Scholarly leadership of the study of leadership: A review of The Leadership Quarterly's second decade, 2000-2009.

By: William L. Gardner, Kevin B. Lowe, Todd W. Moss, Kevin T. Mahoney, Claudia C. Cogliser

Gardner, W. L., Lowe, K. B., Cogliser, C., Moss, T. & Mahoney, K. (2010). Scholarly leadership of the study of leadership: A review of The Leadership Quarterly's second decade, 2000-2009. *The Leadership Quarterly*, 21(6): 922-958.

Made available courtesy of Elsevier:
http://www.sciencedirect.com/science/article/pii/S1048984310001402

*****Reprinted with permission. No further reproduction is authorized without written permission from Elsevier. This version of the document is not the version of record. Figures and/or pictures may be missing from this format of the document. *****

Abstract:

In a reprise of Lowe and Gardner's (2000) review of The Leadership Quarterly's (LQ) first decade as a premier outlet for scholarly leadership research, we review 353 articles published in LQ during its second decade. Multiple methods were employed to prepare this review, including: interviews with the journal's current Senior Editor and Associate Editors; an assessment of LQ's impact, reputation, and most cited articles through citation analyses; a content analysis of article type (theory, empirical, and methods), contributors (e.g., discipline, nationality, and institutional affiliation), theoretical foundations, research strategies, sample location/type, data collection methods, and analytical procedures; survey and follow-up focus groups conducted with LQ Editorial Review Board members; and qualitative analyses to assess the prevalent themes, contributions, and trends reflected in LQ during its second decade. Drawing from these sources, we describe anticipated directions for future research.

Keywords: leadership | leadership theory | research methods | content analysis | citation analysis | journal impact | journal reputation

Article:

The purpose of this manuscript is to review the second decade of research published in The Leadership Quarterly (LQ). In conducting this review we employed multiple methodologies (e.g. content analyses, citation analysis, interviews, and questionnaires) and considered multiple antecedent variables including editorial staff emphases and reviewer decision processes that influence what appears in LQ. In doing so we examine and update Lowe and Gardner's (2000, p. 504) assertion that at the end of its first decade LQ had achieved “the founders' vision of being the leading outlet for leadership research” and that in its second decade LQ would “solidify this position and eliminate any remaining ambiguity surrounding where to publish and obtain the best in leadership research.” (For background information on the purpose and development of Lowe and Gardner's [2000] review of LQ's first decade, see Video 1).

Thus our broad research questions include: Is there a consensus among leadership scholars that the content of LQ represents the highest level of leadership scholarship? What are the topical characteristics (methods and design) and content (theories and constructs) of the research that appears in LQ? To what extent has LQ met its mission and which areas offer the greatest opportunity for fulfilling that mission? How might we increase, by looking forward and backward at the same time, our understanding of where leadership research might be going?

To answer these questions we first use Reichers and Schneider's (1990) stage model for the evolution of constructs to provide a broad frame through which to view the state of leadership research published in LQ over the past decade. Next, we conduct a citation analysis to assess the reputation of LQ and the impact on the field of management relative to other leading management and psychology journals. We follow this with a detailed and thickly described content analysis of the 353 articles that appeared in LQ over the period 2000–2009. Specifically, the content analysis examines the type of article (theory, empirical, and methods), contributors (discipline, nationality, and institutional affiliation), theoretical foundations, research strategies, sample location/type, data collection methods, and analytical procedures. 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 Top 50 most cited articles published in LQ during the journal's first two decades. While the content analysis accurately describes what LQ published, it offers only trend-like insights into why these articles got published. To explore the why aspect of LQ publications we provide insights gained from extensive interviews with LQ Senior and Associate Editors as well as data gained via focus groups with and survey research from LQ's Editorial Board members. We conclude by looking backward and forward at the same time to integrate our perspectives on LQ's progress and content, the normal science criteria employed by its standards-bearers, and the projections of these standards-bearers to identify some ways that the field of leadership research can be advanced. (See Video 2 for a complementary overview of the diverse research methods used to complete this review.)

1. Vibrancy of the field of leadership—looking backward

At the turn of the twentieth century, it was widely acknowledged that leadership, as a topic of study for management scholars, had been back in vogue for the better part of two decades. Hunt (1999) argued that this turnaround in scholarly attention to leadership research could be attributed to a resurgence of interest in charismatic leadership (Conger & Kanungo, 1987, House, 1977 and House & Aditya, 1997) and the introduction of the transformational leadership construct (Bass, 1985 and Burns, 1978). Surging interest in these “new” (Bryman, 1992) or “neo-charismatic” (House & Aditya, 1997) theories of leadership attracted new scholars to the field and brought experienced scholars who had turned their attention to other topics back into the fold. As chronicled in Lowe and Gardner (2000), this resurgence of interest in leadership spawned a new journal, The Leadership Quarterly, which published 188 articles on leadership in the 1990s without a noticeable decline in the volume of leadership research at traditional outlets such as the Journal of Applied Psychology and Personnel Psychology (Cascio & Aguinis, 2008). While future growth was speculated, what could not be definitively answered at the turn of the century was: Will the field of leadership continue to grow or will it again stagnate as these “new” leadership constructs near the end of their second decade? Will relatively untested constructs emerge as further igniters of leadership research or will they perish from neglect?

The short answer to these questions is that the field has continued to flourish. Over the last ten years, LQ has gone from four issues to six issues per year. Compared to the prior decade, LQ increased the number of journal pages from 4501 to 7870 (74.9%) and the number or articles from 188 to 353 (87.8%). This growth has been achieved during a period when new outlets for leadership research (e.g., Leadership was launched by Sage in 2005) have been founded. While these statistics are indisputable, looking backward they do not answer the question of why leadership research has remained so vibrant.

To place a broad frame on the why question as it relates to the vibrancy of leadership research in general and the role of LQ more specifically, we adopt the stage model of Reichers and Schneider (1990) that has been successfully applied to leadership research in the past (Cogliser & Brigham, 2004 and Hunt, 1999). Our perspective is that the stage model can be used for two primary purposes. The first is to categorize and explain past leadership research. The second is to speculate, given the stages of somewhat developed (e.g. strategic leadership theory, implicit leadership theory, and social identity theory) and new (e.g. neuroscience and complexity theory) leadership constructs, whether the recent vibrancy in leadership research will continue, or if a return to a period of stagnation is the more probable scenario.

Reichers and Schneider (1990) proposed a three stage model for the evolution of constructs. In discussing the stage model, we adopt the approach of Hunt (1999) who applied it to examine leadership as a field and the various schools or approaches within the field as constructs. The three stages are: 1) concept introduction and elaboration; 2) concept evaluation and augmentation; and 3) concept consolidation and accommodation. Concept introduction and elaboration is characterized by attempts to legitimize the construct and educate others, via articles and books, about the new or newly borrowed concepts. Early data are offered as evidence that the construct is a real concept. Concept evaluation and augmentation, the second phase, is characterized by critical reviews that lament faulty construct conceptualization and variable operationalization. In this stage, empirical results come to be regarded as equivocal and in response moderators and mediators are offered as evidence of the underlying mechanisms behind the phenomenon and as an attempt to place boundary conditions on the application of the underlying theory. Concept consolidation and accommodation, the third phase, is characterized by a few generally accepted definitions, meta-analytic studies and the appearance of the construct as a moderator or mediator in more general models within the field. In this latter stage, enthusiasm for the construct begins to wane because there is little “new” to discover. To the extent that the construct consolidation phase (e.g., leader trait theory appears to have reached a stage of maturity) dominates interest in the field (leadership), overall research declines.

2. Journal reputation of LQ

LQ's emphasis on rigor and scholarship has led to a natural interest in its quality relative to other management and psychology journals. The 2000 LQ content analysis utilized the Anbar Intelligence Service that rated several journals in the strategy content area (LQ included) on research and practical implications, readability, and originality. LQ was judged quite favorably on those dimensions (Lowe & Gardner, 2000). Here, we examine the impact of LQ using multiple impact measures. Traditionally, journal impact has been assessed through the use of the Journal Impact Factor (JIF) formula from the Social Science Citation Index and the Journal Citation Reports through Thomson Reuthers' Web of Science. This concept was introduced by Garfield (1979) and is a measure of the average citation frequency for a specific citable item in a journal for a specific time period. Typically, the impact factor of a journal is the ratio between citations of published articles in the last two years (in other words, the average number of citations in a given year of articles published in that journal in the preceding two years). This impact factor is now considered the main tool for ranking, evaluating, and comparing journals. Recently, an additional five-year journal impact factor has been added as a complement to the traditional JIF, and is considered to be more stable and less fickle (Jascó, 2009).

An alternative or complement to JIF is Anne-Wil Harzing's Publish or Perish software that searches Google Scholar to assess impact. Using this software, an “h-index” and “g-index” are generated, based upon different formulae for assessing impact. Hirsch (2005) introduced the h-index, and Harzing defined it in this way: A scientist has index h if his or her Np papers have at least h citations each, and the other (Np–h) papers have no more than h citations each. The goal of the h-index is to assess the overall impact of a researcher's contributions by examining the number of times he or she has been cited (Harzing & van Der Wal, 2008). Developed by Egghe (2006), the g-index is defined in the following way: Given a set of articles ranked in decreasing order of the number of citations that they received, the g-index is the (unique) largest number such that the top g articles received (together) at least g2 citations. The goal of the g-index is to give more weight to a frequently cited article, and it is meant to complement the h-index (Harzing & van Der Wal, 2008).

The developers of this software have argued that the use of Google Scholar may be advantageous because it assesses a journal's impact in sources not published by Thomson Reuters' Web of Science, such as “books, conference papers, and non-US journals” (Harzing & van Der Wal, 2008). In the focal article of a recent issue of the Academy of Management Learning and Education, Adler and Harzing (2009) decried overreliance on journal impact factors as single measures of the quality of a journal, an academic institution, or an individual's research. The authors argue that an appropriate assessment of author or journal impact should include multiple measures of impact.

Through examination of the extant literature and conversations with LQ editors past and present, we selected several management and psychology journals with a leadership component to compare with LQ. Two steps were then employed to calculate and examine the impact of these journals. First, we collected both the two-year and five-year JIF from the Social Science Citation Index and the Journal Citation Reports. Next, we employed Publish or Perish software to generate an h-index, g-index and mean citations per paper (CPP) for each journal.

The results of our impact analysis are presented in Table 1. When examining the years 2004 through 2008, Table 2 shows that LQ had an h-index of 37 and a g-index of 50, ranking it 10th on this list of elite journals. These numbers compare favorably to Harzing and van Der Wal's (2008) recent ranking of the top 20 international business and management publications which found that between 2000 and 2005, LQ had an h-index of 25 and a g-index of 36. Additionally, the five-year JIF of LQ of 1.638 (2002–2006) Harzing and van Der Wal reported has grown to 3.50 (2004–2008). Clearly, the JIF of LQ is increasing; in 2006 the impact was 1.72, it was 1.76 in 2007, and it rose to 2.21 in 2008. Overall, these statistics show that LQ is comparable with other quality journals in international business and management, many of which appeal to more general audiences (ASQ's five-year h-index and g-index scores are nearly identical to LQ; see Table 1). LQ can also be compared favorably with the overall impact factors of other fields: the 2.205 impact of LQ (as reflected in the table) is favorably compared with psychology journals (1.39) and business and marketing journals (1.03) (Althouse, West, & Bergstrom, 2009).

Table 1. Impact of *LQ* relative to other Top Management and Psychology Journals.

Journal	2004–2008						2008					
	h-index	Rank	g-index	Rank	CPP mean	JIF	h-index	Rank	g-index	Rank	CPP mean	JIF
Academy of Management Journal	65	1.0	96	1.0	27.12	7.670	11	4.5	15	6.0	5.91	6.079
Academy of Management Review	61	3.0	91	2.0	22.29	8.211	14	1.0	21	1.0	7.13	6.125
Administrative Science Quarterly	31	12.0	50	10.5	8.43	6.313	8	9.0	10	10.5	2.75	2.853
Journal of Applied Psychology	56	4.0	78	5.0	20.79	6.006	12	2.5	16	4.0	5.63	3.769
Journal of Leadership and Organizational Studies	16	13.5	20	14.0	5.69		2	14.5	2	15.0	0.78	
Journal of Management	40	7.0	60	7.0	25.52	4.532	8	9.0	13	7.5	3.65	3.080
Journal of Management Studies	42	6.0	63	6.0	15.60	3.485	11	4.5	16	4.0	5.20	2.558
Journal of Organizational Behavior	39	8.5	60	8.0	13.96	3.932	9	7.0	18	2.0	4.69	2.441
Leadership (2005)	13	15.0	18	15.0	5.72		2	14.5	3	13.5	0.96	
Leadership and Organization Development	16	13.5	24	13.0	4.22		3	13.0	3	13.5	0.60	
Leadership Quarterly	37	10.0	50	10.5	16.55	3.503	7	11.5	8	12.0	3.37	2.205
Organization Science	49	5.0	82	4.0	23.04	5.453	10	6.0	13	7.5	4.01	2.575
Organization Studies	39	8.5	56	9.0	12.19		8	9.0	11	9.0	3.40	1.857
Organizational Behavior and Human Decision Processes	33	11.0	45	12.0	15.32	3.187	7	11.5	10	10.5	4.49	2.740
Strategic Management Journal	62	2.0	89	3.0	22.82	6.708	12	2.5	16	4.0	4.71	3.344

Table 2. Editors, number, and type of publication, and author information by *LQ* volume.

		Editors		Number of publications			Author disciplines[a]		Author residence		Board member	
Year	Vol.	Senior	Guest	Articles	Other	Total	MGMT/business	Other disciplines	USA	Other nationality	2000–2009	1990–2009
2000	11	Hunt	Connelly, Yammarino (Leadership Skills), Hunt (Yearly Review of Leadership)	21	12	33	59	19	57	17	12	31
				64%	36%		76%	24%	77%	23%		
					Book Review (4), Special Issue/ Section Intro (3), Exchange (1), Interview (2), Theory Letters (2)			Psychology (18), Not Specified (1)		Israel (12), Canada (2), Other (3)		
2001	12	Hunt	Offerman, Hanges Day (Leaders, Followers, & Values), Hunt (Yearly Review of Leadership)	18	8	26	21	28	38	11	6	16
				69%	31%		43%	57%	78%	22%		
					Book Review (5), Special Issue/Section Intro (1), Interview (1), Comments from Past Students of James Burns (1)			Psychology (20), Education (3), Research Institute (2), Other (3)		Israel (3), Austria (2), Canada (2), Other (4)		
2002	13	Hunt	Bliese, Halverson, Schriesheim (Benchmarking Multi-level Methods in	32	8	40	49	25	55	19	18	23
				80%	20%		66%	34%	74%	26%		
					Special			Psychology		Australia (11),		

		Editors		Number of publications			Author disciplines[a]		Author residence		Board member	
Year	Vol.	Senior	Guest	Articles	Other	Total	MGMT/business	Other disciplines	USA	Other nationality	2000–2009	1990–2009
			Leadership), Bryman (Qualitative Methods), Hanges, Day (Quantitative Methods), Humphrey (Emotions & Leadership), Hunt (Yearly Review of Leadership)		Issue/Section Intro (3), Theory Letters (4)			(15), Research Institute (4), Consulting (3), Sociology (2), Other (1)		Netherlands (4), China (2), Other (2)		
2003	14	Hunt	Mumford (Leading for Innovation: Part 1), Hunt (Yearly Review of Leadership)	30	15	45	40	40	66	15	12	27
				67%	33%		50%	50%	81%	19%		
					Editorial (1), Special Issue/Section Intro (3), Leadership Classics (7), Book Reviews (4)			Psychology (24), Research Institute (4), Accounting (2), Other (10)		UK (6), Israel (4), Sweden (2), Other (3)		
2004	15	Hunt	Mumford (Leading for Innovation: Part 2), Ammeter, Douglas, Gardner, Hochwarter, Ferris (Political Perspectives in Leadership), Hunt (Yearly Review of	35	9	44	70	24	70	23	17	31
				80%	20%		74%	26%	75%	25%		
					Special Issue/ Section Intro (4), Theory Letters (2), Book Reviews (3)			Psychology (20), Other (4)		Australia (9), Israel (5), Canada (4), Netherlands (2), Other (3)		

		Editors		Number of publications			Author disciplines[a]		Author residence		Board member	
Year	Vol.	Senior	Guest	Articles	Other	Total	MGMT/business	Other disciplines	USA	Other nationality	2000–2009	1990–2009
			Leadership)									
2005	16	Mumford	van Knippenberg, van Knippenberg, De Cremer, Hogg (Leadership, Self & Identity), Avolio & Gardner (Authentic Leadership Development), Fry (Spiritual Leadership), Hunt (Yearly Review of Leadership)	38	11	49	57	41	64	34	21	31
				78%	22%		58%	42%	65%	35%		
					Editorial (2), Special Issue/Section Intro (5), Theory Letters (1), Book Reviews (3)			Psychology (30), Public Policy (3), Other (8)		Canada (10), Netherlands (9), Finland (3), UK (3), Israel (2), Italy (2), Other (5)		
2006	17	Mumford	Day, Gronn, Salas (Leadership in Team-Based Organizations), Dickson, Resick, Hanges (Cross-Cultural Leadership), Hunt (Yearly Review of Leadership)	36	6	42	56	45	77	21	14	22
				86%	14%		52%	48%	79%	21%		
					Special Issue/Section Intro (2), Book Reviews (2), Theory Letters (2)			Psychology (28), Consulting (8), Marketing (3), Military (3), Public Policy (2), Other (4)		Australia (7), Finland (5), China (3), Canada (2), Israel (2), Other (2)		
2007	18	Mumford	Tierney, Tepper (Destructive Leadership), Marion, Uhl-Bien (Leadership & Complexity), Hunt (Yearly Review of	34	4	38	57	37	80	17	18	25
				89%	11%		61%	39%	82%	18%		
					Special Issues/Section			Psychology (29),		Israel (4), Canada (2),		

		Editors		Number of publications			Author disciplines[a]		Author residence		Board member	
Year	Vol.	Senior	Guest	Articles	Other	Total	MGMT/business	Other disciplines	USA	Other nationality	2000–2009	1990–2009
			Leadership)		Intro (3), Theory Letters (1)			Consulting (2), Public Policy (2), Other (4)		Finland (2), Germany (2), Norway (2), Turkey (2), Other (3)		
2008	19	Mumford	Yammarino & Dansereau, Issue 2 (Multi-level); Uhl-Bien (Yearly Review of Leadership) Ciulla, Issue 4 (Humanities)	47	5	52	63	50	81	32	23	32
				90%	10%		56%	44%		28%		
					Special Issue/Section Intro (3), Theory Letters (2)			Psychology (27), Consulting (9), Industry (2), Public Policy (6), Other (6)		UK (8), Australia (7), Canada (7), China (3), Italy (2), Netherlands (2), Other (3)		
2009	20	Mumford	Waldman, Benson, Keller (Leadership & Organizational Learning), Gardner & Cogliser (Meso-Modeling of Leadership), Uhl-Bien (Yearly Review of Leadership)	62	5	67	100	47	132	44	46	46
				93%	7%		68%	32%	75%	25%		
					Special Issue/Section Intro (3), Editorial (2)			Psychology (30), Research Institute (9), Education (2), Political Science (2), Other (4)		Australia (11), Netherlands (6), Korea (5), Israel (4), UK (4), Canada (3), Singapore (3), Belgium (2), China (2), Other (4)		

		Editors		Number of publications			Author disciplines[a]		Author residence		Board member	
Year	Vol.	Senior	Guest	Articles	Other	Total	MGMT/business	Other disciplines	USA	Other nationality	2000–2009	1990–2009
Total				353	84	437	569	367	720	233	187	284
Total %				80%	20%	100%	62%	38%	76%	2		

a In cases where the author did not indicate his or her affiliation, institutional web sites, curricula vitae, and/or other sources of biographical sources were examined to identify the author's affiliation at the time the article was published.

3. Content analysis of LQ publications: 2000–2009

Having established LQ's impact relative to other top journals in the field, we then conducted an extensive content analysis to better explicate what has made LQ so successful. We chose the period 2000–2009 because it offers a time period of equal length to that employed in Lowe and Gardner's (2000) comprehensive review of the first decade of The Leadership Quarterly, thereby facilitating comparative analyses. While our primary purpose here is to document the content and characteristics of leadership research over the most recent decade, the equivalent time periods do offer the intuitively attractive opportunity to empirically demonstrate the growth and decline of leadership constructs. The three stage model of introduction–evaluation–consolidation discussed earlier may then offer utility for understanding how the field has evolved and in turn how it might evolve in the decade going forward.

The content analysis was performed in four stages that roughly parallel those detailed in Lowe and Gardner (2000). First, complete references with abstracts were downloaded from the ScienceDirect® database (the online source for electronic issues of LQ) into the Endnote X1 software package (EndNote X1, 2007) and full-text copies of all articles were compiled. Second, for each article, three members of the author team recorded: 1) editor and author information, including the Senior Editor, guest editors and topic (if any), author discipline, author institutional affiliation, and author residence at the time of the publication, and whether the author was a member of LQ's Editorial Board (at the time of the publication or previously); 2) primary theoretical bases or content focus; and 3) publication type (theoretical, empirical, methodological, and special issue). For empirical articles, additional fields were coded, including the: 1) research strategy; 2) sample location and type; 3) data collection methods; and 4) analytical methods employed. Note that while Lowe and Gardner (2000) also coded the level of analysis, we chose not to do so because a comprehensive assessment of the level of analysis in leadership research recently completed by Yammarino, Dionne, Uk Chun, and Dansereau (2005) would render that analysis largely redundant. Also note that for each issue of LQ, we recorded all citable publications, including editorials, special issue introductions, theory letters, book reviews, interviews, and articles. However, further coding was completed only on articles that were deemed to make a substantive contribution. Hence, editorials, theory letters, interviews and book reviews were not coded further, and special issue introductions were coded only when they made a substantive contribution (i.e., a contribution of new knowledge), rather than providing a short introduction to or overview of the issue.

In the third stage, reliability checks on the coded data were performed and discrepancies were reconciled. The most challenging element of coding involved the primary theoretical foundations and/or content focus of the articles. An emergent scheme for classifying the theoretical/content focus was developed (described in Section 4.2.1), and applied by all five members of the research team. To obtain an initial assessment of reliability, two members of the research team coded the theoretical/content foundations for all articles, revealing a level of agreement of 82%. In addition, the entire research team met face-to-face to review the coding completed for each article and reconciled all initial coding discrepancies.

In the fourth and final stage, the coding for each article was aggregated across the ten volumes of LQ's second decade to create Table 2, Table 3, Table 6, Table 7, Table 8 and Table 9. In detailing the content analysis results we supplement our analysis, where appropriate, with comparisons to Lowe and Gardner's (2000) results, insights gained through the coding process, and relevant content from the broader leadership and management literature. Embedded in our discussion of the content analysis is a complementary citation analysis that summarizes the 50 most cited LQ articles. (See Video 3 for additional information regarding the content analysis.)

Table 3. Type of articles by *LQ* volume.

Year	Volume	Empirical	Theoretical	Methods	Total	Special issue	Yearly Review issue
2000	11	10	11	0	21	7	6
		48%	52%	0%	100%	33%	29%
2001	12	10	8	0	18	5	5
		56%	44%	0%	100%	28%	28%
2002	13	17	10	5	32	19	5
		53%	31%	16%	100%	59%	16%
2003	14	12	18	0	30	9	8
		40%	60%	0%	100%	30%	27%
2004	15	20	14	1	35	15	5
		57%	40%	3%	100%	43%	14%
2005	16	18	20	0	38	22	4

Year	Volume	Empirical	Theoretical	Methods	Total	Special issue	Yearly Review issue
		47%	53%	0%	100%	58%	11%
2006	17	22	10	4	36	4	6
		61%	28%	11%	100%	11%	17%
2007	18	19	15	0	34	13	5
		56%	44%	0%	100%	38%	15%
2008	19	32	15	0	47	15	5
		68%	32%	0%	100%	32%	11%
2009	20	35	27	0	62	0	5
		56%	44%	0%	100%	0%	8%
Total		195	148	10	353	109	54
Total %		55%	42%	3%	100%	31%	15%

3.1. LQ publications: What is published and by whom

When they approached the task of providing a review of the first decade of LQ,Lowe and Gardner (2000) quickly identified two basic questions: 1) What is published in LQ?; and 2) Who is publishing in LQ? These questions provide an appropriate starting point for presenting the content analysis results for LQ's second decade. Initial answers can be gleaned from Table 2, which provides a summary of the editorship, number and types of publications, and each authors' discipline, residence, and board member status, by volume.

3.1.1. Number and type of publications

As Table 2 indicates, the number of articles per volume has grown steadily over LQ's second decade, from 34 in 2000 to 62 in 2009, for an increase of 82%. Moreover, the total number of publications rose 56% in the second decade, increasing from 280 to 437, with the number of total articles rising from 188 to 353 (88%). Such growth was undoubtedly boosted by an increase in the number of issues from four to six (an unusual number for a “quarterly” publication!) in 2000. The rationale for expanding the number of issues per year from four to six is that the two additional issues include the Yearly Review and one special issue that supplement the four regular issues (F. Yammarino, personal communication, February 18, 2010). While that may have been the initial intention and actual practice for the first two years of the expanded format, seven of the eight subsequent LQ volumes included multiple special issues, as described in Section 4.1.4. Beyond the expanded number of issues, the growth in the number of articles per volume also reflects a steady rise in the number of submissions (M. Mumford, personal communication, February 10, 2010). The rise in submissions, in turn, reflects the growth of the leadership discipline in general, as further evidenced by an increase in the number of leadership journals (e.g., the introduction of the European-based journal, Leadership by Sage Publications in 2005).

With regard to the type of publications over the decade, 80% were journal articles, with the remainder consisting of editorials, book reviews, interviews, brief special issue/section introductions, and theory letters (see Table 2). A more detailed breakdown of the types of articles published (see Table 3) reveals that the majority were empirical (55%), as compared with theoretical (42%) and/or research methods-focused (3%), articles. This breakdown is similar to that obtained by Lowe and Gardner (2000), who found that 55% of the first decade LQ articles were empirical, followed by 46% theoretical, and 10% methods-focused articles. The decline in the proportion of methods-focused articles is notable, and suggests that LQ editors may want to actively encourage the submission of methods-related articles in the upcoming decade to foster greater empirical rigor and stimulate the adoption of more diverse research strategies.

The summary provided in Table 3 also indicates that articles published in special issues declined from 50% in the 1990s to 31% of articles published in LQ's second decade. However, 15% of the last decades' articles were presented in Yearly Review issues, starting with the inaugural Yearly Review in 2000. Hence, consistent with the journal's first decade, roughly half of the articles in LQ's second decade were published in regular issues. Given that some of the most highly cited LQ articles from the last decade appeared in the Yearly Reviews (e.g., Day, 2000, Fry, 2003 and Zaccaro et al., 2001) or special issues (e.g., Avolio & Gardner, 2005 and Mumford, Zaccaro, et al., 2000), it appears that the journal is using these special forums for leadership scholarship effectively, while ensuring that sufficient journal space is maintained for the dissemination of leadership theory and research through the regular submission process.

3.1.2. Author information

Since its inception, primary components of LQ's mission have been to publish articles from a wide array of disciplines that reflect an interest in leadership and to serve as a international outlet for leadership theory and research (Lowe & Gardner, 2000). After reviewing LQ's first decade, Lowe and Gardner concluded that the journal had only modest success in achieving these goals, as the majority (67%) of authors were affiliated with business schools and/or management departments and four out of five (82%) resided in the United States. Limited progress in achieving these goals appears to have been made over the past decade, as the proportions of authors from disciplines other than business/management has risen from 33% to 38%, and the proportion of authors from outside the United States has increased from 18% to 24% (see Table 2) Among the other disciplines, psychology (241 authors/26%) was by far the most represented. With respect to other nationalities, residents from Australia (45 authors/4.7%), Israel (36 authors/3.8%), Canada (32 authors/3.4%), the Netherlands (23 authors/2.4%), and the United Kingdom (21 authors/2.2%) were most common. Together, these results suggest that while the study of leadership as represented by LQ has become more interdisciplinary and less U.S.-centric, further efforts are needed to elicit and encourage high quality leadership research with these attributes.

One theme that consistently emerged from interviews with LQ's editors during both its first and second decades is the importance of selecting top leadership scholars for the journal's Editorial Review Board (Lowe & Gardner, 2000; M. Mumford, personal communication, August 8, 2009). As such, it is hardly surprising that LQ's board members are also frequent contributors to the journal. Indeed, Lowe and Gardner found that current board members accounted for 118 of 285 (42%) authorship credits assigned for LQ's publications during its first decade. Lowe and Gardner (2000, p. 471) opined that “[w]hile the importance of having a strong, extensive, and committed board is readily apparent from these numbers, they also underscore the aforementioned need to generate additional manuscripts from a broader circle of authors who represent more diverse disciplines and nationalities.”

Dramatic progress was made with respect to the proportion of authorship by current board members, which was more than halved during the journal's second decade to 19.6% (187 out of 953 author credits). In addition, the proportion of authors publishing in LQ during the 2000's who were current or prior members of LQ's Editorial Review Board was only 29.8% (284 out of 953 author credits). Upon reflection, we believe two factors account for this dramatic decline. First, LQ's founding editors indicated that it was a constant struggle during the journal's formative years to secure sufficient numbers of quality articles to fill the journal's pages. Consequently, editorial board members were strongly encouraged to submit their work to the journal, and it was typically well received. Given that annual submissions to LQ approached 300 manuscripts in 2009 (M. Mumford, personal communication, February 10, 2010) in LQ's second decade, there is no longer a need for editors to solicit manuscripts from board members. Second, given that growth in submissions to LQ has far outstripped growth in the size of the board (from 75 in 1999 to 87 in 2009), the decline is partially attributable to a decline in the ratio of board members to submitters. Collectively, the reduction in the proportion of LQ authors who are or have been board members clearly reflects a healthy development in the maturation of the journal as it indicates LQ is both attractive and receptive to a large number of submitting authors who have no formal affiliation with the journal.

3.1.3. Top institutional contributors

Another way to explore who publishes in LQ and the breadth of representation involves an examination of its top institutional contributors. The top institutional contributors to LQ were identified in two ways. First, we counted the number of unique articles associated with each institution. Second, we computed the rankings of institutional affiliations through the use of a weighted, proportional tabulation system devised by Howard, Cole, and Maxwell (1987). This method was used as an attempt to estimate differences in contributing effort by authors (at their respective institutions). In this system, credit for each institutional affiliation was set at a value of one (1.0) per article. Thus, a single authored article netted that author a single unit (1.0) of credit. For an article with two authors the first author earned .6 points of credit and the second author earned .4 points of credit. In an article with three authors, the first author netted a credit of .47, the second netted .32 and the third .21 points of credit. If an article had more than three authors the proportional credit was determined for each author based on a continuation of the above system. In cases where an individual author had more than one institutional affiliation, credit was split evenly across affiliations. Table 4 provides the results of both of these analyses with institutions having a proportional affiliation count of 2.0 or over considered a top contributor (with inclusion in this table).

Table 4. Top institutional contributors to *LQ*, 2000–2009.

Institution	Total (proportional affiliation count)[a]	Rank	Total (unique contributions)[b]	Rank
University of Oklahoma	18.75	1.0	29	1.0
Binghamton University	10.68	2.0	21	2.0
Pennsylvania State University	10.41	3.0	20	3.0
University of Miami	8.56	4.0	15	4.0
University of Nebraska at Lincoln	7.85	5.0	14	5.5
University of Queensland	7.67	6.0	13	8.0
Harvard University	7.21	7.0	9	15.0
Texas Tech University	7.09	8.0	14	5.5
University of Richmond	6.29	9.0	7	22.5
Arizona State University	5.98	10.0	13	8.0
University of Maryland	5.44	11.0	13	8.0
Claremont Graduate University	4.92	12.0	10	11.5
University of Western Ontario	4.78	13.0	9	15.0
Wayne State University	4.43	14.0	9	15.0
Florida State University	4.33	15.0	9	15.0
University of Haifa	4.10	16.0	5	33.5
University of Mississippi	4.08	17.0	9	15.0
University of Akron	3.93	18.5	7	22.5
Virginia Commonwealth University	3.93	18.5	5	33.5
New Mexico State University	3.83	20.0	7	22.5
George Mason University	3.80	21.0	11	10.0
University of Houston	3.72	22.0	8	19.0
State University of New York-Buffalo	3.65	23.0	10	11.5

Institution	Total (proportional affiliation count)[a]	Rank	Total (unique contributions)[b]	Rank
Claremont McKenna College	3.10	24.5	6	27.0
Erasmus University Rotterdam	3.10	24.5	8	19.0
University of Notre Dame	3.00	26.0	6	27.0
Yale University	2.93	27.0	6	27.0
University of Central Florida	2.87	28.5	6	27.0
State University of New York-Albany	2.87	28.5	4	43.5
Rice University	2.70	30.0	4	43.5
Michigan State University	2.61	31.0	4	43.5
Monash University	2.60	32.0	5	33.5
Bar-Ilan University	2.52	33.5	5	33.5
Oklahoma State University	2.52	33.5	4	43.5
Management Research Institute	2.48	35.0	7	22.5
Walter Reed Army Institute of Research	2.34	36.0	5	33.5
New York University	2.28	37.0	3	61.5
Tilburg University	2.25	38.5	6	27.0
United States Military Academy	2.25	38.5	5	33.5
Northwestern University	2.20	40.5	3	61.5
Virginia Polytechnic Institute and State University	2.20	40.5	3	61.5
Indiana University	2.02	42.0	5	33.5
Tarleton State University	2.00	43.0	2	97.5
University of Illinois at Springfield	2.00	44.0	2	97.5
University of Technology, Sydney	2.00	45.0	3	61.5

The top three institutional contributors to LQ from 2000–2009 are the University of Oklahoma, Binghamton University, and Penn State University. Although most top contributor affiliations are North American, seven schools across Australia, Israel and Europe are also prominent contributors. Both analyses point to the University of Queensland as the top non-U.S. contributor. Most of the institutions listed are universities, suggesting top contributors to LQ are affiliated with traditional academic settings. However, several institutes or centers appear including the Management Research Institute, American Institutes for Research, and the Walter Reed Army Institute of Research.

3.1.4. Special issues

A wide variety of leadership topics have been addressed within LQ special issues during the past decade, as indicated by the following list of special issue titles: Leadership Skills (Connelly & Yammarino, 2000 and Yammarino, 2000), Leaders, Followers, and Values (Offermann, Hanges, & Day, 2001), Benchmarking Multi-level Methods (Bliese, Halverson, & Schriesheim, 2002), Emotions and Leadership (Humphrey, 2002), Leading for Innovation Part I: Micro-studies (Mumford, 2003), Leading for Innovation Part II: Macro-Studies (Mumford, 2004), Political Perspectives for Leadership (Ammeter, Douglas, Hochwarter, Ferris, & Gardner, 2004), Authentic Leadership Development (Avolio & Gardner, 2005), Research in Leadership, Self, and Identity (van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2005), Toward a Paradigm of Spiritual Leadership (Fry, 2005), Leaders in Team-Based Organizations (Day, Gronn, & Salas, 2006), Destructive Leadership (Tierney & Tepper, 2007), Leadership and Complexity (Marion & Uhl-Bien, 2007), Multi-Level Approaches to Leadership (Yammarino & Dansereau, 2008), Leadership: Views from the Humanities (Ciulla, 2008), Leadership and Organizational Learning (Waldman, Berson, & Keller, 2009) and Meso-Modeling of Leadership: Integrating Micro- and Macro-Perspectives of Leadership (Gardner & Cogliser, 2009). In total, LQ published 17 special issues during the past decade, nearly double the nine published in the 1990s. Importantly, the heightened use of special issues to introduce emerging theories and streams of research appears to be consistent with the vision of LQ's founders to “create a critical mass” of leadership scholarship (Lowe & Gardner, 2000).

The increasing proliferation of LQ special issues during the past decade is part of a larger trend documented by Olk and Griffith (2004) in an insightful Organization Science article. Based on interviews with journal editors and archival data, Olk and Griffith (2004) compiled data on the impact and quality of special issues for five prominent management journals (Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Strategic Management Journal, and Organization Science). Within this sample, Organization Science published the highest frequency of special issues (30% or 15 special issues out of 50 total issues within a 10-year time period). Interestingly, 17 of 56 total LQ issues published during the 2000–2009 time period (30.3%) were special issues—a high rate that is nearly identical to that of Organization Science.

Of particular interest here are Olk and Griffith's (2004) findings that articles published in special issues have significantly higher citation rates, and greater upward variance in quality (more exceptional rather than substandard articles), than regular issues. Thus, contrary to occasional speculation that special issues yield inferior articles because of the need for reviewers to look at a "batch" of articles in a relatively short period of time (and thus cut corners to "fill in" a special issue), Olk and Griffith found that special issues enhanced the overall quality and reputation of the sampled journals. To assess the impact of LQ special issues, we examined the top 100 most cited LQ articles from 2000 to 2008 as identified by Harzing's Publish or Perish methodology. Consistent with Olk and Griffith's findings, 47 of the top 100 most cited articles from LQ's second decade appeared in special issues. As such, special issues were overrepresented among influential articles, as they made up only 30% of the journal's articles, but accounted for nearly half of the most cited publications. Hence, Olk and Griffith's conclusion that special issues can positively impact a journal's influence and reputation appears to generalize to LQ.

3.1.5. Most cited articles

To gain further insight into the relative influence of LQ publications from the journal's second decade in comparison to the first, we examined the Top 50 most cited LQ publications. This analysis was added at the suggestion of John Antonakis, who compiled and supplied the 50 most cited LQ articles for our research team using SCOPUS (www.scopus.com) (J. Antonakis, personal communication, February, 19, 2010). Table 5 provides a summary of the results by ranking the Top 50 most cited LQ articles in order of cites per year. We also report the total number of cites, the rank in terms of overall cites, and the type of article (theoretical, empirical, and/or special issue). An examination of Table 5 reveals that while 5 of the Top 10 most cited LQ articles were published during the 1990s, only 14 of the Top 50 were published in the 1990s, as opposed to 36 in the 2000s. This finding suggests that while a handful of articles from LQs first decade are heavily cited, and perhaps on their way to "classic article" status, the journal's second decade has been more influential overall.

Table 5. The 50 most cited *LQ* articles.

Rank cites/year	Cites/year	Total cites	Rank cites	Year	Vol.	Issue	Authors	Article title	Content category
1	30.1	451	2	1995	6	2	Graen G.B., Uhl-Bien M.	Relationship-based approach to leadership: Development of leader–member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective	Theoretical, review, special issue
2	26.6	372	3	1996	7	3	Lowe K.B., Kroeck K.G., Sivasubramaniam N.	Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature	Empirical, review
3	24.1	482	1	1990	1	2	Podsakoff P.M., MacKenzie S.B., Moorman R.H., Fetter R.	Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors	Empirical
4	15.5	171	4	1999	10	2	Yukl G.	An evaluation of conceptual weaknesses in transformational and charismatic leadership theories	Theoretical, review, special issue
5	15.1	121	8	2002	13	3	Wong C.-S., Law K.S.	The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study	Empirical
6	14.5	116	9	2002	13	6	Mumford M.D., Scott G.M., Gaddis B., Strange J.M.	Leading creative people: Orchestrating expertise and relationships	Theoretical, review
7	13.6	68	23	2005	16	3	Gardner W.L., Avolio B.J., Luthans F., May D.R., Walumbwa F.	"Can you see the real me?" A self-based model of authentic leader and follower development	Theoretical, special issue
8	13.4	67	24	2005	16	3	Avolio B.J., Gardner W.L.	Authentic leadership development: Getting to the root of positive forms of leadership	Theoretical, special issue

Rank cites/year	Cites/year	Total cites	Rank cites	Year	Vol.	Issue	Authors	Article title	Content category
9	12.2	122	7	2000	11	4	Day D.V.	Leadership development: A review in context	Theoretical, review
10	12.1	133	5	1999	10	2	Bass B.M., Steidlmeier P.	Ethics, character, and authentic transformational leadership behavior	Theoretical, special issue
11	11.9	95	15	2002	13	4	Gronn P.	Distributed leadership as a unit of analysis	Theoretical, special issue
12	11.8	130	6	1999	10	2	Den Hartog D.N., House R.J., Hanges P.J., Ruiz-Quintanilla S.A., Dorfman P.W.	Culture specific and cross-culturally generalizable implicit leadership theories: Are attributes of charismatic/transformational leadership universally endorsed?	Empirical, special issue
13	11.7	82	20	2003	14	3	Antonakis J., Avolio B.J., Sivasubramaniam N.	Context and leadership: An examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire	Empirical
14	11.2	67	25	2004	15	6	van Knippenberg D., van Knippenberg B., De Cremer D., Hogg M.A.	Leadership, self, and identity: A review and research agenda	Theoretical, review
15	11.2	67	26	2004	15	6	Avolio B.J., Gardner W.L., Walumbwa F.O., Luthans F., May D.R.	Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors	Theoretical, review
16	10.2	51	45	2005	16	6	Yammarino F.J., Dionne S.D., Chun J.U., Dansereau F.	Leadership and levels of analysis: A state-of-the-science review	Theoretical, review
17	9.5	38	65	2006	17	4	Bono J.E., Ilies R.	Charisma, positive emotions and mood contagion	Empirical
18	9.4	85	18	2001	12	4	Zaccaro S.J., Rittman	Team leadership	Theoretical,

Rank cites/year	Cites/year	Total cites	Rank cites	Year	Vol.	Issue	Authors	Article title	Content category
							A.L., Marks M.A.		review
19	9.3	28	116	2007	18	4	Uhl-Bien M., Marion R., McKelvey B.	Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era	Theoretical, special issue
20	9.3	65	29	2003	14	6	Fry L.W.	Toward a theory of spiritual leadership	Theoretical, review
21	8.8	97	13	1999	10	2	Conger J.A.	Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research	Theoretical, review
22	8.8	97	14	1999	10	1	Schriesheim C.A., Castro S.L., Cogliser C.C.	Leader–member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic practices	Review, empirical
23	8.8	70	22	2002	13	6	Osborn R.N., Hunt J.G., Jauch L.R.	Toward a contextual theory of leadership	Theoretical, review
24	8.8	35	80	2006	17	6	Brown M.E., Trevino L.K.	Ethical leadership: A review and future directions	Theoretical, review
25	8.5	51	46	2004	15	3	Rafferty A.E., Griffin M.A.	Dimensions of transformational leadership: Conceptual and empirical extensions	Empirical
26	8.5	93	16	1999	10	2	Shamir B., Howell J.M.	Organizational and contextual influences on the emergence and effectiveness of charismatic leadership	Theoretical, special issue
27	8.4	59	35	2003	14	4–5	Jung D.I., Chow C., Wu A.	The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings	Empirical, special issue
28	8.3	91	17	1999	10	3	Awamleh R., Gardner W.L.	Perceptions of leader charisma and effectiveness: The effects of vision content, delivery, and organizational	Empirical, special issue

Rank cites/year	Cites/year	Total cites	Rank cites	Year	Vol.	Issue	Authors	Article title	Content category
								performance	
29	7.9	55	42	2003	14	6	Eagly A.H., Carli L.L.	The female leadership advantage: An evaluation of the evidence	Theoretical, review
30	7.8	47	51	2004	15	1	Shalley C.E., Gilson L.L.	What leaders need to know: A review of social and contextual factors that can foster or hinder creativity	Theoretical, special issue
31	7.8	109	11	1996	7	3	House R.J.	Path–goal theory of leadership: Lessons, legacy, and a reformulated theory	Theoretical
32	7.6	61	33	2002	13	5	McColl-Kennedy J.R., Anderson R.D.	Impact of leadership style and emotions on subordinate performance	Empirical, special issue
33	7.3	29	114	2006	17	3	Burke C.S., Stagl K.C., Klein C., Goodwin G.F., Salas E., Halpin S.M.	What types of leadership behaviors are functional in teams? A meta-analysis	Empirical
34	7.0	56	40	2002	13	5	Dasborough M.T., Ashkanasy N.M.	Emotion and attribution of intentionality in leader–member relationships	Theoretical, special issue
35	7.0	42	58	2004	15	1	Amabile T.M., Schatzel E.A., Moneta G.B., Kramer S.J.	Leader behaviors and the work environment for creativity: Perceived leader support	Empirical, special issue
36	6.9	62	32	2001	12	4	Marion R., Uhl-Bien M.	Leadership in complex organizations	Theoretical, review
37	6.7	67	27	2000	11	4	Boal K.B., Hooijberg R.	Strategic leadership research: Moving on	Theoretical, review
38	6.6	99	12	1995	6	1	Shamir B.	Social distance and charisma: Theoretical notes and an exploratory study	Theoretical, empirical

Rank cites/year	Cites/year	Total cites	Rank cites	Year	Vol.	Issue	Authors	Article title	Content category
39	6.6	33	90	2005	16	4	Reicher S., Haslam S.A., Hopkins N.	Social identity and the dynamics of leadership: Leaders and followers as collaborative agents in the transformation of social reality	Theoretical, special issue
40	6.6	33	91	2005	16	3	Shamir B., Eilam G.	“What's your story?” A life-stories approach to authentic leadership development	Theoretical, special issue
41	6.4	32	98	2005	16	4	Lord R.G., Hall R.J.	Identity, deep structure and the development of leadership skill	Theoretical, special issue
42	6.4	32	99	2005	16	2	Sosik J.J.	The role of personal values in the charismatic leadership of corporate managers: A model and preliminary field study	Empirical
43	6.3	38	66	2004	15	2	Bligh M.C., Kohles J.C., Meindl, J.R.	Charisma under crisis: Presidential leadership, rhetoric, and media responses before and after the September 11th terrorist attacks	Empirical
44	6.3	113	10	1992	3	2	House R.J., Howell J.M.	Personality and charismatic leadership	Theoretical, review, special issue
45	6.3	25	134	2006	17	6	Porter L.W., McLaughlin G.B.	Leadership and the organizational context: Like the weather?	Theoretical, review
46	6.2	31	105	2005	16	3	Ilies R., Morgeson F.P., Nahrgang J.D.	Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes	Theoretical, special issue
47	6.1	67	28	1999	10	2	Beyer J.M.	Taming and promoting charisma to change organizations	Theoretical, special issue
48	6.0	48	49	2002	13	5	Pirola-Merlo A., Hartel C., Mann L., Hirst G.	How leaders influence the impact of affective events on team climate and performance in R&D teams	Empirical, special issue

Rank cites/year	Cites/year	Total cites	Rank cites	Year	Vol.	Issue	Authors	Article title	Content category
49	6.0	30	111	2005	16	1	Strange J.M., Mumford M.D.	The origins of vision: Effects of reflection, models, and analysis	Empirical
50	6.0	24	144	2006	17	6	Uhl-Bien M.	Relational leadership theory: Exploring the social processes of leadership and organizing	Theoretical, review

There are several possible explanations for this finding. First, because the absolute number of publications nearly doubled during LQs second decade, resulting in disproportional representation of second decade articles within the total pool of LQ publications by a roughly 2 to 1 margin, it stands to reason that second decade articles would be overrepresented among the most cited LQ articles by a similar margin. Second, this finding could be interpreted as discrediting the intuitive heuristic that older publications get habitually cited, while newer work has trouble gaining traction. Third, this result may reflect the tendency for researchers (particularly junior scholars) to cite the most recent research while ignoring the original work or the “classics” due to lack of familiarity with prior research. In addition, common suggestions from reviewers to “cite more recent work on topic X” may cause authors to drop citations to older work due to space limitations (F. Yammarino, personal communication, February 27, 2010). Fourth, it may be that the research published in LQ during the journal's second versus first decade is more rigorous and of higher quality (as the analyses of research methods presented in subsequent sections suggests), and hence more influential within the field. Regardless of the explanation, however, we view this finding as evidence that the field of leadership is robust and receptive to new constructs and literature—an interpretation that is bolstered by the following analysis of the evolving theoretical foundations that underline LQ research.

3.2. Theoretical focus

The most challenging element of the content analysis involved the classification of the theoretical foundations for the articles. Since the Lowe and Gardner (2000) review, the diversity of theories invoked by LQ authors has expanded dramatically, reflecting a wider array of theories drawing from more varied disciplines. In addition, because many articles drew from multiple theories, we found it difficult and rather misleading to limit the coding of underlying theoretical frameworks identified to a single theory. While we coded all articles using the coding scheme developed by Lowe and Gardner (2000) to facilitate comparisons of the theories reflected in LQ during its first and second decades, the growth and the diversity of theory scope necessitated the development of a more refined coding scheme. With this in mind, we developed a coding scheme that reflects non-mutually exclusive categories of leadership theories using the procedures described in Section 4.2.1.

3.2.1. Herding theoretical cats: Developing a leadership theory and content coding scheme

We followed a five-step, emergent process in creating the leadership theory and content coding scheme.

Step 1:Yukl (2010)chapter headings and content. As a starting point, we used the chapter titles and subheadings from Gary Yukl's (2010) 7th edition of Leadership in Organizations as an initial framework for classifying leadership theories. Given Yukl's status as a widely recognized authority on leadership, we considered the scheme he uses to group theories within his extensively adopted textbook to be an appropriate basis for an initial classification of leadership theories. Accordingly, we began by creating a table that lists the chapter titles from Yukl's book, Yukl as the source for these categories, and the subheadings from his Table of Contents to indicate the content of the particular categories of leadership theories.

Step 2: Addition ofMahoney, Buboltz, and Igou (2009)leadership theory categories. In early 2008, Kevin Mahoney, Walter Buboltz, and Frank Igou performed an independent content analysis of articles published in LQ between 2000 and 2008. With the permission of the authors, we used the coding scheme they created to refine our preliminary coding scheme. Specifically, we added categories from the Mahoney et al. (2009) classification system that were not reflected in our coding scheme, but described theories that were used in a critical mass of LQ articles during the past decade. In addition, for categories that were aligned with Yukl's (2010) book chapters, we indicated Mahoney et al. (2009) as a secondary source, and added their category definition to the theory description column. For categories not identified by Yukl, 2010 and Mahoney et al., 2009 were identified as the primary source, and their definition was provided.

Step 3: Addition of Bass handbook (2008) categories. Next, we examined the chapter titles from the recently updated 4th edition of The Bass Handbook of Leadership (Bass, 2008). In several cases, there was clear alignment with existing categories. In such cases, we indicated the corresponding chapters from the Bass handbook. In other cases, chapters/topics appeared that were not reflected by our coding scheme. We selectively added categories from Bass' handbook based on the incidence of articles that corresponded to these categories, and identified Bass (2008) as the source for these categories.

Step 4: Emergent refinements and category additions. During the coding process, we found it necessary to refine some of our working categories and add one emergent category to capture theory/content that was reflected in the articles with some frequency, but was not otherwise captured by the coding scheme (e.g., shared and distributed leadership—added to the title and description of Category 3; trust in leadership—added to the definition of Category 4; ideological and pragmatic leadership—reflected in a new category (Number 27).

Step 5: Refinements to category titles. As a final step, we selected a title for each category that best reflected its theoretical focus and content. In some cases we used an existing title from one of the sources; in others, we renamed the category to better reflect its content. The final theoretical coding scheme is presented in the Appendix. (See Video 4 for a discussion of the trade-offs we considered in developing the theoretical coding scheme.)

Table 6 presents a summary of the leadership theories reflected by the second decade of LQ articles using a combination of the coding schemes developed by Lowe and Gardner (2000) and the current study. Specifically, this table groups the theory categories developed in the current study within Lowe and Gardner's broad theoretical domains to facilitate comparison of the prominent theoretical approaches across the two decades. The results reveal a dramatic increase in the proportion of articles that reflect one of the theories subsumed under the New Directions category (from 14% to 44.4%). This finding suggests that the past ten years have been a particularly fertile time for the development of new theories and perspectives on leadership. (See Video 5 for an explanation of how the theoretical coding scheme employed in this study came to be embedded within the coding scheme developed by Lowe and Gardner (2000) to facilitate cross-decade comparisons.)

Table 6. Prominent leadership theories reflected in *LQ* publications.[a]

Number of articles reflecting theory														
											1990–1999		2000–2009	
Leadership Theories	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	%	Total	%
Trait theories											*17*	*8.5*	*26*	*3.8*
Leadership traits and attributes[b]	0	2	4	1	1	4	3	3	1	7			26	3.8
Behavioral theories											*5*	*2.5*	*37*	*4.4*
Behavioral approaches	0	2	1	0	1	1	3	1	1	2			12	1.8
Leadership skills[c]	7	0	1	1	2	2	0	1	0	0			14	2.1
Participative leadership, shared leadership, delegation and empowerment	0	0	2	0	0	0	4	1	2	2			11	1.6
Contingency theories											*25*	*12.0*	*7*	*1.0*
Contingency theories of leadership	0	1	2	1	0	1	1	0	0	1			7	1.0
Multiple level approaches											*19*	*9.0*	*89*	*13.0*
Multiple level approachesb [and] c	0	2	8	4	4	2	5	5	9	10			49	7.2
Dyadic relations and followership[c]	1	2	2	2	5	1	5	4	6	12			40	5.9

Number of articles reflecting theory														
											1990–1999		2000–2009	
Leadership Theories	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	%	Total	%
Leadership and information processing											*16*	*8.0*	*38*	*5.6*
Leader and follower cognition[c]	1	2	2	2	4	7	5	3	7	5			38	5.6
Neo-charismatic approaches											*68*	*34.0*	*86*	*12.6*
Neo-charismatic approaches[b]	3	5	6	9	10	8	8	6	13	18			86	12.6
Other prominent approaches											*28*	*14.0*	*21*	*3.1*
Power and influence[b and c]	2	0	2	0	9	1	0	0	3	4			21	3.1
Other approaches											*50*	*25.0*	*33*	*4.8*
Leadership and diversity[b]	0	0	2	3	2	1	1	0	2	2			13	1.9
Cross-cultural leadership[b]	1	1	0	1	1	1	2	2	0	2			11	1.6
Nature of managerial work	0	0	0	0	0	0	0	0	0	0			0	0.0
Other	4	0	0	1	2	1	0	0	1	0			9	1.3
New directions											*29*	*14.0*	*303*	*44.4*
Contextual influences on	0	2	3	4	2	4	3	5	6	9			38	5.6

Number of articles reflecting theory														
											1990–1999		2000–2009	
Leadership Theories	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	%	Total	%
leadership[c]														
Development and identification of leaders and leadership	10	0	1	2	3	10	2	1	2	6			37	5.5
Ethical, servant, spiritual and authentic leadership[c]	0	1	1	2	2	16	4	0	7	3			36	5.4
Leading for creativity and innovation[c]	0	0	2	10	8	1	2	1	5	6			35	5.2
Strategic leadership by top executives	2	0	0	2	4	0	3	2	8	8			29	4.3
Emotions and leadership[c]	0	0	9	1	1	2	4	1	2	7			27	4.0
Leadership in teams and decision groups[c]	1	1	3	1	3	2	7	2	5	3			28	4.1
Political and public leadership[b and] c	0	2	0	1	1	2	1	2	8	3			20	3.0
Complexity theory of leadership[c]	0	2	1	0	0	0	2	6	0	2			13	1.9
Leadership effects of task, technology, distance and virtuality	1	0	2	1	0	1	0	0	1	3			9	1.3

Number of articles reflecting theory														
											1990–1999		2000–2009	
Leadership Theories	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	%	Total	%
Ideological and pragmatic leadership	0	1	1	0	0	0	0	1	3	2			8	1.2
Destructive leadership	0	0	0	0	1	0	0	6	1	0			8	1.2
Leading change in organizations	0	0	0	0	1	2	0	0	0	3			6	0.9
New directions	0	0	0	2	1	0	0	1	3	1			9	1.3
New methods category											*NA*	*NA*	*42*	*6.2*
Measurement and methods for studying leadership[c]	3	1	8	4	3	4	4	4	5	6			42	6.2
Total	36	27	63	55	71	74	69	58	101	128	257	100	682	100

a Categories are not mutually exclusive.

b Special issue on topic, 1990‑1999.

c Special issue on topic, 2000‑2009.

3.2.2. Neo-charismatic approaches

A total of 86 articles were coded as reflecting the Neo-charismatic Approaches, which represented the largest specific category of leadership theories within our emergent coding scheme, and the third most common of Lowe and Gardner's (2000) broad categories of leadership theories. However, while the absolute number of articles reflecting these approaches rose over the amount reported in the prior decade (68), the proportion of articles declined from 34% to 12.6%. Thus, while Neo-charismatic Approaches remain the single-most dominant paradigm, a plethora of competing perspectives has emerged over the past decade to challenge these perspectives, suggesting that diverse seeds for a potential paradigm shift have been planted (Reichers & Schneider, 1990).

3.2.3. Multiple-level approaches

The second largest of the broad categories involved Multiple Level Approaches, which experienced an increase in both the number and proportion of articles from 19 (9.0%) to 89 (13.0%). One Yearly Review article (Yammarino et al., 2005) and three special issues (Bliese et al., 2002, Gardner & Cogliser, 2009 and Yammarino & Dansereau, 2008) focusing on multi- and meso-level approaches to leadership contributed to the prominence of this category. Because Lowe and Gardner (2000) included leader–member exchange (LMX), individualized leadership, vertical dyad linkage, and multi-linkage model (MLM) theories within this category, we grouped our more specific categories of Multiple Level Approaches and Dyadic Relations and Followership into this broader category—even though the notion that the latter class of theories is multi-level is debatable (Yammarino et al., 2005). With increasing recognition of the importance of examining leadership at multiple levels of analysis (Chun et al., 2009 and Yammarino et al., 2005), we found that some articles focused specifically on developing or empirically examining the predictions of multi-level leadership theory, while many others coupled a multi-level perspective with one or more complementary theoretical approaches. The relatively large number of articles focusing on Dyadic Relations and Followership (40/5.9%) attests to continuing interest in LMX theory and related approaches, as well as growing recognition of and interest in the role of followers (Dvir & Shamir, 2003, Howell & Shamir, 2005, Meindl, 1995 and Yukl, 2010) in the leadership process, which was boosted by the special issue on Leaders, Followers and Values (Offermann et al., 2001).

3.2.4. Behavioral theories

Behavioral Theories constituted the fourth largest category under the broad classification scheme (37/4.4%), encompassing the more specific categories of Behavioral Approaches (12/1.8%), Leadership Skills (12/1.8%), and Participative Leadership, Shared Leadership, Delegation and Empowerment (11/1.6%). Both the number and proportion of articles classified under this category increased beyond those reported in the prior decade (5/2.5%). While a 2000 special issue focusing on Leadership Skills (Connelly et al., 2000) contributed to these numbers, they were also bolstered by growing interest in the topics of shared and distributed leadership (Ensley & Hmieleski, 2006, Mehra et al., 2006, Pearce et al., 2008 and Pearce et al., 2008), which were included in this category.

3.2.5. Leadership and information processing

The fifth most common set of theories found using both Lowe and Gardner's (2000) and the current coding scheme is Leadership and Information Processing. This broad category encompassed a single category from our emergent coding scheme, Leader and Follower Cognition, which tied with Contextual Influences on Leadership as the fourth most prominent category. While the number of articles focusing on Leader and Follower Cognition more than doubled (38) in LQ's second decade in comparison to the first (16), the proportion of articles declined from 34 to 5.6 percent. Thus, while interest in leader and follower cognition among contributors to LQ continues to grow, interest in alternative influences on leadership (e.g., emotions, context) is likewise expanding.

3.2.6. Other approaches

Three categories from our coding scheme—Leadership and Diversity (13/1.9%), Cross-Cultural Leadership (11/1.6%), and Nature of Managerial Work (0/0.0%)—were subsumed under Lowe and Gardner's (2000) Other Approaches category, which constitutes the sixth most common of the broad leadership categories (33/4.8%). Here it is noteworthy that the Leadership and Diversity and Cross-Cultural Leadership categories reflect topics that Lowe and Gardner identified as important areas for future research. While these topics have remained of interest to LQ's contributors, the proportion of articles focusing on these topics is relatively small. Perhaps scholars find alternative outlets focusing on cross-cultural issues (e.g., Journal of International Business, Management International Review) and diversity (e.g., Journal of Management, Journal of Organizational Behavior, Human Resource Management, Human Relations) to be more attractive venues for these topics.

3.2.7. Decline in traditional approaches

Consistent with a trend observed by Lowe and Gardner (2000), we witnessed a continuing decline over the past decade in the proportion of articles focusing on traditional theories of leadership, including Trait Theories (from 8.5% to 3.8%), Contingency Theories (from 12.0% to 1.0%), Power and Influence perspectives (from 14.0% to 3.1%), and the previously mentioned Nature of Managerial Work and Behavioral Approaches. Thus, applying Reichers and Schneider's (1990) model, it appears that these theories have reached the mature stage of construct development where scholars' interest in these theories has begun to wane as interest in the New Directions reflected in Table 6 has grown.

3.2.8. New directions

Fourteen of the leadership theory categories developed through the current content analysis are grouped under the broader New Directions category. These are listed in Table 6 in order of frequency, with Contextual Influences on Leadership being the most common (38/5.6%), followed closely by the Development and Identification of Leaders and Leadership (37/5.4%), Ethical, Servant, Spiritual and Authentic Leadership (36/5.3%), and Leading for Creativity and Innovation (35/5.1%) categories. The emergence of the latter two categories and the Leadership and Emotions and Complexity Theory of Leadership categories were bolstered by the dedication of Yearly Review articles (Avolio et al., 2004, Brown & Trevino, 2006, Fry, 2003, Marion & Uhl-Bien, 2001 and Mumford et al., 2002) and special issues (Avolio & Gardner, 2005, Fry, 2005, Marion & Uhl-Bien, 2007, Mumford, 2003 and Mumford, 2004) to these topics. The least frequent New Directions categories included Leadership Effects of Task, Technology, Distance and Virtuality (9/1.3%), Ideological and Pragmatic Leadership (8/1.2%), Destructive Leadership (8/1.2%) and Leading Change in Organizations (6/.9%). Nevertheless, the fact that none of these categories were reflected during LQ's first decade suggests that these are ascending theoretical perspectives.

Contextual Approaches to Leadership is a broad category that encompasses leadership theory focused on specific arenas (e.g., the military and education), theories that focus on how leadership practices are constrained by contextual variables, and articles that develop and apply Osborn, Hunt, and Jauch's (2002) contextual theory of leadership. The emergence and relatively high frequency of articles included in this category is encouraging and suggests that the decades-long and oft-repeated calls for greater attention to the leadership context (Antonakis et al., 2003, Hunt, 1991, Hunt, 2004, Hunt & Phillips, 1992, Kerr & Jermier, 1978, Osborn et al., 2002 and Tosi, 1991) are finally being heeded. Similarly, the relatively high proportion of New Direction articles that reflect a focus on the Development and Identification of Leaders and Leadership suggests that calls for greater attention devoted to the study of leader and leadership development (Avolio, 1999, Avolio, 2005, Day, 2000, London, 2002 and Mumford, Marks, et al., 2000) are likewise gaining traction.

The Ethical, Servant, Spiritual and Authentic Leadership category reflects an eclectic mix of theories that emerged and/or rose in prominence during the past decade and share a common focus on the moral components of leadership (Avolio & Gardner, 2005, Brown & Trevino, 2006, Graham, 1991, Liden et al., 2008 and Spears et al., 2001). The focus of both Yearly Review articles (Avolio et al., 2004, Brown & Trevino, 2006 and Fry, 2003) and special issues (Avolio & Gardner, 2005 and Fry, 2005) on authentic and spiritual leadership clearly contributed to the emergence of this category. Given growing public (Dealy & Thomas, 2006, Halla et al., 2004 and Lebow & Spitzer, 2002) and scholarly (Ciulla, 2004) awareness of the interplay between leadership, ethics and accountability, we expect these perspectives will continue to receive increased theoretical and empirical attention.

3.3. Research design

3.3.1. Coding scheme

A summary of the research designs employed in the empirical articles published in LQ during its second decade is provided in Table 7. We adopted a coding scheme developed by McGrath (1982) and refined by Scandura and Williams (2000) to provide a more fine-grained categorization of methodological approaches than that used by Lowe and Gardner (2000). Articles were coded into one of nine categories. The first category, theory/review, refers to research that deductively generates new theory or provides a narrative review of the relevant literature associated with a particular model or research stream. The second, sample survey, refers to survey research that seeks to obtain a representative sampling of the population units studied. The third, laboratory experiment, involves the application of experimental methods in an artificial setting for the purpose of drawing causal inferences. The fourth category, experimental simulation, involves a situation contrived by the researcher whereby there is an attempt to retain some contextual realism through the use of scenarios or simulated situations.

Table 7. Research designs used in LQ publications, 2000–2009.a

	Research strategy											Time horizon				
Year	Volume	Theory/review	Sample survey	Lab experiment	Experimental simulation	Field study–primary	Field study–secondary	Field experiment	Judgment task	Computer simulation	Content analysis/case/qualitative	Total	Cross-sectional	Longitudinal	Not applicable	Total
2000	11	11	0	0	5	7	0	1	0	0	3	27	10	0	0	10
		41%	0%	0%	19%	26%	0%	4%	0%	0%	11%	100%	100%	0%	0%	100%
2001	12	8	5	1	0	1	0	0	2	1	2	20	5	3	2	10
		40%	25%	5%	0%	5%	0%	0%	10%	5%	10%	100%	50%	30%	20%	100%
2002	13	10	0	1	1	12	5	0	0	2	5	36	16	6	0	22
		28%	0%	3%	3%	33%	14%	0%	0%	6%	14%	100%	73%	27%	0%	100%
2003	14	18	7	2	0	3	0	0	0	1	0	31	8	4	0	12
		58%	23%	6%	0%	10%	0%	0%	0%	3%	0%	100%	67%	33%	0%	100%
2004	15	14	4	0	2	11	5	0	0	0	6	42	16	5	0	21
		33%	10%	0%	5%	26%	12%	0%	0%	0%	14%	100%	76%	24%	0%	100%
2005	16	20	7	2	0	5	1	0	0	0	3	38	12	5	1	18
		53%	18%	5%	0%	13%	3%	0%	0%	0%	8%	100	67%	28%	6%	100

	Research strategy												Time horizon			
Year	Volume	Theory/review	Sample survey	Lab experiment	Experimental simulation	Field study–primary	Field study–secondary	Field experiment	Judgment task	Computer simulation	Content analysis/case/qualitative	Total	Cross-sectional	Longitudinal	Not applicable	Total
												%				%
2006	17	10	4	1	3	10	4	0	0	1	6	39	19	4	3	26
		26%	10%	3%	8%	26%	10%	0%	0%	3%	15%	100%	73%	15%	12%	100%
2007	18	14	12	0	0	2	1	0	0	0	6	35	10	5	4	19
		40%	34%	0%	0%	6%	3%	0%	0%	0%	17%	100%	53%	26%	21%	100%
2008	19	15	7	3	3	10	9	0	1	1	14	63	24	7	1	32
		24%	11%	5%	5%	16%	14%	0%	2%	2%	22%	100%	75%	22%	3%	100%
2009	20	27	21	8	1	2	5	2	0	0	0	66	29	6	0	35
		41%	32%	12%	2%	3%	8%	3%	0%	0%	0%	100%	83%	17%	0%	100%
Total		147	67	18	15	63	30	3	3	6	45	397	149	45	11	205
Total %		37%	17%	5%	4%	16%	8%	1%	1%	2%	11%	100%	73%	22%	5%	100%

a Total number of research designs does not equal total number of articles due to non-mutually exclusive coding.

The next two field study categories involve investigations that are conducted in natural settings. A distinction is made between field studies that involve the obtrusive collection of primary data, and field studies that involve the unobtrusive collection of secondary, or archival, data. The seventh strategy, field experiment, refers to the collection of data in field settings through the manipulation of behavioral variables. The eighth category, judgment tasks, refers to studies that ask participants to rate or judge behaviors. The setting is contrived and sampling with this strategy is systematic, rather than representative. Scandura and Williams (2000, p. 1251) final category, computer simulation, refers to “artificial data creation or simulation of a process.” We added a final category, content analysis/case/qualitative research to code research strategies that used methods not captured by the prior categories. As in the Lowe and Gardner (2000) review, we also coded the time horizon (cross-sectional, longitudinal, not applicable) of each empirical study. Because multiple research strategies were sometimes employed within the same article, the total number of research strategies reported in Table 7 exceeds the total number of articles (353) published.

3.3.2. Research strategies

As indicated in the prior discussion of the types of articles published in LQ during the last decade, 147 articles advanced new theory or systematically reviewed a leadership model or research stream. The most prevalent research strategy for the remaining empirical articles was the sample survey (67/17%), as LQ researchers used a variety of survey instruments to explore leadership constructs. An example of a study that employed the sample survey strategy is provided by Marshall-Mies et al. (2000) titled, “Development and Evaluation of Cognitive and Metacognitive Measures for Predicting Leadership Potential.” The authors describe the development of an online skill assessment battery called Military Leadership Exercises (MLE) that is designed to assess and develop high-level military executives. A sample of senior officers from the National Defense University, Industrial College of the Armed Forces, was used to assess the reliability and validity of the skill measures. The prevalence of this strategy is partly explained by the common use of survey measures (e.g., the Multifactor Leadership Questionnaire/MLQ, Avolio & Bass, 2004) in conjunction with other research strategies (e.g., field study/primary data; laboratory experiment).

The second most common empirical strategy was the field study/primary data (63/16%). An example of a field study that involved primary data collection is Krause's (2004) test of a model that explains how influence-based leadership impacts the inclination to innovate and innovation-related behaviors. The utility of the model was assessed in the field using a sample of different German organizations of assorted sizes and sectors. The results confirmed that the granting of autonomy coupled with expert knowledge enhanced the inclination to innovate and actual innovative behavior, while reducing innovative blocking behaviors.

The third most prevalent empirical research strategy was the content analysis/case/qualitative methods category (45/11%). An example of an article that was categorized as qualitative is Pescosolido's (2002) study of emergent leaders as managers of group emotions. Critical incidents were collected as part of a field study of 20 groups whereby the emotional dynamics of groups were observed. The group observations were followed by whole-group critical incident interviews with each group. The groups sampled included semi-professional jazz music groups and collegiate rowing crews. Individual group members emerged as leaders by providing direction and certainty during times of ambiguity. Specifically, they assumed a leadership role by modeling an emotional response to an incident that best served the group's needs. The data collected through observation and in-depth group interviews enabled Pescosolido to provide narrative descriptions of the effects of leader charisma and empathy, group norms for emotional expression, and ambiguous feedback regarding group performance on leader emergence and success. Hence, Pescosolido's study illustrates well the strengths that accrue from qualitative research designs, including inductive theory building and the generation of rich narrative descriptions (Creswell, 2009 and Lee, 1999).

The fourth most prevalent research strategy was field study/secondary data (30/8%). A representative article that employed this strategy is Giambatista's (2004) longitudinal assessment of leader life cycles in the National Basketball Association (NBA). Using archival data collected since the NBA's inception in 1946 through the 2001–2002 season, the relationships between coaching succession, tenure and team performance (team winning percentage in a given season) were explored via cross-sectional time series linear models. The results were consistent with a life cycle consisting of three stages: disruption, learning and stagnation. Other studies that employed the field study/secondary data research strategy, did so in combination with other research strategies, including methods such as content analysis (Bligh & Hess, 2007, Bligh et al., 2004a, Bligh et al., 2004b and Seyranian & Bligh, 2008), narrative analysis (Boje & Rhodes, 2006), or anecdotal evidence (Furst & Reeves, 2008). In addition, meta-analyses (e.g., Burke et al., 2006 used meta-analysis to identify functional leadership behaviors in teams) were coded using the field survey/secondary data category because they involve the collection of archival data in the form of statistics and methodological information from prior studies.

Laboratory experiments (18/5%) constituted the next most commonly employed research strategy. An example of a laboratory experiment is provided by Newcombe and Ashkanasy's (2002) experimental investigation into the role that positive and congruent affect plays in determining members' ratings of leaders in a performance appraisal context. Participants were undergraduate business students who viewed videotapes of male and female leaders delivering positive and negative feedback with facial expressions that were either congruent or incongruent with the verbal message. Positive and message-congruent leader affect was shown to produce the most positive member ratings of the leader, while positive feedback delivered with negative affect yielded the least favorable ratings. Importantly, the control and internal validity inherent to the experimental method enabled Newcombe and Ashkanasy to make causal inferences about the relationships between leader feedback, affective congruence, and follower ratings.

Next most common (though not extensively utilized) were empirical research strategies that involved simulations—either experimental (15/4%) or computer (6/2%). An example of the former is Kellett, Humphrey, and Sleeth's (2002) study of empathy and complex task performance as two alternative routes to leadership. Using a simulated corporate office designed by Humphrey and colleagues (Humphrey, 1985 and Humphrey & Berthiaume, 1993), these authors generated support for a model proposing these two distinct routes to leadership. An example of the latter is Black, Oliver, Howell, and King's (2006) agent-based dynamic model simulation of leader and group effects on organizational learning. While both workgroup and leader skill levels were shown to impact the developmental paths of particular groups, high- versus low-skilled groups invariably achieved more positive developmental paths, regardless of the leader's skills. While both forms of simulation were used relatively infrequently, their application to leadership research demonstrates that alternatives to the predominant methods are viable and capable of producing unique insights into leadership processes. The remaining empirical research strategies of field experiments (3/1%) and judgment tasks (3/1%) were rarely employed.

It is interesting to note that the vast majority of empirical studies published in LQ's second decade were conducted in field (159/79.9%) as opposed to laboratory (27/13.6%) settings, as was the case during its first decade when the ratio of field to laboratory research was 4 to 1. Thus, Lowe and Gardner's (2000) conclusion that most of the empirical studies published in LQ are not open to charges of suspect external validity arising from an overreliance on experimental designs conducted in laboratory settings (Gordon, Slade, & Schmitt, 1986) remains true. To the contrary, we share the concern expressed by Lowe and Gardner, among others (Brown & Lord, 1999, Hunt, 1999, Hunt et al., 1999 and Wofford, 1999), that leadership scholars may be underutilizing laboratory research designs characterized by high internal validity (Fromkin & Streufert, 1976). We encourage leadership scholars who target LQ in its third decade and beyond to give greater consideration of the potential for laboratory research to not only permit strong inferences regarding causal relations among leadership constructs, but to illustrate the types of potentially productive forms of leadership that could occur under the right circumstances (Mook, 1983).

3.3.3. Time horizon

In contrast to the 1990s when the ratio of cross-sectional to longitudinal designs used by LQ studies was 4 to 1, this ratio dropped to 3 to 1 in the 2000s, with 136 (68.3%) studies using cross-sectional designs, compared to 44 (22.1%) with longitudinal designs. This is a welcome development, as decades long calls for more longitudinal designs within leadership research (Hunt, 2004, Lowe & Gardner, 2000 and Melcher, 1977) have heretofore fallen on deaf ears. Nevertheless, the fact that over two-thirds of the articles published in LQ during the past decade relied on cross-sectional designs indicates that longitudinal designs continue to be underutilized.

3.3.4. Participants

Table 8 provides a summary of the sample location and sample type (e.g., private organization, public/government organization, students, and military) employed in empirical articles published in LQ during the past decade. While the majority of samples consisted of participants from the United States (110/54%), researchers also drew samples from Europe (21/10%), Australia (12/6%), Asia (9/4%), the Middle East (9/4%) and multiple locations (25/12%), among others. Thus, the diversity of sample locations provides evidence that LQ has achieved success in fulfilling its mission to be a premier outlet for international research. With respect to sample type, the majority (93/46%) of samples were drawn from private organizations (e.g., businesses), followed by student (31/15%), mixed (29/14%), military (26/12%), and public/governmental (12/6%) samples. Consistent with the finding that the majority of LQ studies were conducted in field settings, the majority of participants were drawn from non-university settings. Hence, the diversity of sample types indicates that Lowe and Gardner's (2000) observation that LQ is immune to the criticism leveled against some organizational research that it reflects the “science of the college sophomore” (Gordon et al., 1986) continues to apply. Instead, LQ contributors have demonstrated a penchant for studying leadership using diverse types of samples, thereby enhancing the potential external validity and generalizability of the findings (Ellsworth, 1977).

		Sample location											Sample type								
Year	Volume	USA	Canada	South America	Europe	Asia	Australia	Middle East	Africa	Other	Multiple	NA/not reported	Private	Public/Gov	NGO	Student	Military	Not reported	Mixed	NA	Total
2000	11	6	1	0	0	0	0	2	0	0	1	0	1	1	0	1	6	0	1	0	10
2001	12	8	0	0	0	0	1	0	0	1	0	0	2	1	0	1	2	0	2	2	10
2002	13	14	0	0	2	1	3	0	0	0	1	1	10	0	0	4	5	0	2	1	22
2003	14	7	0	0	3	0	1	0	1	0	0	0	4	1	0	3	2	0	1	1	12
2004	15	12	1	0	1	0	3	1	0	0	3	0	17	1	0	2	0	0	0	1	21
2005	16	7	2	0	5	0	0	0	0	0	3	1	10	1	0	3	2	1	1	0	18
2006	17	9	1	0	2	1	2	1	0	0	7	3	13	0	0	3	3	1	4	2	26
2007	18	11	1	0	1	0	0	2	0	0	3	1	5	4	1	1	2	1	3	2	19
2008	19	17	1	0	3	3	2	2	0	0	3	1	21	0	0	3	3	0	4	1	35
2009	20	19	0	2	4	4	0	1	0	0	4	1	10	3	0	10	1	0	11	0	34
Total		110	7	2	21	9	12	9	1	1	25	8	93	12	1	31	26	3	29	10	205
Total %		54%	3%	1%	10%	4%	6%	4%	0%	0%	12%	3%	46%	6%	0%	15%	12%	1%	14%	4%	100%

3.4. Analytical methods

3.4.1. Coding scheme

Table 9 presents a summary of the analytical methods employed by LQ researchers during the journal's second decade. Following Lowe and Gardner (2000), we make a distinction between quantitative and qualitative methods (Creswell, 2009). Within the quantitative category, we replaced the category scheme used by Lowe and Gardner (2000) with one developed by Scandura and Williams (2000) because the latter scheme provided a more fine-grained description of the types of quantitative statistical techniques adopted by leadership scholars during the past decade. Specifically, after first providing a raw count in column two of the number of studies that employed inferential statistical methods, we used Scandura and Williams (2000) coding scheme to report frequencies for the following types of quantitative statistical methods: 1) linear regression techniques; 2) analysis of variance techniques (ANOVA/MANOVA); 3) factor analytic techniques (Exploratory Factor Analysis [EFA]/Confirmatory Factor Analysis [CFA]); 4) Structural Equation Modeling (SEM)/path analytical techniques; 5) multiple-levels-of-analysis techniques; 6) meta-analysis; 7) linear techniques for categorical dependent variables; 8) time series/event history techniques; 8) non-parametric techniques; and 9) computer simulation techniques. Note that inclusion of the multiple-levels-of-analysis category is particularly important given the heightened focus on levels of analysis issues within the leadership literature (Yammarino et al., 2005), coupled with the dissemination of statistical methods that are used to assess leadership effects within and across levels and the appropriateness of aggregation (Castro, 2002). These statistical methods include Hierarchical Linear Modeling (HLM) (Gavin & Hofmann, 2002), Within- and Between-Analysis (WABA) (Dansereau, Alutto, & Yammarino, 1984), rWG (James, Demaree, & Wolf, 1984), intraclass correlations (ICCs) (Bliese, 2000 and Bliese et al., 2002), and random group resampling (RGR) (Gavin & Hofmann, 2002). Finally, the “other” category was added to classify quantitative methods that do not fall within any of the previously mentioned categories.

Table 9. Analytical methods used in empirical *LQ* articles, 2000–2009[a].

	Quantitative methods			Qualitative methods
		Multivariate statistics		

Year/volume	Inferential statistics	Regression	ANOVA/MANOVA	EFA/CFA	SEM	Multi-level	Meta-analysis	Linear/categorical	Time series	Non-parametric	Simulation	Other	Total quantitative	Case analysis	Grounded theory	Content analysis	Other	Total qualitative
2000/11	6	1	4	4	4	0	0	0	0	0	3	3	25	0	0	3	0	3
2001/12	5	3	1	4	2	2	0	0	0	1	1	1	20	1	0	2	0	4
2002/13	10	7	5	5	5	2	0	0	0	0	2	2	38	0	2	3	0	5
2003/14	9	7	3	3	2	2	0	1	0	0	0	0	27	1	0	0	0	2
2004/15	18	10	4	7	2	4	0	0	0	0	0	0	45	1	1	5	0	7
2005/16	14	8	4	6	6	6	0	0	0	1	0	0	45	1	1	2	0	4
2006/17	14	10	8	7	2	5	1	0	1	0	1	1	50	3	1	3	1	8
2007/18	13	9	5	7	3	3	0	0	0	1	0	0	41	3	0	3	1	7
2008/19	15	7	9	10	1	4	0	1	0	1	2	2	52	7	0	6	1	14
2009/20	9	16	16	6	7	7	1	3	1	3	0	0	69	1	0	1	0	2
Total	113	78	59	59	34	35	2	5	2	7	9	9	412	18	5	28	3	56

	Quantitative methods													Qualitative methods				
		Multivariate statistics																
Year/volume	Inferential statistics	Regression	ANOVA/MANOVA	EFA/CFA	SEM	Multi-level	Meta-analysis	Linear/categorical	Time series	Non-parametric	Simulation	Other	Total quantitative	Case analysis	Grounded theory	Content analysis	Other	Total qualitative
Total %	27%	19%	14%	14%	8%	8%	0%	1%	4%	2%	2%	2%	100%	32%	9%	50%	5%	100%

a Total number of methods does not equal total number of empirical and methods articles due to non-mutually exclusive coding.

With respect to qualitative methods, categories were created to reflect the most common methods including case analysis, grounded theory, and content analysis (Krippendorff, 2003 and Lee, 1999). Because these categories are not mutually exclusive and studies commonly use one or more methods in conjunction, multiple categories were often coded for a given study.

3.4.2. Mix of quantitative and qualitative methods

Compared to the overall distribution of quantitative (73/71%), qualitative (40/39%), and mixed (13/13%) design studies reported by Lowe and Gardner (2000), the proportion of studies that employed quantitative designs (174/87.4%) in its second decade increased substantially, while those with qualitative (48/24.1%) and mixed (23/11.6%) designs declined. Indeed, in comparison to its first decade when the ratio of purely quantitative to qualitative studies was roughly 2 to 1, the ratio increased to 3 to 1. Given that a core goal of LQ's mission is to publish studies that employ a wide range of research methods, this trend toward a heavier mix of quantitative methods is a potential cause for concern. In the later part we describe the specific types of quantitative and qualitative analytical methods employed in more detail.

3.4.3. Quantitative methods

As was the case in LQ's first decade, the most common forms of multivariate statistical analysis were regression analysis (78/19%), followed by ANOVA/MANOVA (59/14%) and factor analytical techniques (EFA/CFA; 59/14%). Interestingly, while the absolute number of studies that employed SEM (34/8%) and multiple-levels-of-analysis (35/8%) was higher in LQ's second decade in comparison to the first (11/14% and 10/13%, respectively), these methods remained relatively small proportions of the total number of methods utilized. Moreover, as was the case in the 1990s, only two meta-analyses were published in LQ in the 2000s. Other forms of quantitative analysis such as linear techniques for analyzing categorical variables, time series/event analysis, and non-parametric statistics, were rarely reported. Thus, Lowe and Gardner's (2000) recommendation for future leadership scholars to better capitalize on the wealth of sophisticated statistical techniques available remains timely.

3.4.4. Qualitative methods

As noted previously, while the absolute number of qualitative studies increased mildly (from 40 to 56) during LQ's second decade, the relative proportion actually declined (from 39% to 24%). With respect to specific techniques, content analysis was by far the most common (28/52%), followed by case analysis (18/33%) and grounded theory (5/9%). Representative examples of content analysis include Bligh and colleagues' (Bligh & Hess, 2007, Bligh et al., 2004a and Seyranian & Bligh, 2008) application of DICTION (Hart, 1999) to analyze leader rhetoric. Here, it is important to recognize that because the word counts obtained through DICTION were subjected to quantitative analyses, the content analysis performed by Bligh and associates represents an example of mixed methods. Indeed, because content analysis is “in effect, a quantitative method for analyzing the content of qualitative data” (Myers, 2009, p. 172), there is disagreement as to whether it is primarily a qualitative (Hoyle et al., 2002 and Mayring, 2000) or a quantitative (Kerlinger & Lee, 2000) method. In reality, it may be primarily quantitative, qualitative, or a balanced mixture of both, depending on the application (Berg, 2009 and Krippendorff, 2003). Given that content analysis constitutes the most common methodology that we coded as qualitative, and that such analyses typically have a quantitative bent, it is clear that the publication of purely qualitative studies was a comparatively rare occurrence in LQ's second decade, and that the frequency of its use is most likely inflated in our analysis. However, it is also clear that if we coded content analysis as a purely quantitative method, the frequency of quantitative methods would be inflated instead, and the use of qualitative methods understated. Hence, we chose to code content analysis as a qualitative method, while acknowledging its status as a mixed method and the potential distortion that such coding may produce in the relative frequencies of qualitative versus quantitative methods.

One representative example of a purely qualitative study is Cha and Edmondson's (2006) longitudinal examination of the interplay between charismatic leadership, shared values, follower attributions, and employee disenchantment within a small advertising firm. Using grounded theory (Glaser & Strauss, 1967 and Parry, 1998), the authors employed in-depth interviews with employees and extensive observation to develop a case narrative of the advertising firm. Their results illustrate how value expansion by a charismatic leader can serve as a double-edged sword if employees come to perceive that the leader violates espoused values. Specifically, Cha and Edmondson (2006) concluded that employee sense-making triggered by strong organizational values increases the probability that employees will grow disenchanted with a charismatic leader if his or her behavior is deemed to be hypocritical, i.e., inconsistent with the espoused values. The narrative case developed provides rich examples of value articulation by the firm's CEO, employee expansions of expressed values, and subsequent attributions of leader hypocrisy, thereby demonstrating the strengths of grounded theory as a tool for inductively generating deep insights into leadership processes (Bryman, 1995 and Parry, 1998).

It is interesting to note that 2008 was an outlier in terms of the number of studies published in LQ's second decade that used qualitative methods, with twice as many (14) appearing in Volume 19 as in any other volume (7 appeared in Volumes 15 [2004] and 18 [2007]). One factor contributing to the relatively high number of qualitative studies in 2008 is the publication of a special issue on Leadership Views from the Humanities (Ciulla, 2008), which included several studies with purely qualitative designs. Thus, one approach to increasing the diversity of research designs appearing in LQ would be to publish more special issues on topics attractive to disciplines that utilize qualitative methodologies. Of course, the goal is not to simply publish more qualitative manuscripts per se, but to publish qualitative manuscripts that provide meaningful insights and enhance our understanding of leadership processes. (For a complementary discussion of the key findings from the content analysis, see Video 6).

4. Focus groups and surveys of LQ board

In our review of LQ's second decade, we supplemented the quantitative and qualitative content analyses and interviews of Lowe and Gardner (2000) with surveys and focus groups of the LQ editorial board to provide additional insight. Questions gauged the board's thoughts regarding the extent to which LQ is meeting its mission, new directions in leadership research, and reviewing practices. Surveys and focus groups were conducted during the annual meeting of the Academy of Management (AOM) in August, 2009 in Chicago. During the concluding portion of the LQ business meeting (which four of the five authors attended), board members completed surveys anonymously and submitted them to the author team, for a total of 35 surveys. Survey questions used a Likert response format, with a mix of original questions about the fulfillment of LQ's mission and future directions, plus questions on review practices taken from Jauch and Wall's (1989) survey of Academy of Management Review and Academy of Management Journal reviewers. Once the board members completed the surveys, the group as a whole was divided into four focus groups. Members of the author team asked predetermined open-ended questions and took notes of the board members' responses. Following the AOM Conference, a member of the author team compiled the survey results and focus group responses. (See Video 7 for additional discussion of the processes employed in conducting the LQ editorial board survey and focus groups.)

4.1. Focus groups

In the focus groups, board members were presented with two questions. The first asked about the extent to which LQ has succeeded in providing a premier outlet for leadership research (Table 10). There was broad consensus that LQ has clearly become the top journal dedicated to leadership studies. Indeed, board members questioned if there was another competitor in this scholarly niche. There was a general feeling that the number of leadership scholars is growing and board members agreed that many doctoral students were submitting manuscripts to LQ.

Table 10. Focus group results of *LQ* Board.

Question	Focus group summary comments
Has *LQ* achieved its goal of providing a premier outlet for leadership manuscripts? Why or why not?	*Mission accomplished*
	LQ is unanimously viewed as the top journal focused on leadership.
	Senior scholars prefer *LQ* over other premier journals.
	Students are generally advised to send leadership articles to *LQ*.
	LQ is filling a need for relevant leadership research.
	LQ has increased the number of issues and number of articles per issue, and still has quality articles.
	There are now many more leadership scholars.
	Is there a competitor?
	Areas for improvement
	Gap between rising importance of leadership and*LQ's* efforts to highlight it, and no plans from *LQ*Board to move to top tier.
	Issue is one of perception; *LQ* is specialized and thus a 2nd tier journal.
	Need Board shake-up and term limits to infuse it with new blood.
	Junior, untenured faculty are pressured to target journals with higher ratings like *AMJ*, *ASQ*, *JAP*, etc.
	Needs to improve readership outside of management/psychology.
What aspects of *LQ* do you consider to be most successful? Are there aspects of the journal that you believe could be improved? Please explain.	*Successful areas*
	Yearly review issue receives by far most citations—“diamonds in the rough."
	Scholarly dialogue (theory letters, revisiting great works, etc.).
	Perceived as A-level journal outside of USA.
	Leadership focus.

Question	Focus group summary comments
	Reviewers are developmental, something to be proud of.
	Promotion of new theories, new approaches.
	Articles are interesting rather than incremental.
	Areas for improvement
	Reach out to non-management/psychology scholars; more multidisciplinary.
	More desk rejections required to improve reviewer satisfaction.
	Electronic review system needed to reflect top-tier aspirations.
	E-mail alerts for upcoming table of contents would be helpful.
	Could use improved tie-in with the LDRNET group.
	LQ has too much of a micro bias, viewing from the individual out.
	Increased creative formats (letters).

While these responses indicate that LQ is a premier outlet for leadership research, the groups saw a few areas in which the journal could be improved. Board members agreed with the perception that LQ is a second-tier journal, with no visible plans to improve its image consistent with the growing importance of leadership research. This becomes all the more important given that untenured junior faculty are pressured to target journals with higher ratings like the Academy of Management Journal, Academy of Management Review, and Journal of Applied Psychology.

The second question asked board members about the successful aspects of LQ, as well as aspects that needed to be improved. The focus groups agreed that the Yearly Review issues were “diamonds in the rough,” receiving by far the most citations. LQ is perceived as an A-quality journal outside of the USA, an indicator that the journal is growing its international presence. Board members also agreed that LQ articles tend to be more interesting than many in competing journals, which were judged to make more narrow and incremental contributions. Finally, the board members agreed that the LQ reviewer comments are quite developmental in nature.

Areas in which LQ could improve seemed to revolve around the editorial review process and marketing of the journal. Some felt that the editorial team needed to reach out to disciplines beyond management and psychology, such as political science or biology, to make the journal more multidisciplinary, and hence more interesting to its readers. Board members also felt that more desk rejections are required for reviewer satisfaction; there was a perception that too many articles with glaring weaknesses or fatal flaws were making it past the associate editors. However, as noted by the Senior Editor, a high number of desk rejects is inconsistent with LQ's developmental focus (M. Mumford, personal communication, February 15, 2010). An electronic review system would also show that the journal has top-tier aspirations, while streamlining the review process. Consistent with this observation, our research team experienced the drawbacks of a paper-based system when we attempted to compile information on reviewing practices based on actual reviewer ratings of articles. An electronic system would have provided a readily accessible database of reviewer ratings to compare the characteristics of articles selected for publication with those that were not. The absence of an electronic submission and review system therefore limited our ability to make additional contributions in this article. (Note: The incoming Senior Editor is in the process of implementing a fully electronic review system; F. Yammarino, personal communication, February 18, 2010).

4.2. Survey results

Regarding top directions in leadership research, board members mentioned 15 topics at least two times, and 12 others only once (Table 11). Seven board members mentioned multi-level studies (11%), reflecting a growing interest in leadership at different levels of theory and analysis. They also mentioned ethical leadership, complexity theory, affect, and authentic leadership, five times each (8% each). Interestingly, neuroscience was close behind (6%), projecting closer linkages with bioscience scholars. Examples of trends that were only mentioned once include creativity/innovation, networks, and the social construction of leadership.

Table 11. Top three directions in leadership research.

Top 3 directions in leadership research	Board members mentioning		Mentioned in Associate Editors, interviews
	Number	%	

Top 3 directions in leadership research	Board members mentioning		Mentioned in Associate Editors, interviews
	Number	%	
Multi-level studies	7	10.8%	Yes
Ethical leadership	5	7.7%	Yes
Complexity theory	5	7.7%	
Affect	5	7.7%	
Authentic leadership	5	7.7%	
Neuroscience	4	6.2%	Yes
Distributed leadership	3	4.6%	Yes
Simulations	3	4.6%	
Methods	3	4.6%	Yes
Cross-cultural leadership	3	4.6%	
Sustainability	2	3.1%	Yes
Strategic leadership and change	2	3.1%	
Qualitative methods	2	3.1%	
Leadership in teams	2	3.1%	Yes
Crisis leadership	2	3.1%	Yes
Other (1 each)	12	18.5%	Yes (6)
Total	65	100.0%	

Specific research directions identified by Associate Editors

a To highlight the correspondence of the directions mentioned by the Associate Editors with those emerging from the survey of LQ Board Members, the direction labels used to describe the survey results appear following the corresponding directions identified by the Associate Editors.

• Greater integration with cognitive fields (e.g. neuroscience) and less emphasis on socio-emotional—neuroscience

• Continued interest in multi-level issues and cross-level interfaces—multi-level studies

• Conceiving different ways to measure and study group level leadership—leadership in teams

• Ethical, servant, and values-based leadership including sustainability—ethical leadership and sustainability

• Archival, historical information based leadership studies—other

• Education leadership studies (driven by increases in government funding)—other

• Leadership in extreme contexts –crisis leadership

• Leadership when teams are frequently assembled, disassembled, and reassembled—leadership in teams

• More gestalt models; leadership entities as configurations rather than parts—other

• Team leadership using students, because B-schools are putting students in teams—leadership in teams

• Scholars will do a better job of studying leadership, rather than defining leadership as a set of measures—methods

• Impact of technology on leadership (e.g. instant communication means the organizational world is flat, technological tools may shape thinking about how to lead, etc.)—other

• Distributed and follower-centric leadership models—distributed leadership

• Behavioral economics approaches to understanding leadership—other

• Leadership for innovation—other

• Assessment of leadership interventions—methods

There is much that leadership scholars can learn about how to improve the likelihood of having their manuscript accepted at LQ. As indicated in Table 12, attention to proper methods, a clear contribution to the leadership literature, and rock-solid use of theory will address the most prevalent failings in recently rejected manuscripts (28%, 25%, and 21%, respectively). Clear writing that has been copyedited to remove unforced errors will also increase the chances of acceptance (11%). The use of data that matches the focal research question, a thorough literature review, and a focus on leadership is also important.

Table 12. Top three reasons to reject a manuscript.

Top 3 reasons to reject a manuscript	# times mentioned	
	Number	%
Poor methods	22	28.6%
Lack of contribution	20	26.0%
Poor/flawed theory and logic	17	22.1%
Unprofessional/unforced errors	9	11.7%
Poor data	4	5.2%
Poor grasp of literature	3	3.9%
Not focused on leadership	2	2.6%
Other (1 each)	3	3.9%
Total	77	100.0%

The survey asked editorial board members to rank their top outlets for leadership research (Table 13). Consistent with the focus group responses, LQ was the top ranked and the most frequently listed journal for leadership articles (27%), followed by the Journal of Applied Psychology (17%) and the Academy of Management Journal (15%). The diversity of research interests falling within the leadership field is also reflected by the diversity of journals mentioned, with a total of 23 journals mentioned by the 35 board members who took the survey.

Table 13. Top outlets for publishing leadership research by *LQ* Board.

Journal	1st Choice	2nd	3rd	4th	5th	Total

Journal	1st Choice	2nd	3rd	4th	5th	Total
The Leadership Quarterly	10	6	8	5	3	32
Journal of Applied Psychology	8	10	2	0	0	20
Academy of Management Journal	7	4	6	1	0	18
Organizational Behavior and Human Decision Processes	0	0	3	0	4	7
Journal of Management	0	1	1	4	1	7
Journal of Organizational Behavior	0	2	3	1	0	6
Academy of Management Review	1	2	0	1	0	4
Leadership	0	3	0	0	1	4
Personnel Psychology	0	0	1	2	0	3
Administrative Science Quarterly	1	0	1	0	0	2
Journal of Management Studies	0	0	0	2	0	2
Other (1 each)	1	0	3	5	3	12

Finally, we queried board members about their views on the progress of LQ in meeting its mission. We also posed questions taken from Jauch and Wall's (1989) survey to gauge their reviewing practices. Table 14 reports the responses that displayed a high degree of variance (standard deviation greater than 2) or a low degree of variance (standard deviation less than 1). Board members generally agreed that LQ had succeeded in achieving its stated mission to be an interdisciplinary and international journal that serves as a forum for the best ideas and the best research on leadership (Lowe & Gardner, 2000 and Mumford, 2005), with an overall mean of 3.9 (1 = strongly disagree; 5 = strongly agree) for the four mission-related questions. There was also broad consensus in what reviewers point out to authors, such as flaws in logic, holes in theory, and how authors might better focus a manuscript. At the same time, board members displayed a wide range of reviewing and evaluation practices for original manuscripts and revisions. Some reported reading manuscripts within two days, while many others reported waiting longer for their preliminary read. Some reported rereading the original manuscript before reading a revised version, while others stated that they simply read the revision without the original. Board member responses therefore suggest that they agree that providing valuable feedback to authors is important, but differ greatly as to the reviewing and evaluation practices they employ for assessing original and revised manuscripts.

Table 14. *LQ* mission accomplishment and key reviewing practices of *LQ* Board members.

Question	Mean	Standard Deviation
LQ has succeeded in achieving its mission to…[a]		
Become an interdisciplinary journal.	3.76	0.74
Become an international journal.	3.79	0.88
Publish the best ideas on leadership.	4.03	0.97
Publish the best research on leadership.	4.03	0.87
Reviewing and evaluation practices[b]		
Within two days of receipt I read the paper to determine my expertise.	3.82	2.12
I read the entire paper to determine my expertise to review.	3.82	2.14
If unfamiliar with topic, I notify the editor within two days.	4.06	2.16
Within one week, I preread the manuscript to get a sense of it.	3.88	2.03
Remarks to Authors Point Out…[b]		
Flaws in the logic.	6.70	0.59
Holes in the theory.	6.67	0.60
Missing literature or variables.	6.61	0.66
Problems of conveying meaning.	6.55	0.79
Questions to be addressed.	6.39	0.66
How to better focus a manuscript.	6.30	0.88
Revisions[b]		
I read the original paper before I read a revision.	2.97	2.02

Question	Mean	Standard Deviation
I read reviewer comments after I read a revision.	3.42	2.26
I read author reactions after I read a revision.	3.45	2.27
I expect a revision to address comments of original review.	6.52	0.91

a Scale: 1 = strongly disagree; 5 = strongly agree.

b Scale: 1 = never; 7 = always.

5. Associate editor/senior editor interviews

For this study one of the authors conducted in-depth structured interviews with Senior Editor Mike Mumford and seven of LQ's nine Associate/Feature Editors, including (listed alphabetically) Joanne Ciulla, Barbara Crosley, David Day, Cindy McCauley, Craig Pearce, Ron Riggio, and David Waldman. For ease of discussion we refer to these eight interviewees as the LQ Editors (LQE). Each of the LQE was asked the same eleven questions, some of which overlapped by design with the editorial board surveys and focus group questions (as reported in Table 10, Table 11, Table 12, Table 13 and Table 14). Conversations were audio-taped to ensure accurate capture of the interview data. (See Video 8 for additional information on the Associate Editor/Senior Editor interview process.) A brief summary of their responses follows.

5.1. Leadership Quarterly's mission

As noted above, the LQ mission statement indicates that the journal should be interdisciplinary, international, publish the best ideas on leadership and publish the best research on leadership (Lowe & Gardner, 2000 and Mumford, 2005). The LQE's assessments with regard to the journal's success in achieving these components of its mission are discussed in the later part.

5.1.1. Interdisciplinary

The LQE believe that the journal has become more interdisciplinary over the prior decade, though a few noted that “cross-disciplinary” might be a better descriptor than “interdisciplinary,” since LQ tends to publish articles by research teams who share the same discipline, as opposed to teams composed of members with diverse disciplinary backgrounds. Indicators supporting this belief include; appointments to the LQE, such as Barbara Humphreys and Joanne Ciulla, which helped to build a bridge between LQ and a more diverse scholar base; special issues in areas such as the Humanities; and the number of articles published by authors whose academic home is not in business or psychology departments. Despite this progress, the LQE generally believe that more progress can and should be made toward becoming interdisciplinary. The counterargument to continued progress was an acknowledgement that pressure within disciplines to submit an author's best papers to within-discipline outlets (e.g., top sociologists submitting to top sociology journals) makes it more difficult to attract the very best work from disciplines outside of management and psychology. This phenomenon increases the rejection rate of inter- and cross-disciplinary work submitted to LQ.

5.1.2. International

The LQE believe that the journal has become more international, although the answer to that question varied depending on whether the question was interpreted as international in the composition of the study samples, the home country of published authors, or the home country of submitting authors. The inclusion of international (non-U.S.) samples in manuscripts submitted to LQ was perceived to have increased markedly in comparison to the prior decade. However, in terms of articles actually published by international authors, the samples continued to be disproportionately Australian, Israeli, Western European, and Nordic. The mismatch in terms of non-U.S. author submissions to LQ versus non-U.S. publications in LQ was largely attributed to variations in scholar training in scientific best practices. Variance in the quality of training results in a number of problematic outcomes, including research questions that are atheoretical, datasets that lack proper control measures, results sections that lack rigorous analysis, and discussion sections that fail to integrate the study constructs into the relevant nomological net.

5.1.3. Best ideas and best research

The LQE believe that the journal, vis-à-vis other journals, has been highly successful in publishing the best ideas on leadership research. They characterized the journal as a risk taker that is fun to read because of the high level of idea diversity and novelty. But the perception of LQ as a risk taker also impacts, to some extent, the perceived quality of the journal. Typically greater tolerance for novelty is accompanied by higher risk and with higher risk comes attendant failures; academic constructs are no exception. The LQE noted that journals such as Academy of Management Journal and Journal of Applied Psychology may be more consistent in the quality of leadership research they publish because they can wait on other journals to establish a construct (e.g., authentic leadership) and then later publish relatively more developed manuscripts in those areas. This process is reinforced when schools with top research talent have a very short list of acceptable outlets that are general management or general psychology in nature and thus create a disincentive to publish in a journal perceived to be more narrowly focused on topics such as leadership, organizational behavior, strategy, or international business. While LQ may publish some of the best early stage ideas in leadership research, its prospecting nature reduces perceptions of consistent quality. Thus, the LQE view LQ as meeting its mission of publishing the best ideas in leadership research and also views that research to reflect high overall quality. But they also recognize that the promotion and tenure policies of leading research universities, in combination with a surge in interest regarding all things leadership, has resulted in some high quality empirical manuscripts moving away from LQ and toward other journals such as Academy of Management Journal and Journal of Applied Psychology in the mid (evaluation) to later (consolidation) stages of leadership construct development.

5.2. Journal strengths and weaknesses

The LQE view the journal's strengths and weaknesses in a manner that is largely consistent with the responses to the question of mission fulfillment. They view the journal strengths as pushing the frontiers of leadership research, appreciating diversity and novelty in leadership research, and publishing research that is consistently high quality. The LQE agree that the journal's reputation has improved markedly in the last decade to the point where it is the undisputed leader among journals focused on leadership research.

Disappointments include inconsistencies in how LQ is evaluated across disciplines. In business school ratings of journal quality outside the U.S. (e.g. the Australian Business Deans Council) and in departments of Psychology in the U.S., the journal is consistently regarded as an “A” level journal. However, within U.S. business schools, LQ has been unable to consistently establish itself as an “A” level journal. The LQE noted that differential ratings of LQ by U.S. business schools do not appear to be related in any consistent fashion to university research tier (e.g., LQ is an “A” at the University of Pennsylvania but a “B” at Northwestern University) or the leadership publication productivity of the institution's faculty.

While not a weakness per se, the LQE noted a concern that the combination of: a) LQ's increasing reputation as a premier outlet over the decade, and b) the developmental bent the journal has taken with authors, has resulted in editorial board members receiving a high volume of manuscripts for review. For example, the developmental focus allows manuscripts that otherwise lack the scientific rigor needed for publication in LQ to enter the review process because the authors (and their samples) are from less-studied areas of the world. Hence, this educational mission, intended to serve the field's best interests over time, trades editorial board member review efficiency for development of an author's scientific skills. Reflecting this philosophy, one LQE stated (paraphrased) “perhaps if we are really serious about increasing our cross-cultural knowledge of leadership, our time would be better spent teaching tenets of good scientific practice to those with cultural access and understanding, than trying to gather and understand international samples ourselves.”

5.3. Top academic disciplines from which LQ draws

The perceptions of the LQE are consistent with the empirical results provided earlier in this manuscript. LQ draws heavily (approximately 84%) from the management and psychology disciplines, while other disciplines are only occasionally represented.

5.4. Greatest challenges of LQ Associate Editors

A big challenge for the LQE is to maintain objectivity in the review process. The LQE noted that one reason for LQ's success is that authors believe they will get a thorough, fair, and timely review and that the review will not be politicized. Maintaining a non-political position can be a challenge as considerable money can be made in leadership consulting and associated products. The resulting allure of high payoffs leads to some attempts to politicize the field through advocacy for particular products and ideas. So the LQE must attend to these pressures by ensuring that the reviewers chosen do not stack the deck for, or against, a particular construct or point of view but rather in favor of the scientific advancement of the study of leadership.

Another challenge the LQE face is that in being appreciative of multiple methods in an effort to meet LQ's interdisciplinary mission, the journal runs the risk of disenfranchising its traditional psychology and management base who may regard research outside the dominant logic of those domains as being of lesser quality. The attendant challenge for the LQE is to not only solicit and obtain the best cross- and inter-disciplinary work in leadership but to also educate the management/psychology base on the value of those approaches.

5.5. What would not occur to most “outsiders”

Responsibility and decision-making power has been more centralized in the Senior Editor at LQ as compared to other leading journals. Most “A” level journals tend to use Associate Editors (AE) as action editors on regular submissions, whereas LQ has assigned AEs on the basis of disciplines (e.g. social science studies; philosophy, ethics and the humanities) and on the basis of journal features (e.g. theoretical letters, contemporary leadership) with the final editorial decision remaining with the senior editor (Note that the incoming Senior Editor is in the process of putting a traditional associate/action editor model into practice; F. Yammarino, personal communication, February 18, 2010).

The selection process for journal editors has typically been determined by the former Senior Editors identifying potential candidates and then interviewing those candidates in terms of best fit with the journal's stage of development. This process differs from many journals where an open call for Senior Editor nominations is posted in issues of the journal and beyond.

5.6. Assignment of reviewers

The practice at LQ has been to assign three reviewers to each manuscript. For manuscripts submitted to regular issues, two reviewers are typically chosen for their expertise on constructs that are central to the manuscript, while the third reviewer is typically a leadership scholar who has played a prominent role in developing and is hence well associated with those constructs. For manuscripts submitted to special issues, the assignment of all three reviewers may be determined by construct/method expertise. The leadership community can be characterized as a relatively tight network, which has helped the journal in terms of being able to consistently solicit three rigorous and constructive reviews from talented scholars.

The LQE indicated that ad-hoc reviewers are rarely solicited for submissions to regular issues. For special issues, the guest editors will often solicit ad-hoc reviewers within their network of scholars to supplement the expertise of the LQ board.

5.7. Achieving a favorable editorial decision

The LQE had very specific advice for receiving a favorable editorial decision and noted how consistent the editorial board was in requiring these manuscript attributes. Authors are advised to avoid long introductions of fifteen to twenty pages, especially when these are followed by a long list of hypotheses. Succinct introductions are preferable. Literature reviews that are nuanced in a way that guides the reader to a specific and small set of hypotheses as the literature review unfolds are preferred. Authors are advised to state the purpose of their paper and the specific research question(s) within the first few pages of the manuscript. Manuscript submissions also need to clearly state the leadership theories in use and how they relate to the purpose of the study and the specific research questions. The LQE advise authors to incorporate appropriate control measures into the design of the research. Too often manuscript submissions appear to be an outcome of an opportunistic chance to hand out a survey, which incorporates leadership measures of interest to the authors, without enough thought given to what controls and control variables are appropriate to testing the posited research questions.

The LQE advises authors to test for alternative models. Initial submissions where authors demonstrate that they have considered plausible alternative relationships among study variables fare much better with reviewers. Authors are advised to avoid the “splicing” of theories by taking pieces of one theory (e.g. a couple of sub-dimensions of transformational leadership) and pieces of another theory to test the linkages between the selected pieces. Instead, it is preferable to use both theories in their entirety and show that linkages exist where expected and do not exist where not expected. Authors are advised to avoid advocating for a particular view of leadership. They are also encouraged to study leaders as they are, which may be dark or may be light, rather than predetermining what leaders are (e.g., positive) and then advocating that point of view.

5.8. Impact of technology on leadership

The LQE generally agreed that technology has had a strong impact on what leaders do and to a lesser extent on leadership research. One way that technology has changed leadership research is that statistical software packages (e.g., SAS and SPSS) make it less burdensome to test multiple models. Access to technology such as online databases and the Internet has also changed how and where and the speed with which authors retrieve relevant literature. As a consequence reviewers are much less tolerant of gaps in literature reviews.

The LQE indicated that the extent to which leadership researchers have incorporated technology into the study of leadership has been disappointing. The modal study in the field continues to be a mono-method handing out, whether physical or virtual, of surveys. One example of how technology has changed the way that leadership might be studied involves exploring detailed records of how managers network, gather information, plan, think, and communicate as reflected in the form of the technology they use, the websites they visit, and the e-mails they send. Another example would be to conduct a time series analysis of how images of leadership evolve with changes in current events by assessing the contents or images of Internet websites related to leadership (MSN's weekly piece on leadership was given as one example). A final example would be how technology has changed access to the corporate level suite of a company. It is now possible at most companies for anyone at any level anywhere in the world to send an e-mail to the upper echelon of the organization; yet the literature is silent on whether (and how) this unparalleled access impacts what leaders do.

It was also noted that technology might have impacted leadership development as much or more as the practice of leadership. The ability to collect and disseminate 360-degree feedback and other types of assessment online as well as to bring in leadership development coaches virtually, has heightened the popularity of both. Simulations and virtual reality may well be the next step in extending leadership development beyond the current action-learning model.

5.9. New directions in leadership research—looking forward

We asked the LQE to speculate on fertile areas for future leadership research. They typically took a deep breath at this question and would often talk more about how the field has expanded over the prior decade (a point we return to in the next section), rather than jumping into prognostications for the next decade. Nevertheless, after some prodding they provided some observations, included in Table 11. While the list of future directions does not exhaust the ideas mentioned by the LQE, it does reflect those that were most often mentioned or were stated with great emphasis. The list is juxtaposed with the results obtained from the Editorial Board surveys and focus groups to gain a more complete sense of newer directions in leadership research.

6. Future research directions

In outlining this manuscript we had originally intended to follow a process similar to Lowe and Gardner (2000) in preparing our future directions section. Based on their content analysis, interviews, and personal insights, Lowe and Gardner were able to identify what seemed, at least at the time, to be eight clearly indicated content directions for future leadership, including Strategic Leadership, Levels of Analysis, Leadership Development and Leadership Systems, Leadership Context, Females as Leaders, International Leadership, Technology, and Transformational/Charismatic Leadership. Of the eight future directions proposed in the year 2000, four received considerable interest with Levels of Analysis and Transformational/Charismatic Leadership receiving the most attention. Strategic Leadership also received considerable attention both within and outside LQ (e.g. Strategic Management Journal, Academy of Management Journal) while heightened attention to Leadership Context was predominately a latter half of the decade phenomenon. From our 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. However, it is worth noting that one of the more cited LQ articles of the decade was focused on gender and leadership (Eagly & Carli, 2003).

In attempting to devise a short-list of future research directions similar to Lowe and Gardner (2000), we were struck by the explosion of leadership theories and novelty of approaches to studying leadership that have emerged in the most recent decade. Indeed, as our content analysis reveals, over 40% of the articles published in LQ over the past ten years would be categorized as “New Directions” by Lowe and Gardner (2000) just a decade ago. Combining that observation with the recognition that many of the theories thus categorized were introduced during the past decade, it is apparent that handicapping a short list of future topics is more speculative than at any time in recent decades. Moreover, given that the LQE listed several possible directions, we decided to forgo the temptation to further speculate on future content areas. Instead, we have chosen 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. Therefore, we summarize our recommendations in the later part.

First, we recommend a reduction in 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 analyses of leader speeches such as those conducted by Bligh et al., 2004a and Bligh et al., 2004b).

Second, we would like to see our depth of understanding of phenomena grow by increasing the number of studies within a study (e.g., study 1, study 2, and study 3) that richly and methodically demonstrate how a leadership phenomenon unfolds. Too often we have single study inferences, albeit rigorously determined, that can lead to misleading conclusions.

Third, we recommend that leadership scholars increase the number of lenses brought to bear on a single phenomenon and integrate those perspectives. Scholars are encouraged to build 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. Such an approach is also likely to be an enabler of the studies within a study advocated above and echoes Scandura and Williams (2000) call for triangulation in research methodology. Furthermore, we encourage researchers to use such cross-disciplinary teams to conduct truly international research, such as that exemplified by the GLOBE study (Chokkar et al., 2007, Den Hartog et al., 1999 and House et al., 2004), as opposed to the more prevalent cross-cultural studies that compare leadership practices across a small set of cultures.

Fourth, we suggest the foci of cross-level studies move toward understanding how leadership is enacted and evaluated at different levels simultaneously. The field has taken a necessary first step in statistically determining how variance is partitioned across levels and thus at what levels of analysis a phenomena can appropriately be investigated (Yammarino & Dansereau, 2008). The next step is 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.

Fifth, we recommend greater use of controlled experiments to tease out causal relationships that operate within the process of leadership. As both the Lowe and Gardner (2000) and the current review indicate, laboratory and field experiments and experimental simulations appear to be underutilized by leadership researchers in comparison to field surveys. While field surveys certainly have their place, there is no stronger methodology for isolating causal relationships and eliminating competing interpretations of findings than the experimental design (Fromkin & Streufert, 1976, Hoyle et al., 2002 and Kerlinger & Lee, 2000). Leadership researchers would be wise to draw upon the strengths of experimental design to provide controlled tests of theories and explicate the causal direction of underlying leadership processes.

Sixth, leadership scholars are encouraged to draw on alternative methodologies from other fields of study, such as: 1) the use of experimental methods developed by behavioral economists (Fromkin & Streufert, 1976 and Hoyle et al., 2002) to test game theory predications regarding leader decision-making; 2) the application of the narrative analytical techniques developed by sociologists to assess leader and organizational stories (Ligon et al., 2008 and Sparrowe, 2005); 3) the introduction of computer simulations developed by sociologists and psychologists (Heise, 2007 and Schneider, 2002) to model leader–follower interactions; and 4) the continued application of agent based models (Hazy, 2007, Lichtenstein et al., 2006, Marion & Uhl-Bien, 2003 and Marion & Uhl-Bien, 2008) to assess the implications of complexity theory for leadership processes.

Seventh, we recommend that leadership scholars generate greater testing of competing models in data analysis. Powerful reformulations and extensions of current theories may emerge from models with better fit or elegance, especially when that fit is demonstrated across multiple samples and varying methods.

Eight, given the LQ mission of an interdisciplinary approach, we suggest leadership scholars increase the amount of attention they give to cognitive aspects of leaders and leadership. The field has been dominated by the socio-emotional approach, an approach that remains useful, but which could be augmented and further explicated by cognition, decision science and behavioral economic perspectives.

Finally, we believe leadership researchers can think more creatively about how to incorporate a wide range of new technologies for studying leadership. The use of electronic diaries to obtain repeated measures in real time is one example. Placing an existing paper and pencil survey into an online data collection program like SurveyMonkey is not. (See Video 9 for a complementary discussion of future research directions.)

7. Conclusions

More than thirty years ago Lombardo and McCall (1978, p. 3) wrote “If leadership is bright orange, leadership research is slate grey.” Two decades later a more optimistic view was advanced by Hunt (1999) who noted that the field had been rejuvenated by a paradigm shift to transformational/charismatic leadership. Yet Hunt (1999) was, at the same time, concerned that leadership research could collapse into a similar “weeping and gnashing period” (p. 140) around a different two factor model.

Our review of the most recent decade of literature published in LQ would more than allay Hunt's fear as we conclude that the field of leadership research is more diverse, more robust, more multi-faceted and more multi-focused than at any time in recent decades. Indeed we believe that the field's lack of a single definition of leadership (Bass, 2008 and Yukl, 2010) is cause for celebration, rather than lament, given that leadership is a complex, multi-level and socially constructed process. The field can now be described as increasingly bright orange where it is “cool” to be a leadership researcher again with new and talented scholars continuing to be attracted to the field. Indeed if there is a concern about vibrancy, that concern would be better placed in worrying about the field being too vibrant, with scholars chasing so many new (stage one) conceptual models and methodologies that the field collectively fails to develop mature knowledge about core theoretical processes.

While we have argued that the diversity of leadership research documented herein provides clear evidence of a renewed vibrancy for the field arising from theoretical and methodological advances, it also seems clear that macro trends and current events have contributed to making leadership scholarship de rigueur. Organizational trends such as the globalization of business and workforce diversity as well as a search for answers to complex questions such as the financial crisis, climate control, ethical debacles, and entitlement programs has resulted in increased governmental and public interest in leadership. The current malaise around these events, frequently characterized in the media as “a failure of leadership,” has focused the public's attention on both the self-regulation of leaders as individuals and on the collective regulation of leadership systems embedded in institutional processes and structures. The trends, including increased workforce diversity and the ongoing globalization of business, are typically characterized as “leadership challenges.” To suggest that leadership research will eliminate these problems is naïve, but we are optimistic about the ability of the field over the next decade to both provide better insights into how leaders can be more effective in tackling these problems and to explicate the relevant leadership processes and dynamics.

Acknowledgements

We thank Mike Mumford, Senior Editor of The Leadership Quarterly (LQ), for his support of this manuscript including granting time to run focus groups during LQ's Editorial Board Meetings at the 2009 Annual Meetings of the Academy of Management. We also wish to thank the Associate Editors of LQ for participating in individual structured interviews and to the full Editorial Review Board of LQ for their participation in focus groups and survey research. We are also grateful to John Antonakis for recommending the inclusion of the analysis of the most cited LQ articles by decade. Finally, we wish to thank Fran Yammarino, the Yearly Review Editor, and Leanne Atwater, the incoming Senior LQ Editor, for their expert guidance in conducting our review.

Appendix A. Leadership theory and content coding scheme1

Category number	Category title	Category source	Category theories and Content
1	Nature of managerial work	Yukl (2010)	Typical activity patterns in managerial work; the content of managerial work; demands, constraints, choices; research on situational determinants; changes in the nature of managerial work; how much discretion do managers have?
2	Behavioral approaches	Yukl (2010)/Mahoney et al. (2009)/Bass (2008; Ch. 17, 19 and 20)	OSU leadership studies; Michigan leadership studies; experiments on task and relations behavior; research using critical incidents; the high-high leader; leadership behavior taxonomies; specific task behaviors; specific relations behaviors/This category included articles that investigate the OSU and Michigan leadership behavior directions, focus on

Category number	Category title	Category source	Category theories and Content
			leadership punishment, or reward behaviors.
3	Participative leadership, shared leadership, delegation and empowerment	Yukl (2010)	Nature and consequences of participative leadership; delegation; perceived empowerment
4	Dyadic relations and followership	Yukl (2010)/Mahoney et al. (2009)/Emergent	Leader‐member exchange theory; follower contributions to effective management; self-management/this category dealt with LMX theory and related ideas like relational leadership/trust in leadership
5	Power and influence	Yukl (2010)/Emergent	Conceptions of power and influence; power types and sources; consequences of position and personal power; influence tactics; use and effectiveness of influence tactics; political skill; impression management (moved from Yukl Category 4). Note: The focal level of analysis for these influence and political tactics is dyadic, group and organizational as opposed to institutional, regional, and societal.
6	Leadership traits and attributes	Yukl (2010)/Mahoney et al. (2009)	Nature of managerial traits; managerial traits and effectiveness/some studies of leadership look at individual differences in leaders and investigate where they originate and how they relate to leader success. This category included articles that study the traditional trait approach, as well as other newer approaches. Note: Leader values, other than ethical values, are included here.
7	Leadership skills	Yukl (2010)/Mahoney et al. (2009)	Nature of managerial skills; managerial skills and effectiveness; other relevant competencies; situational relevance of skills/articles in this category describe specific abilities or clusters of abilities that contribute to leadership effectiveness.
8	Contingency theories of leadership	Yukl (2010)/Mahoney et al. (2009)	LPC contingency model; path‐goal theory of leadership; situational leadership theory; leadership substitutes theory; multiple linkage model; cognitive resources theory; applications for adaptive leadership; Vroom, Yetton, and Jago normative decision model (moved from Yukl Category 3)/this category includes articles where the leader adjusts to the situation, or adjusts the situation to fit him or herself. This includes path‐goal theory of leadership and substitutes for leadership.
9	Neocharismatic approaches	Yukl (2010)/Mahoney et al. (2009)/Emergent	Two early theories; attribution theory of charismatic leadership; other conceptions of charisma; consequences of charismatic leadership; transformational leadership/these articles discussed transformational and/or charismatic leadership topics. Sometimes the focus was on transformational leadership; at other times the only focus was charismatic leadership.

Category number	Category title	Category source	Category theories and Content
			Frequently, both transformational and charismatic leadership were mentioned, resulting in a category that combined these two/visionary and inspirational leadership.
10	Leading change in organizations	Yukl (2010)/Mahoney et al. (2009)	Change processes in organizations; influencing organization culture; developing a vision; implementing change/articles in this category dealt with organizational change, changes within the context of organizations, or larger social changes in society or government. These changes were spurred by direct or indirect actions of leaders.
11	Leading for creativity and innovation	Mahoney et al., 2009 and Yukl, 2010	Articles in this category investigated creative leadership processes from a variety of perspectives. Three special issues of *LQ* published over two years were at least partially categorized here/innovation and organizational learning moved from Yukl Category 10 to here.
12	Leadership in teams and decision groups	Yukl (2010)/Mahoney et al. (2009)	The nature of teams; determinants of team performance; leadership in different types of teams; procedures for facilitating team learning; guidelines for team building; decision making in groups; leadership functions in meetings/this category consisted of articles where teams were the primary focus, or the article attempted to apply leadership theory to team settings in a novel fashion. Note: The focal level of analysis involves teams and groups at the mid- and lower-level echelons of the organization.
13	Strategic leadership by top executives	Yukl (2010)/Mahoney et al. (2009)	How leaders influence organizational performance; constraints on executives; conditions affecting the need for strategic leadership; executive tenure and strategic leadership; research on effects of CEO leadership; strategic leadership by executive teams; two key responsibilities for top executives/these articles dealt with leadership problems at the highest levels of organizations. Executive leadership and strategic leadership were included in this category, with topics like leadership succession and top management teams. Note: The focal level of analysis involves top-management teams at the upper echelon levels of the organization.
14	Ethical, servant, spiritual and authentic leadership	Yukl, 2010 and Mahoney et al., 2009	Conceptions of ethical leadership; determinants and consequences of ethical leadership; transforming leadership and adaptive problem solving; servant leadership; spiritual leadership; authentic leadership/this category included theories of ethical leadership and investigation of leader priorities in terms of what they think is most important. This category included how an ethical orientation toward leadership is developed, how an ethical approach to leadership is important, and how it can be sustained. Examinations of authentic leadership were also placed in this category.

Category number	Category title	Category source	Category theories and Content
15	Leadership and diversity	Yukl (2010)/Mahoney et al. (2009)/Bass (2008; Ch. 31/32)	Gender and leadership; managing diversity/this category examined the experiences of women in leadership positions. Some focused on the benefits of more women leaders, and others, the challenges facing women in leadership roles. Note: The focus of this category is on the leadership of diverse followers within domestic borders.
16	Cross-cultural leadership	Yukl (2010)/Mahoney et al. (2009)/Bass (2008)	Introduction to cross-cultural leadership; the GLOBE project; cultural value dimensions and leadership/this category included articles comparing the leadership processes of one culture or another, or looking at leadership in non-US populations to discern if European/US leadership theories applied in such settings/culture, country and attributes of leadership; universality; cultural and institutional changes; differences in leadership across cultures; leadership in the multinational firm. Note: The focus of this category is on the leadership of diverse groups across cultural and national boundaries.
17	Development and identification of leaders and leadership	Yukl (2010)/Mahoney et al. (2009)/Bass (2008: Ch. 34 and 35)	Leadership training programs; designing effective training; specific techniques of leadership training; learning from experience; developmental activities; self-help activities; facilitating conditions for leadership development; a systems perspective of leadership development/articles that prescribed or described pathways or processes by which leaders came to possess leadership capacity were placed in this category/development and identification of leaders and leadership/assessment, appraisal and selection
18	Complexity theory of leadership	Mahoney et al. (2009)	Articles in this category dealt with catastrophe theory or complex adaptive systems. Articles explored how complexity theory was useful in describing how leaders can be successful in turbulent environments.
19	Destructive leadership	Mahoney et al. (2009)	Articles in this category investigated cases where leaders misbehaved, acted in ways contrary to the best interests of followers, and the setting where they were leaders. An example is sexual harassment.
20	Political and public leadership	Mahoney et al. (2009)/Emergent	Articles that dealt with the direct or indirect use of power were included in this category. Presidential leadership studies, influence tactics, and other investigations of public leadership were categorized here/ public leadership approaches.
21	Multiple level approaches	Mahoney et al. (2009)	The articles in this category dealt with a focus on clear, specific and articulated tying of leadership to the appropriate levels of analysis.
22	Leader and follower cognition	Mahoney et al. (2009)	Leader attributions about subordinates; follower attributions and implicit theories (moved from Yukl Category 4)/this category included articles which pertained to cognitive

Category number	Category title	Category source	Category theories and Content
			approaches to leadership including the Connectionist Approach of Robert Lord. This category also included self-concept and social identity approaches to leadership. Note: The work of Hogg and colleagues on leader categorization theory is also included in this category.
23	Emotions and leadership	Mahoney et al. (2009)	Articles in this category dealt with the feelings or affect of leaders and a variety of influences which emotions, positive and negative, have at all levels of leadership.
24	Contextual influences on leadership	Mahoney et al. (2009)	This category dealt with leadership in specific arenas, such as the military or education setting and how leadership practices often are constrained by contextual variables (i.e., period of time in organizational processes), or environmental characteristics (i.e., whether conflict pervades). Articles dealing with the contextual theory of Osborn et al. (2002) were also placed in this category. Note: To be included in this category, authors must explicitly indicate that the primary article focus is on contextual factors.
25	Measurement and methods for studying leadership	Mahoney et al. (2009)	The primary focus of the articles in this category is the examination of measurement methodology(ies) used to empirically examine leadership or concepts underlying or relating to leadership. This included a critique of a currently used research method, a demonstration of methods or techniques for improving a currently used method or the proposal of new methods, including new definitions of data collection, definitions of manifest variables, statistical techniques, or use of new technologies. Frequently, the purpose of articles in this category was to demonstrate optimal or new research methods for advancing the understanding of leadership.
26	Leadership effects of task, technology, distance and virtuality	Bass (2008; parts of Ch. 27 and 29)	Ch. 27–Leadership in a technology-enabled working environment; the leader's competence and the requirements of tasks; important dimensions of tasks; sociotechnical systems; effects of type of task/Ch. 29–interaction potential; leadership and physical space; leadership and psychosocial space; networks; electronic communication networking; e-leadership; leadership in experimental communication networks
27	Ideological and Pragmatic Leadership	Emergent	Includes theoretical and empirical examinations of ideological and pragmatic leadership, including the theoretical perspectives of Mumford and colleagues. NOTE: Articles that focus on charismatic, ideological and/or pragmatic leadership are coded as both neocharismatic and ideological and/or pragmatic leadership.
28	New directions	Emergent	This category is used to classify new perspectives on leadership that have emerged in recent years that do not fit in any of the

Category number	Category title	Category source	Category theories and Content
			existing categories.
29	Other	Emergent	This category is used to classify established theoretical perspectives that do not fit into any of the existing categories.

References

N.J. Adler, A.W.K. Harzing. When knowledge wins: Transcending the sense and nonsense of academic rankings. Academy of Management Learning and Education, 8 (2009), pp. 72–95

B. Althouse, J. West, C. Bergstrom. Differences in impact factor across fields and over time. Journal of American Society for Information Science and Technology, 60 (2009), pp. 27–34

A.P. Ammeter, C. Douglas, W.A. Hochwarter, G.R. Ferris, W.L. Gardner. Introduction to: The Leadership Quarterly special issue on political perspectives in leadership. The Leadership Quarterly, 15 (2004), pp. 433–435

J. Antonakis, B.J. Avolio, N. Sivasubramaniam. Context and leadership: An examination of the nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire. The Leadership Quarterly, 14 (2003), pp. 261–295

B.J. Avolio. Full leadership development: Building the vital forces in organizations. Sage, Newbury Park, CA (1999)

B.J. Avolio. Leadership development in balance: Made/born. Earlbaum, Mahwah, NJ (2005)

B.J. Avolio, B.M. Bass. Multifactor Leadership Questionnaire: Manual and sampler set. (3rd ed.)Mind Garden, Redwood City, CA (2004)

B.J. Avolio, W.L. Gardner. Authentic leadership development: Getting to the root of positive forms of leadership. The Leadership Quarterly, 16 (2005), pp. 315–338

B.J. Avolio, W.L. Gardner, F.O. Walumbwa, F. Luthans, D.R. May. Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. The Leadership Quarterly, 15 (2004), pp. 801–823

B.M. Bass. Leadership and performance beyond expectations. Free Press, New York (1985)

B.M. Bass. The Bass handbook of leadership. Free Press, New York, NY (2008)

B.M. Bass, B.J. Avolio. Mutlifactor leadership questionnaire: Rater form (5× short). Mind Garden, Palo Alto, CA (1995)

B.L. Berg. Qualitative research methods for the social sciences. (7th ed.)Pearson, Upper Saddle River, NJ (2009)

J.A. Black, R.L. Oliver, J.P. Howell, J.P. King. A dynamic system simulation of leader and group effects on context for learning. The Leadership Quarterly, 17 (2006), pp. 39–56

P.B. Bliese. Within-group agreement, non-independence, and reliability: Implications for data aggregation. K.J. Klein, S.W.J. Kozlowski (Eds.), Multilevel theory, research, and methods, Jossey-Bass, San Francisco (2000), pp. 349–381

P.D. Bliese, R.R. Halverson, C.A. Schriesheim. Benchmarking multilevel methods in leadership: The articles, the model, and the data set. The Leadership Quarterly, 13 (2002), pp. 3–14

M.C. Bligh, G.D. Hess. The power of leading subtly: Alan Greenspan, rhetorical leadership, and monetary policy. The Leadership Quarterly, 18 (2007), pp. 87–104

M.C. Bligh, J.C. Kohles, J.R. Meindl. Charisma under crisis: Presidential leadership, rhetoric, and media responses before and after the September 11th terrorist attacks. The Leadership Quarterly, 15 (2004), pp. 211–239

M.C. Bligh, J.C. Kohles, J.R. Meindl. Charting the language of leadership: A methodological investigation of President Bush and the crisis of 9/11. Journal of Applied Psychology, 89 (2004), pp. 562–574

D.M. Boje, C. Rhodes. The leadership of Ronald McDonald: Double narration and stylistic lines of transformation. The Leadership Quarterly, 17 (2006), pp. 94–103

D.J. Brown, R.G. Lord. The utility of experimental research in the study of transformational/charismatic leadership. The Leadership Quarterly, 10 (1999), pp. 531–539

M.E. Brown, L.K. Trevino. Ethical leadership: A review and future directions. The Leadership Quarterly, 17 (2006), pp. 595–616

A. Bryman. Charisma and leadership in organizations. Sage, London (1992)

A. Bryman. Qualitative methods in leadership research: Introduction. The Leadership Quarterly, 6 (1995), pp. 491–493

C.S. Burke, K.C. Stagl, C. Klein, G.F. Goodwin, E. Salas, S.M. Halpin. What type of leadership behaviors are functional in teams?: A meta-analysis. The Leadership Quarterly, 17 (2006), pp. 288–307

J.M. Burns. Leadership. Harper & Row, New York (1978)

W.F. Cascio, H. Aguinis. Research in industrial and organizational psychology from 1968 to 2007: Changes, choices and trends. Journal of Applied Psychology, 93 (2008), pp. 1062–1081

S.L. Castro. Data analytic methods for the analysis of multilevel questions: A comparison of intraclass correlation coefficients, rwg(j), hierarchical linear modeling, within- and between-analysis, and random group resampling. The Leadership Quarterly, 13 (2002), pp. 69–93

S.E. Cha, A.C. Edmondson. When values backfire: Leadership, attribution, and disenchantment in a values-driven organization. The Leadership Quarterly, 17 (2006), pp. 57–78

J.S. Chokkar, F.C. Brodbeck, R.J. House. Culture and leadership across the world: The GLOBE book of in-depth studies of 25 societies. Erlbaum, Mahwah, NJ (2007)

J.U. Chun, F.J. Yammarino, S.D. Dionne, J.J. Sosik, H.K. Moon. Leadership across hierarchical levels: Multiple levels of management and multiple levels of analysis. The Leadership Quarterly, 20 (2009), pp. 689–707

J.B. Ciulla. Leadership ethics: Mapping the territory. J.B. Cuilla (Ed.), Ethics: The heart of leadership, Praeger, Westport, CT (2004), pp. 1–24

J.B. Ciulla. Leadership studies and "the fusion of horizons". The Leadership Quarterly, 19 (2008), pp. 393–395

C.C. Cogliser, K.H. Brigham. The intersection of leadership and entrepreneurship: Mutual lessons to be learned. The Leadership Quarterly, 15 (2004), pp. 771–799

J.A. Conger, R.N. Kanungo. Toward a behavioral theory of charismatic leadership in organizational settings. Academy of Management Review, 12 (1987), pp. 637–647

M.S. Connelly, J.A. Gilbert, S.J. Zaccaro, K.V. Threlfall, M.A. Marks, M.D. Mumford. Exploring the relationship of leadership skills and knowledge to leader performance. The Leadership Quarterly, 11 (2000), pp. 65–86

M.S. Connelly, F.J. Yammarino. Special issue: Leadership skills. The Leadership Quarterly, 11 (2000), pp. 3–170

J.W. Creswell. Research design: Qualitative, quantitative, and mixed methods approaches. (3rd ed.)Sage, Los Angeles (2009)

F. Dansereau, J.A. Alutto, F.J. Yammarino. Theory testing in organizational behavior: The varient approach. Prentice-Hall, Englewood Cliffs, NJ (1984)

D.B. Day. Leadership development: A review in content. The Leadership Quarterly, 11 (2000), pp. 581–614

D.V. Day, P. Gronn, E. Salas. Leadership in team-based organizations: On the threshold of a new area. The Leadership Quarterly, 17 (2006), pp. 211–216

M.D. Dealy, A.B. Thomas. Managing by accountability: What every leader needs to know about responsibility, integrity—and results. Praeger, Westport, CT (2006)

D.N. Den Hartog, R.J. House, P.J. Hanges, S.A. Ruiz-Quintanilla, P.W. Dorfman. Culture specific and cross-culturally generalizable implicit leadership theories: Are attributes of charismatic/transformational leadership universally endorsed?[1] The Leadership Quarterly, 10 (1999), pp. 219–256

T. Dvir, B. Shamir. Follower developmental characteristics as predicting transformational leadership: A longitudinal field study. The Leadership Quarterly, 14 (2003), pp. 327–344

A.H. Eagly, L.L. Carli. The female leadership advantage: An evaluation of the evidence. The Leadership Quarterly, 16 (2003), pp. 807–834

L. Egghe. Theory and practice of the g-index. Scientometrics, 69 (2006), pp. 131–152

P.C. Ellsworth. From abstract ideas to concrete instances: Some guidelines for choosing natural research settings. American Psychologist, 32 (1977), pp. 604–615

EndNote X1. Thomson/ISI ResearchSoft. (2007)

M.D. Ensley, K.M. Hmieleski. The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. The Leadership Quarterly, 17 (2006), pp. 217–231

H.L. Fromkin, S. Streufert. Laboratory experimentation. M. Dunnette (Ed.), Handbook of industrial and organizational psychology, Rand-McNally, Chicago (1976), pp. 415–466

L.W. Fry. Toward a theory of spiritual leadership. The Leadership Quarterly, 14 (2003), pp. 693–727

L.W. Fry. Introduction to The Leadership Quarterly special issue: Toward a paradigm of spiritual leadership. The Leadership Quarterly, 16 (2005), pp. 619–622

S.A. Furst, M. Reeves. Queens of the hill: Creative destruction and the emergence of executive leadership of women. The Leadership Quarterly, 19 (2008), pp. 372–384

W.L. Gardner, C.C. Cogliser. Meso-modeling of leadership: Following James G. (Jerry) Hunt's lead in integrating micro- and macro-perspectives of leadership. The Leadership Quarterly, 20 (2009), pp. 493–500

E. Garfield. Citation indexing, its theory and application in science, technology, and humanities. Wiley, New York (1979)

M.B. Gavin, D.A. Hofmann. Using hierarchical linear modeling to investigate the moderating influence of leadership climate. The Leadership Quarterly, 13 (2002), pp. 15–33

R.C. Giambatista. Jumping through hoops: A longitudinal study of leader life cycles in the NBA. The Leadership Quarterly, 15 (2004), pp. 607–624

B.G. Glaser, A.L. Strauss. The discovery of grounded theory: Strategies for qualitative research. Aldine, Chicago (1967)

M.E. Gordon, L.A. Slade, N. Schmitt. The “science of the sophomore” revisited: From conjecture to empiricism. Academy of Management Review, 11 (1986), pp. 191–207

J.W. Graham. Servant-leadership in organizations: Inspirational and moral. The Leadership Quarterly, 2 (1991), pp. 105–119

A.T. Halla, F.R. Blass, G.R. Ferris, R. Massengale. Leader reputation and accountability in organizations: Implications for dysfunctional leader behavior. The Leadership Quarterly, 15 (2004), pp. 515–536

R. Hart. DICTION 5.0: The text-analysis program. Scolari/Sage, Thousand Oaks, CA (1999)

A.W.K. Harzing, R. van Der Wal. Google Scholar as a new source for citation analysis. Ethics in Science and Environmental Politics, 8 (2008), pp. 61–73

J.K. Hazy. Computer models of leadership: Foundations for a new discipline or meaningless diversion? The Leadership Quarterly, 18 (2007), pp. 391–410

D. Heise. Expressive order: Confirming sentiments in social actions. Springer Verlag (2007)

J.E. Hirsch. An index to quantify an individual's scientific research output [Electronic Version]. Proceedings of the National Academy of Science USA, 102 (2005), pp. 16569–16572

R.J. House. A 1976 theory of charismatic leadership. J.G. Hunt, L.L. Larson (Eds.), Leadership: The cutting edge, Southern Illinois University Press, Carbondale, IL (1977), pp. 189–207

R.J. House, R. Aditya. The social scientific study of leadership: Quo vadis? Journal of Management, 23 (1997), pp. 409–474

R.J. House, P.J. Hanges, M. Javidan, P.W. Dorfman, V. Gupta. Culture, leadership, and organizations. The GLOBE Study of 62 SocietiesSage, London (2004)

G. Howard, D. Cole, S. Maxwell. Research productivity in psychology based on publication in the journals of the American Psychological Association. American Psychologist, 42 (1987), pp. 975–986

J.M. Howell, B. Shamir. The role of followers in the charismatic leadership process: Relationships and their consequences. Academy of Management Review, 30 (2005), pp. 96–112

R.H. Hoyle, M.J. Harris, C.M. Judd. Research methods in social relations. (7th ed.)Wadsworth/Thomson Learning, United States (2002)

R.H. Humphrey. How work roles influence perceptions: Structural-cognitive processes and organizational behavior. American Sociological Review, 50 (1985), pp. 242–252

R.H. Humphrey. The many faces of emotional leadership. The Leadership Quarterly, 13 (2002), pp. 493–504

R.H. Humphrey, R.D. Berthiaume. Job characteristics and biases in subordinates' appraisals of managers. Basic and Applied Social Psychology, 14 (1993), pp. 401–420

J.G. Hunt. Leadership: A new synthesis. Sage, Newbury Park, CA (1991)

J.G. Hunt. Transformational/Charismatic leadership's transformation of the field: An historical essay. The Leadership Quarterly, 10 (1999), pp. 129–144

J.G. Hunt. What is leadership? J. Antonakis, A.T. Cianciolo, R.J. Sternberg (Eds.), The nature of leadership, Sage, Thousand Oaks, CA (2004), pp. 19–47

J.G. Hunt, K.B. Boal, G.E. Dodge. The effects of visionary and crisis-responsive charisma on followers: An experimental examination of two kinds of charismatic leadership. The Leadership Quarterly, 10 (1999), pp. 423–448

J.G. Hunt, G.E. Dodge. Leadership deja vu all over again. The Leadership Quarterly, 11 (2000), pp. 435–458

J.G. Hunt, R.L. Phillips. Strategic leadership: A multiorganizational-level perspective. Quorum, Westport, CT (1992)

L.R. James, R.G. Demaree, G. Wolf. Estimating within-group interrater reliability with and without response bias. Journal of Applied Psychology, 69 (1984), pp. 85–98

P. Jascó. Five-year impact factor data in the Journal Citation Reports. Online Information Review, 33 (2009), pp. 603–614

L.R. Jauch, J.L. Wall. What they do when they get your manuscript: A survey of Academy of Management reviewer practices. Academy of Management Journal, 32 (1989), pp. 157–173

J.B. Kellett, R.H. Humphrey, R.G. Sleeth. Empathy and complex task performance: Two routes to leadership. The Leadership Quarterly, 13 (2002), pp. 523–544

F.N. Kerlinger, H.B. Lee. Foundations of behavioral research. (4th ed.)Wadsworth-Thomson Learning (2000)

S. Kerr, J.M. Jermier. Substitutes for leadership: Their meaning and measurement. Organizational Behavior & Human Performance, 22 (1978), pp. 375–403

D.E. Krause. Influence-based leadership as a determinant of the inclination to innovate and innovation-related behaviors: An empirical investigation. The Leadership Quarterly, 15 (2004), pp. 79–102

R. Lebow, R. Spitzer. Accountability: Freedom and responsibility without control. Berrett-Koehler Publishers (2002)

T. Lee. Using qualitative methods in organizational research. Sage, Thousand Oaks, CA (1999)

B. Lichtenstein, M. Uhl-Bien, R. Marion, A. Seers, D. Orton, C. Schreiber. Complexity leadership theory: Explaining the interactive process of leading in complex adaptive systems. Emergence: Complexity and Organization, 8 (4) (2006), pp. 2–12

R.C. Liden, S.J. Wayne, H. Zhao, D. Henderson. Servant leadership: Development of a multidimensional measure and multi-level assessment. The Leadership Quarterly, 19 (2008), pp. 161–177

G.S. Ligon, S.T. Hunter, M.D. Mumford. Development of outstanding leadership: A life narrative approach. The Leadership Quarterly, 19 (2008), pp. 312–334

M.M. Lombardo, M. McCall (Eds.), Leadership: Where else can we go?, Duke University, Durham, NC (1978)

M. London. Leadership development: Paths to self-insight and professional growth. Elrbaum, Mahwah, NJ (2002)

K.B. Lowe, W.L. Gardner. Ten years of Leadership Quarterly: Contributions and challenges for the future. The Leadership Quarterly, 11 (2000), pp. 459–514

K.T. Mahoney, W.C. Buboltz Jr., F. Igou. The second act of The Leadership Quarterly: A content analysis of Volumes 11-19. Louisiana Tech University (2009)

R. Marion, M. Uhl-Bien. Leadership in complex organizations. The Leadership Quarterly, 12 (2001), pp. 389–418

R. Marion, M. Uhl-Bien. Complexity theory and Al-Qaeda: Examining complex leadership. Emergence: A Journal of Complexity Issues in Organizations and Management, 5 (2003), pp. 54–76

R. Marion, M. Uhl-Bien. Introduction to the special issue on leadership and complexity. The Leadership Quarterly, 18 (2007), pp. 293–296

R. Marion, M. Uhl-Bien (Eds.), Complexity theory and leadership: Social dynamics in the knowledge era, Information Age Publishing, Charlotte, NC (2008)

J.C. Marshall-Mies, E.A. Fleishman, J.A. Martin, S.J. Zacarro, W.A. Baughman, M.L. MeGee. Development and evaluation of cognitive and metacognitive measures for predicting leadership potential. The Leadership Quarterly, 11 (2000), pp. 135–153

P. Mayring. Qualitative content analysis [Electronic Version]. Forum: Qualitative Social Research [On-line Journal] (2000) Retrieved March 1, 2010, from http://qualitative-research.net/fqs/fqs-e/2-00inhalt-e.htm

J. McGrath. Dilemmatics: The study of research choices and dilemmas. J.E. McGrath, J. Martin, R.A. Kulka (Eds.), Judgment calls in research, Sage, Newbury Park, CA (1982), pp. 69–102

A. Mehra, B.R. Smith, A.L. Dixon, B. Robertson. Distributed leadership in teams: The network of leadership perceptions and team performance. The Leadership Quarterly, 17 (2006), pp. 232–245

J.R. Meindl. The romance of leadership as a follower-centric theory: A social constructionist approach. The Leadership Quarterly, 6 (1995), pp. 329–341

A.J. Melcher. Leadership models and research approaches. J.G. Hunt (Ed.), Leadership: The cutting edge, Southern Illinois University, Carbondale (1977), pp. 94–108

D.G. Mook. In defense of external invalidity. American Psychologist, 38 (1983), pp. 379–387

M.D. Mumford. The Leadership Quarterly special issue on leading for innovation: Part I: Micro studies. The Leadership Quarterly, 14 (2003), pp. 385–387

M.D. Mumford. The Leadership Quarterly special issue on leading for innovation: Part 2: Macro studies. The Leadership Quarterly, 15 (2004), pp. 1–2

M.D. Mumford. Something old, something new: The mission of The Leadership Quarterly. The Leadership Quarterly, 16 (2005), pp. 9–15

M.D. Mumford, M.A. Marks, M.S. Connelly, S.J. Zaccaro, R. Reiter-Palmon. Development of leadership skills: Experience and timing. The Leadership Quarterly, 11 (2000), pp. 87–114

M.D. Mumford, G.M. Scott, B. Gaddis, J.M. Strange. Leading creative people: Orchestrating expertise and relationships. The Leadership Quarterly, 13 (2002), pp. 705–750

M.D. Mumford, S.J. Zaccaro, F.D. Harding, T.O. Jacobs, E.A. Fleishman. Leadership skills for a changing world: Solving complex social problems. The Leadership Quarterly, 11 (2000), pp. 11–36

M.D. Myers. Qualitative research in business and management. Sage, Thousand Oaks, CA (2009)

K.H. Krippendorff. Content analysis: An introduction to its methodology. (2nd ed.)Sage, Thousand Oaks, CA (2003)

M.J. Newcombe, N.M. Ashkanasy. The role of affect and affective congruence in perceptions of leaders: An experimental study. The Leadership Quarterly, 13 (2002), pp. 601–614

L.R. Offermann, P.J. Hanges, D.V. Day. Leaders, followers, and values: Progress and prospects for theory and research. The Leadership Quarterly, 12 (2001), pp. 129–131

P. Olk, T.L. Griffith. Creating and disseminating knowledge among organizational scholars: The role of special issues. Organization Science, 15 (2004), pp. 120–129

R.N. Osborn, J.G. Hunt, L.R. Jauch. Toward a contextual theory of leadership. The Leadership Quarterly, 13 (2002), pp. 797–837

K.W. Parry. Grounded theory and social process: A new direction for leadership research. The Leadership Quarterly, 9 (1998), pp. 85–106

C.L. Pearce, J.A. Conger, E.A. Locke. Shared leadership theory. The Leadership Quarterly, 19 (2008), pp. 622–628

C.L. Pearce, C.C. Manz, H.P. Sims Jr. The roles of vertical and shared leadership in the enactment of executive corruption: Implications for research and practice. The Leadership Quarterly, 19 (2008), pp. 353–359

A.T. Pescosolido. Emergent leaders as managers of group emotion. The Leadership Quarterly, 13 (2002), pp. 583–599

A.E. Reichers, B. Schneider. Climate and culture: An evolution of constructs? B. Schneider (Ed.), Organizational climate and culture, Jossey-Bass, San Francisco (1990), pp. 5–39

T.A. Scandura, G.B. Graen. Moderating effects of initial leader–member exchange status on the effects of a leadership intervention. Journal of Applied Science, 69 (1984), pp. 428–436

T.A. Scandura, E.A. Williams. Research methodology in management: Current practices, trends, and implications for future research. Academy of Management Journal, 43 (2000), pp. 1248–1264

A. Schneider. Behavior prescriptions versus professional identities in multi-cultural corporations: A cross-cultural computer simulation. Organization Studies, 23 (2002), pp. 105–131

V. Seyranian, M.C. Bligh. Presidential charismatic leadership: Exploring the rhetoric of social change. The Leadership Quarterly, 19 (2008), pp. 54–76

R.T. Sparrowe. Authentic leadership and the narrative self. Leadership Quarterly, 16 (2005), pp. 419–439

L.C. Spears, M. Lawrence, K. Blanchard (Eds.), Focus on leadership: Servant leadership for the 21st century (3rd ed), Wiley, New York (2001)

P. Tierney, B.J. Tepper. Introduction to The Leadership Quarterly special issue: Destructive leadership. The Leadership Quarterly, 18 (2007), pp. 171–173

H.L. Tosi. The organization as a context for leadership theory: A multilevel approach. The Leadership Quarterly, 2 (1991), pp. 205–228

B. van Knippenberg, D. van Knippenberg, D. De Cremer, M.A. Hogg. Research in leadership, self, and identity: A sample of the present and glimpse of the future. The Leadership Quarterly, 16 (2005), pp. 495–499

D.A. Waldman, Y. Berson, R.T. Keller. Leadership and organizational learning. The Leadership Quarterly, 20 (2009), pp. 1–3

J.C. Wofford. Laboratory research on charismatic leadership: Fruitful or futile? The Leadership Quarterly, 10 (1999), pp. 523–529

F.J. Yammarino. Leadership skills: Introduction and overview. The Leadership Quarterly, 11 (2000), pp. 5–9

F.J. Yammarino, F. Dansereau. Multi-level nature of and multi-level approaches to leadership. The Leadership Quarterly, 19 (2008), pp. 135–141

F.J. Yammarino, S.D. Dionne, J. Uk Chun, F. Dansereau. Leadership and levels of analysis: A state-of-the-science review. The Leadership Quarterly, 16 (2005), pp. 879–919

G. Yukl. Leadership in organizations. (7th ed.)Prentice-Hall, Upper Saddle Creek, N.J. (2010)

S.J. Zaccaro, A.L. Rittman, M.A. Marks. Team leadership. The Leadership Quarterly, 12 (2001), pp. 451–483

Corresponding author. Institute for Leadership Research, Rawls College of Business, 15th & Flint, Texas Tech University, Lubbock, TX 79409, United States. Tel.: + 1 806 742 1055; fax: + 1 806 742 2308.

1 The “Category title” column lists the title for the category that was determined by the research team to be most descriptive of the category content. Category sources are separated by a slash (/) to reflect different sources, as are the specific category theories and content in the final column.