns, Hall, & Neves, 2017). In addition, the appointment of AEs from a wider array of disciplines including economics, evolutionary psychology, and political science, as well as the publication of special issues that demonstrate the utility of methods from the fields of biology (van Vugt, 2018), neuroscience (Lee et al., 2012; van Vugt, 2018) and economics (Garretsen, Stoker, & Weber, 2016) for studying leadership, suggests that the field is poised to embrace a host of methods from other disciplines.

The seventh recommendation advanced by Gardner et al. (2010) involved a call to test competing models through data analysis. While our coding provides little insight into the extent to which this occurred, our impression from reading the 615 articles published during *LQ*'s third decade is that such comparisons remain rare. Nonetheless, recent meta-analyses by Banks, McCauley, Gardner, and Guler (2016) and Hoch, Bommer, Dulebohn, and Wu (2018) that compared the predictive utility of authentic, ethical, servant, and transformational leadership demonstrate the value of such comparative analyses. We encourage leadership researchers to follow these examples to conduct more extensive comparisons of leadership theories to assess their predictive power and their boundary conditions.

Gardner et al.'s (2010) eighth recommendation is to devote greater attention to the cognitive aspects of leaders and leadership. It appears that progress has been made in this regard, as leader and follower cognitions, implicit leadership theories, identity and identification processes, social identity theory, and information processing and decision making—all focal theories that involve cognitive processes—combined to account for 11.3% of focal theories. Additionally, three special issues were dedicated to leadership and cognition (Foti, Hansbrough, Epitropaki, & Coyle, 2017; Lee et al., 2012; Mumford, Watts, & Partlow, 2015). Despite such progress, the fundamental importance of leader and follower cognitions to the perception, emergence, and enactment of leadership highlights the need for continuing research in this domain.

Finally, Gardner et al. (2010) recommended that researchers draw more extensively on technology to generate new insights into leadership phenomena. As previously noted, our findings suggest that while retrospective surveys continue to dominate as measures of leadership, new applications of technology are gaining traction that promise to expand our methodological tool chest including measures of facial expressions (Poutvaara, 2014; Trichas, 2017; Trichas et al., 2017), biosensors (Dixon et al., 2017), implicit measures (Chong et al., 2017), computer-assisted textual analysis (CATA; Davis & Gardner, 2012; Short et al., 2010), and social network measures (Cullen-Lester & Yammarino, 2016).

Editor interviews

In addition to revisiting the content and methodological recommendations from prior reviews, we also interviewed, for purposes of this manuscript, Mike Mumford, Leanne Atwater, and John Antonakis, each of whom served as Editor-in-Chief during some portion of *The Leadership Quarterly's* third decade. The editor interviews reinforced several of the themes discussed previously and also introduced new topics. While a full discussion of the rich insights provided is beyond the scope of this manuscript, we briefly highlight ten themes.

One theme raised by the editors involved the need to pay more attention to context (e.g. healthcare, education) as a boundary condition on our theories rather than searching for a single moderated mediation model that can explain it all. A second theme was the need to continue to reduce an overreliance on survey research utilizing measures that are underspecified for the richness of the phenomenon they seek to measure. A third theme, related to the preceding point, is the need to broaden the methods employed including increased usage of simulations, robust experimental designs, and qualitative research methods. A fourth theme was a general concern about construct proliferation in the field. The increase in construct proliferation was perceived to be at least, in part, driven by journals insisting on new theoretical development as normative. In contrast to pushing for the development of new theory, a general sentiment was that devoting similar effort to the development of better measurement of the constructs currently in place, and more robust research designs to tease out the nuances and boundary conditions of existing theories, would better serve the field at this juncture. A fifth theme involved a recognition that more needs to be done to understand how leadership demands are similar, and different, at upper-middle and upper echelons of the organization. The editors noted that our current knowledge, which has largely been obtained from middle level managers and lower level supervisors, is better suited to informing undergraduates and other early career workers. Related to this concern is that the reporting of leadership research findings generally ignores both responsibility level in the organization and the context in which leadership is practiced. This challenge is exacerbated by one-size-fits-all theories that provide relatively little guidance on the boundary conditions across contexts and responsibility levels.

A sixth theme was the need to better understand the implications of increasingly non-western samples in leadership research explored predominantly through the lens of theory developed in first world, Anglo-centric organizations. While the general feeling is that construct proliferation and consistent pushes for new theoretical development may not have served the field well, the need for theory development in non-western settings or from non-western lenses may be a needed exception. A seventh theme was the need to better integrate disciplinary perspectives on leadership. For example, psychology researchers typically frame leadership as an outcome variable, whereas organizational behavior researchers typically frame leadership as a predictor variable. An eighth theme was the need to better understand how technology, especially the role of social media and the potential to be constantly connected, is challenging how we define leadership and what is expected from leaders. The use of artificial intelligence and deep learning will also be on the uptake, challenging both our understanding of leadership and redefining the challenges leaders face. A ninth theme was to provide more attention to how changing social norms influence leadership challenges. As a recent example, the “#MeToo” movement both raised social awareness and challenged social norms of often quietly condoned behavior. At the same time the heightened attention gave rise to new forms of backlash in cross-gender relationships. Thus, gender and gendered dynamics specifically, and diversity in general, will continue to require more attention than the field has generally afforded the topics. Finally, a tenth theme reflected a need to better link effective leadership to organizational outcomes. Leadership is generally posited as one method for improving organizational-level performance.

Yet most leadership research focuses on individual level (leader) performance or the relationship of leader behavior on group- (team-) level performance. As a field, we have little evidence that these individual- and group-level outcomes cumulatively increase organizational performance. Thus, developing theories and measures of how leadership systems impact the performance of organizational systems remains a challenge for the field.

Conclusion

Since its founding in 1990, *The Leadership Quarterly* has provided three decades of leadership for theory and research into the study and practice of leadership phenomena. While our review of the content and methodological recommendations offered in the reviews of *LQ's* first and second decades revealed areas where only limited progress had been made, it also revealed many encouraging developments. Based on our assessment of *LQ's* third decade of publications, we conclude that it is fulfilling its mission to advance “our understanding of leadership as a phenomenon, how to study it, as well as its practical implications” while studying “leaders from all walks of social life” and publishing “scholarly research, theory, and developmental application from diverse fields of inquiry about leadership” (<https://www.journals.elsevier.com/the-leadership-quarterly>). We also find that *LQ's* record of publishing rigorous and innovative research during its first three decades provides a basis for optimism that the journal, and the field, will continue to expand our knowledge of leaders and leadership into new frontiers. We look forward, with optimistic anticipation, to the story *LQ's* fourth decade will tell about the evolution and study of leadership.

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