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**A NETWORK ANALYSIS OF LEADERSHIP THEORY:
THE INFANCY OF INTEGRATION**

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**A NETWORK ANALYSIS OF LEADERSHIP THEORY:
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ABSTRACT

We investigated the status of leadership theory integration by reviewing 14 years of published research (2000 through 2013) in 10 top journals (864 articles). The authors of these articles examined 49 leadership approaches/theories, and in 293 articles, three or more of these leadership approaches were included in their investigations. Focusing on these articles that reflected relatively extensive integration, we applied an inductive approach and used graphic network analysis as a guide for drawing conclusions about the status of leadership theory integration. All 293 articles included in the analysis identified one *focal theory* that was integrated with 2 or more *supporting leadership theories*. The six leadership approaches most often appearing as the focal theory were transformational leadership, charismatic leadership, strategic leadership, leadership and diversity, participative/shared leadership, and the trait approach to leadership. Based on inductive reflections on our analysis, we make two key observations. First, the 49 focal leadership theories qualify as middle range theories that are ripe for integration. Second, drawing from social network theory, we introduce the term “theoretical neighborhood” to describe the focal theoretical networks. Our graphical inductive analyses reveal potential connections among neighboring middle range leadership theories that merit investigation, and hence identify promising future directions for achieving greater theoretical integration. We provide an online supplement with 10 additional leadership theory graphs and analyses.

Keywords: Leadership, content analysis, network analysis, theory integration

**A NETWORK ANALYSIS OF LEADERSHIP THEORY:
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Theories can be defined as a method for making sense of natural phenomena (Kaplan, 1964); they provide “a statement of relationships between units observed or approximated in the empirical world” (Bacharach, 1989: 498). Theories are useful to researchers because they provide a framework for organizing existing knowledge and offer tentative explanations for the processes through which constructs are related (Kaplan, 1964). The importance of theory can be observed easily within the organizational sciences, and particularly within the leadership field, which has witnessed a proliferation of theories over the last decade. In fact, a recent review of the leadership literature identified 66 separate theories in the published work since 2000 (Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014). On one hand, these findings demonstrate the growing maturity of the field, as extant theories each describe the role of leaders and their influence within modern day organizations. On the other hand, organizational scholars have commented on the lack of integration of leadership theories (Avolio, 2007; Dansereau, Seitz, Chiu, Shaughnessy, & Yammarino, 2013; Eberly, Johnson, Hernandez, & Avolio, 2013; Hernandez, Eberly, Avolio, & Johnson, 2011; Hoffman & Lord, 2013) pointing out that despite the growing sophistication of the field, the number of leadership theories is proliferating, sometimes in a disparate and fragmented way (Glynn & Raffaelli, 2010). We argue that such proliferation makes an already complex topic more difficult to integrate.

As fields of study evolve, they encounter distinct stages that are demarcated by progressively higher levels of construct and theoretical integration. To explain the process whereby scholarly disciplines develop, Reichers and Schneider (1990) proposed a three-stage model of construct evolution. In the first stage of *concept introduction and elaboration*, the

concept is advanced, efforts are made to legitimize it via books and articles, and early data are offered as evidence that the construct is real. In the second stage of *concept evaluation and augmentation*, empirical results come to be viewed as equivocal, critical reviews challenge the validity of the construct's conceptualization and operationalization, and moderators and mediators are advanced to identify underlying mechanisms and boundary conditions. In the final stage of *concept consolidation and accommodation*, a few generally accepted definitions emerge, meta-analytic studies are published, the construct is adopted as a moderator or mediator in more general models within the field, and enthusiasm starts to wane because there is little "new" to discover. James G. Hunt (1999) used this stage model to examine leadership as a field of study and described the various approaches to leadership as interrelated sets of constructs (i.e., theories). A complementary philosophy of science perspective is offered by Shelby Hunt (1983, 2010), who notes that as a theory becomes more "general" and inclusive in describing focal phenomena, a wider array of constructs pertaining to the phenomena are integrated into the theory. Given that these integrative qualities emerge as theories develop, we think it is timely to explore the extent to which leadership theories have achieved such integration. This exploration provides a foundation for further theoretical development.

In a review of the extent leadership literature, Glynn and Raffaelli (2010) observe that instances of "taking stock" of the field are rare, relatively few articles adopt multiple leadership constructs, and there is a general lack of standards by which leadership scholars compare theories. Bass (1981: 26), a highly influential leadership scholar, has commented that "sometimes leadership theory becomes a way of obscuring fact." Commensuration (Stinchcombe, 2002), a process by which scholars standardize construct definitions and integrate theory, is essential for scholarship to produce meaningful findings (Glynn & Raffaelli, 2010).

Yet, in spite of over a century of leadership research, Glynn and Raffaelli (2010) found little commensuration and theoretical consensus. Rather, the leadership literature by and large suffers from compartmentalization, where scholars proceed in almost “campish” ways and “different theoretical perspectives are neither compared nor combined in meaningful ways” (Glynn & Raffaelli, 2010: 390). While the focus on a specific theory or tradition that characterizes theoretical compartmentalization can bring depth, richness, and clarity to the focal theory, it does not help advance a larger more integrative picture of the leadership phenomena that is essential in capturing the complex interplay between leader, follower, and situation. Based on their findings, Glynn and Raffaelli call for a strategy of theoretical integration moving towards “hybrid theories” as a recommendation for leadership scholars to advance the field. They assert that because such hybrids draw from existing complementary and compatible theories, they can provide common ground between leadership scholars with expertise in particular areas.

We define *integration* as research into a leadership theory that relies on, benefits from, or is supported by simultaneous research into other leadership theories. This takes several forms from highly integrative inclusion of other theories as hypothetical antecedents, mediators, or moderators, to a moderate integration through discussion in the theory section (but not part of the formal hypotheses), to less integrative use as control variables. The goal of such integration is to develop a more holistic understanding of the process of leadership. In this article, *we assess how leadership scholars have come to understand leadership by empirically evaluating the extent of theoretical integration, attending to the relationships that have formed among different theoretical perspectives*. We do so through a network analysis of leadership theories published from 2000 - 2013 to provide insight into the connections scholars draw among leadership theories, and hence the degree and nature of contemporary theoretical integration in the field.

This objective is both timely and pressing given the rapid propagation of theories within the leadership field (Dinh et al., 2014; Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010), and the tendency for theories to be developed independently from one another (Molloy, Chadwick, Polyhart, & Wright, 2011). Consolidating knowledge through integrative studies provides a foundation for more effective and unified future research (Glynn & Raffaelli, 2010).

To address our guiding research question, we introduce a novel visual approach, network analysis, for systematically investigating the degree and nature of theoretical integration that currently exists within the leadership field. Specifically, through network analysis, we examine connections between the theoretical perspectives that have been advanced within the field from 2000 to 2013. We define and operationalize a *connection* between two theories to mean the colocation of two theories within the text of the same article, and visually display this with a line between theory nodes in our network graphs. Both the degree of theoretical integration and the nature of such integration constitute key features that distinguish different leadership theories. Such differences are easily seen in visual depictions of leadership theory networks, which emphasize relationships among theories. Although it is perhaps natural for theories to vary in the number of connections they make with other relevant theories based on their developmental history, a lack of integrative studies may become problematic when it reinforces multilevel and interdisciplinary barriers (Alvesson & Sandberg, 2011; Glynn & Raffaelli, 2010; Molloy et al., 2011). Therefore, efforts that evaluate the *connections* (or *relationships*) that have formed (or not yet formed) among different theoretical perspectives are timely. Accordingly, we graph these relationships to show an estimation of the degree and nature of leadership theory integration. We also provide insights for developing more comprehensive and integrative theories.

This work contributes to the leadership literature in several ways. First, the network

analysis provides an approach for examining the rich body of leadership theories that have been investigated over a recent 14 years period (2000 – 2013), including the underlying constellation of interconnections between theories. Traditionally, network analysis has been applied to understand how systems of people (e.g., social network analysis), ideas, and/or objects (e.g., computer network diagrams) interconnect. In the social sciences, this technique is used to understand how the interrelationships among people influence organizational-, team-, and individual-level outcomes (Haythornthwait, 1996; Moliterno & Mahony, 2011; Westaby, Pfaf, & Redding, 2014; Zaheer & Soda, 2009). Social network analysis has been lauded for its ability to visually describe complex relationships among organizational members, concepts, and the outcomes of dynamic relationships (Moliterno & Mahony, 2011; Sytch & Tatarynowicz, 2014). We employ network analysis to investigate how the *interconnections* among theories inform our understanding of specific focal leadership phenomena. Because this type of analysis also provides graphical illustrations that organize data, it also helps to reveal the degree and nature of integration found within and across many theoretical perspectives.

Second, the application of network analysis permitted the use of an inductive approach for understanding the maturity of the leadership field as a whole, based on the degree of interconnections observed among the theories. Inductive approaches are distinguishable from deductive approaches as they are descriptive in nature (Locke, 2007), and are therefore useful for describing the status of the field (e.g., Hiller, DeChurch, Murase, & Doty, 2011). Combining an inductive approach with network analysis provides a simple, but comprehensive analysis that yields insight for how a diverse array of leadership phenomena have been understood. It also indicates where future research can address theoretically meaningful gaps in the literature.

Third, suggestions for developing more integrative leadership theories emerge from

examining the six most interconnected theories identified from our inductive network analysis. By focusing on the most integrative theories in the literature, we offer insight into the field's maturation. This focus also demonstrates how scholars can problematize a field – a stage that is critical for the development of innovative and impactful theories (Alvesson & Sandberg, 2011).

COMPARITIVE ANALYSIS: CURRENT VERSUS PRIOR APPROACHES TO LEADERSHIP THEORY INTEGRATION

To address the problem of construct and theory proliferation, several scholars have advanced integrative conceptual frameworks intended to enhance interpretation and guide future research (e.g., Antonakis & House, 2002; DeRue, Nahrgang, Wellman, & Humphrey, 2011; Fleishman et al., 1991; House, 1996; House & Shamir, 1993; Morgeson, DeRue & Karam, 2010; Mumford, Zaccaro, Harding, Jacobs & Fleishman, 2000; Shamir, House, & Arthur, 1993; Zaccaro & Horn, 2003; Zaccaro & Klimoski, 2001; Zaccaro, Kemp & Bader, 2004). Network analysis shares their integrative objective, but takes a novel, inductive approach to doing so. We summarize recent efforts to integrate leadership theory and explain how our approach differs.

The key features of six recent efforts to integrate leadership frameworks are described in Table 1 of the Online Supplement, which also describes our network approach in the bottom row. The eight meaningful aspects of these prior reviews that can be compared to a network approach include: the method, scope, theories identified, research questions, unit of analysis, proposed organizing theme, theoretical gaps identified, and exemplar theories, though not all reviews were comparable on all aspects. These six frameworks were included because they are representative of prior efforts to integrate leadership theory and are relatively comprehensive in scope. In contrast, with some exceptions (House & Aditya, 1997; Hunt, 1991, 2004; Zaccaro & Horn, 2003), prior integrative efforts focus on a subset of theories, rather than the field as a whole.

Leaders, followers, and context. In a reflective assessment of the first 100 years of leadership research, Avolio (2007) identified key elements that constitute leadership and advanced an integrative framework that would facilitate a more complete approach to its study. Noting that leadership theory has too often been leader-centric, underappreciating the role of followers and context, Avolio identified the five core facets of leadership that theory should consider: a) cognitive elements; b) individual and group behavior; c) the historical context, d) the proximal context; and e) the distal context. Using authentic leadership development theory as an example, he explained how the interrelationships among these facets of leadership can enhance understanding of the emergence, development, and influence of leadership.

Locus and process of leadership. Hernandez, Eberly, Avolio, and Johnson (2011) proposed an integrative leadership framework composed of two continua: a) the locus of the focal leadership activity, that is, where the leadership activity arises (leader, context, followers, collectives, or dyads); and b) the process or mechanism by which leadership influence arises (traits, behaviors, cognitions, or affect). These scholars suggested that a comprehensive leadership theory should attend to all of these sources and mechanisms by which leadership “happens.” Moreover, they applied this framework to categorize 29 extant leadership theories and identified opportunities to integrate leadership theory through the examination of underexplored loci and mechanisms for leadership.

Leadership event cycles. Eberly et al. (2013) extended this framework as they examined how these loci and mechanisms interact through leadership event cycles to generate dynamic leadership processes. They defined an event as an interpersonal interaction that provides a frame of reference for future interpersonal encounters, thereby creating an event cycle (Zahn & Wolf, 1981). For instance, Person A may initiate a behavior that influences the behavior of Person B,

which in turn influences the subsequent behavior of Person A. Eberly et al. (2013: 430) “posit that what gives rise to the phenomenon of leadership is a series of often simultaneous event cycles between multiple loci of leadership... which explains the dynamic nature of leadership.”

Event taxonomy for leadership. Hoffman and Lord (2013) took the emphasis Eberly and colleagues (2013) placed on leadership event cycles a step further by proposing a seven-dimensional taxonomy of events that can be used to explicate dynamic leadership processes. Specifically, they examined “the link of leader behaviors to outcomes at the lower level of events, where adaptive leader responses and their variable influence on subsequent outcomes can be better assessed” (p. 558). This alternative approach moves attention away from the field’s pervasive *person-wholes* perspective that focuses attention on leaders to a *person-parts* level of analysis that focuses attention on within person actions of both leaders and followers across time and/or events. Hoffman and Lord (2013) applied this taxonomy to three existing leadership theories – substitutes for leadership, authentic leadership, and team leadership – to demonstrate its value in explicating the relationships between leadership and performance.

Self-expansion theory and leadership. In contrast to the above approaches that employed categorization schemas to classify leadership theories and identify theoretical gaps that provided opportunities for integration, Dansereau and colleagues (2013) identified self-expansion theory as a fundamental theory about close relationships that can link traditional leadership theories with more contemporary approaches. Specifically, they demonstrated how self-expansion theory, which explicates the psychological processes whereby individuals incorporate others into the self, can be applied to further develop and integrate 19 core leadership theories. For example, they asserted that self-expansion implicitly lies at the core of shared leadership theory; when group members share knowledge and experience, and thereby expand

resources for the group, this facilitates self-expansion for both groups and group members.

Nature of aggregation and leadership. Most recently, Dinh et al. (2014) organized 66 leadership theories by their underlying process, pointing out that more integrative theory would account for the multilevel, dynamic processes involved in leadership. However, they noted that most leadership research tends to be global, emphasizing leadership effects occurring at a single point in time, and at a single level of analysis. To rectify this situation, they propose that greater attention be given to the compositional (characteristics that reflect an aggregation of individual components from a lower to higher level but do not change the fundamental quality or aspect of the focal phenomenon as a result of aggregation) and compilational (characteristics that reflect a fundamental change in the function or qualities of the sub-unit as a result of aggregation from lower to higher levels) forms of leadership emergence, and how they interact within the event, individual, dyad, group and/or organizational levels of analysis.

While each of these integrative frameworks provide promising approaches for identifying both interconnections between and gaps in leadership theories and opportunities for integration, they offer only limited insights into integrative scholarship that has already occurred. Instead, each of the prior approaches impose an *a priori*, deductively derived conceptual framework (e.g., Avolio's (2007) five core facets of leadership; Hernandez, Eberly and colleagues' (2011) loci and mechanisms of leadership; Hoffman and Lord's (2013) seven-dimensional event taxonomy; Dansereau and colleagues (2013) self-expansion theory; Dinh and colleagues (2014) forms of emergence/levels of analysis taxonomy) to examine and pursue theoretical integration. Although such deductive approaches have an important role in the social sciences, hypothetico-deductive methods also tend to restrict investigation to *a priori* theory and discussion to supported hypotheses, ignoring interesting findings that emerge organically (Hambrick, 2007; Locke, 2007;

Spector, Rogelberg, Ryan, Schmitt, & Zedeck, 2014).

Inductive network approach to leadership. Inductive approaches to theory building, such as ours, focus on empirically examining the phenomenon of interest, and allow the theory to emerge as inferences about patterns and relationships are informed by experience (Locke, 2007). Toward this end, the current study picks up where Dinh and colleagues (2014) left off by applying a network analysis approach to empirically explore the interconnections among the leadership theories they identified in the extant literature. We define a *focal leadership theory* as a theory that provides the primary focus for examining (either conceptually or empirically) the leadership phenomenon explored in the article. In contrast, while *supporting theories* complement focal theories in generating an understanding of the leadership phenomenon of interest, they are peripheral to the core focus of the article. In the following sections, we describe our method, data sampling, and criteria for analyzing our results. We then provide a detailed analysis of the top six most integrated leadership theories, focusing on how the field has understood these leadership phenomena, the level of integration achieved, and the conceptual implications for integrative leadership theory and research.

SAMPLE, ARTICLE CODING PROCEDURE, AND ANALYSIS TECHNIQUE

We chose to focus on leadership research from 2000 – 2013 in order to assess the recent work done to integrate leadership theories. Moreover, selecting this time frame enabled us to explore integrative developments that accrued in the wake of House and Adityas' (1997) influential review of the leadership literature. We began with a dataset of leadership articles from 10 journals well known for publishing leadership research that also have high rankings and impact factors among management journals (Online supplement: Table 2), which was used by Dinh et al. (2014). We updated this dataset by searching PsycInfo for “leadership” in the

document in the same 10 journals. We eliminated those articles where a review of the abstract indicated that leadership was not the primary focus of the article and those that were not reporting primary theoretical or empirical research (e.g., book reviews), leaving 864 articles. We began with the same leadership categorization schema as Dinh et al. (2014; see their Appendix), which applied the criteria for theory specified by Bacharach (1989) and combined and expanded the classification schemas developed by Lowe and Gardner (2000) and updated by Gardner et al. (2010). Gardner et al. (2010) provide a detailed description of the development of this theory classification scheme (see pages 934-935 and their Appendix). Next, to further focus our analysis of integrative applications of leadership theory, we employed four key criteria that Dubin (1976) suggested are characteristic of theories to assess the extent to which the 66 theories categories of leadership perspectives used by Dinh et al. (2014) met these criteria for “theory.” Specifically, we examined these theories to determine the extent to which they specified the: 1) *units* for which the focal interactions serve as the subject matter of interest; 2) *laws of interaction* among these units; 3) the *boundaries* within which the theory is expected to hold; and 4) *propositions* regarding the logical relationships of the model components. Only the 49 theories that meet these criteria were included in our analysis (worksheet available as Table 4 in the Online Supplement).

Each article was coded for its *focal leadership phenomenon*, that is, the central leadership phenomenon of interest. Key indicators of such prominence include the theory for which the greatest amount of text was devoted, the theory that assumed a prominent position in theoretical models, and the theory named in the title of the article. In addition to classifying one theory as the focal theory, we also identified the less prominent or supporting leadership theories contained within each article. These *supporting leadership theories* are classified as those used to explain the focal leadership phenomenon by providing alternative and/or additional insights to the focal

theory, such as conceptualizing antecedents, outcomes, or moderators/mediators. Considering its importance, the focal theory category for the present research was coded using a double-blind procedure by the first and third authors with all discrepancies being resolved in order to achieve 100% agreement. The remainder of the research team coded the remaining categories; a random sample of 10% of the coded articles was selected for blind re-coding by a different research team member. Inter-rater reliability agreement was 82.9%. We discussed and resolved differences in coding prior to analysis.

To organize the data, we developed a Microsoft Access 2010 database using Structured Query Language (SQL), which eliminated many challenges inherent in large data entry projects with multiple coders (e.g., inconsistency between coders in nomenclature). In addition to the leadership theory categorization (all theories present in the article) and focal and supporting leadership theories, our database contains: abstract, author, journal name, keywords (if available), title, and year of publication for each article. We found 23 articles that contained three or more theories, but for which no single theory could be considered “focal” and we therefore excluded these articles, because they could not be graphed using our approach described below. These included ten review articles (several of which we discuss above), 11 articles with focal theories outside of our taxonomy, and two articles that were so integrated no clear focal theory existed. Although this left 864 articles relevant to leadership, we focused only on the articles that undertook relatively *extensive integration*; that is, *those including a focal leadership theory along with two or more supporting leadership theories*. Our logic for setting a minimum of three theories for inclusion of an article as being “integrative” is that this appears to be an appropriate threshold for reflecting the type of integration we are seeking to explore. A lower threshold of only two theories does not reflect the type of “interrelatedness” and connection of theoretical

perspectives that the term integration implies. Moreover, from a practical perspective, the graphical depiction of such an inclusive set of studies would be extremely difficult to interpret, and would be unlikely to provide meaningful insights regarding the types of theories that tend to be incorporated into particular theoretical perspectives. This approach limited the sample to 293 articles as follows: *Academy of Management Journal* (20); *Academy of Management Review* (5); *Administrative Science Quarterly* (7); *American Psychologist* (4); *Journal of Applied Psychology* (42); *Journal of Management* (6); *Organizational Behavior & Human Decision Processes* (14); *Organizational Science* (4); *Personnel Psychology* (16); and *The Leadership Quarterly* (173).

The top six most frequently adopted focal theories were selected to serve as illustrative examples for examining the degree and nature of integration through network analysis (see Online Supplement: Table 3 for a summary of the number of articles that employed each of these 49 theories as the focal theory.) Our rationale for selecting these top six is that they clearly hold a prominent place in the field, based on the frequency of adoption, and hence they are more extensively connected with supporting theories – i.e., they were the most integrative theories.

To create the theory networks, we used the graphical network analysis software, Cytoscape (Shannon et al., 2003), to visually analyze and organize leadership theories based on their relationships with other theories. In these figures, each node represents a theory. The node size represents the number of connections with other theories in the network (that is, the degree of the node); the larger the node, the more integrated the theory represented by that node is with other theories in the network (and therefore more important in describing the focal phenomena in relation to other supporting theories). Focal theories had the largest node size and were located centrally in the network. In addition, the edges (i.e., lines) connecting the nodes indicate the theories that have been integrated together in the included sample. Thicker lines indicate more

frequent connections in the underlying sample of articles. The distance (i.e., “degree of separation”) among nodes was specified using an edge-weighted algorithm which organized the nodes based on the extent that nodes were integrated with adjoining nodes (Cline et al., 2007). This represents importance in the network by showing combined co-occurrence. Together, these aspects represent a reliance on or relationship with connected theories – closer nodes with thicker lines are more often connected in our sample. This produced six networks, each with different spatial configurations based on the pattern of ties connecting each of the nodes. In order to simplify the graphs, we shortened theory names (See Online Supplement: Table 3) and removed links with a weight equal to one (i.e., one article solely accounting for the connection).

RESULTS

Summary of Findings

An examination of our sample of 293 articles with three or more leadership theories shows that the scope of interrelated work within the leadership field is quite extensive, with the research independently proceeding in a total of 49 unique directions since 2000; that is, these 293 articles contained some combination of 3 or more of these 49 leadership theories. Thus, leadership scholars are pursuing a diverse array of topics in a related way. However, our analyses revealed few articles integrating 3 or more theories within any one theory domain (see Online Supplement: Table 3), indicating a need to extend such work.

In the following sections, we describe the six theoretical perspectives that emerged as the focal leadership constructs most often within empirical and theoretical leadership articles that contained 3 or more theories. These included: a) charismatic leadership; b) transformational leadership; c) strategic leadership; d) leadership and diversity; e) participative/shared leadership; and f) trait approaches to leadership. To facilitate our discussion of each of these theories and to

explain how the figures map to our conclusions, we have organized each section to address three key issues. First, we provide a general description of each focal theoretical phenomenon. Second, we examine the supporting theories that are commonly linked to the focal theory and the insights they offer. Last, we point out supporting theories missing from the focal network.

Charismatic Leadership

Charismatic leadership draws its name from the Greek word *charisma*, meaning “divine gift” (Weber, 1947). While there are several formulations of charismatic leadership, the concept overall is one of the most often researched leadership theories (Dinh et al., 2014). Given the theoretical linkages of transformational leadership with charismatic leadership, it is not surprising to find it present in the network. However, what is surprising is that these theories are often discussed interchangeably and yet, as we see (Figure 1), they are in fact not depicted as equivalent by either the most integrative of charismatic or transformational leadership studies.

Theories that frequently co-occur with charismatic leadership are shown with thicker lines and a short distance from the charismatic leadership node in Figure 1a. These supporting theories explain the origins, processes and impact of charismatic leadership by drawing from the trait, cognitive (attribution theory, leader and follower cognitions, romance of leadership), relational (leader-member exchange, followership, relational), and power/influence/politics leadership approaches. These four broad foci are not surprising, given that charismatic leaders apply their unique personal assets to exert influence by challenging followers’ minds and hearts through an inspirational vision coupled with dynamic behaviors that invoke strong reactions (House, 1977; House & Shamir, 1993). However, our analysis reveals that charismatic leadership theory and research has also explored the role of contextual influences, as is apparent from the connections with the contextual theories of leadership (Osborn, Hunt, & Jauch, 2002), and to a

lesser extent, leadership within teams and decision groups. The node size of followership, leader and follower cognitions, attribution theory, and, to a lesser extent, information processing in the network reflects their importance to charismatic theory. Unlike some leadership models, charisma is in essence a “higher order” perception made up of smaller perceptions of leaders’ traits, behaviors, and how they interact with the situation (Conger & Kanungo, 1987). Followers impart charisma to their leader, sometimes even “romanticizing” the leader (Meindl, 1990), as evidenced by the central placement of that leadership theory in the charismatic network. Given the importance of Shamir, House, and Arthur’s (1993) self-concept based charismatic theory, which builds on social identity theory (Tajfel & Turner, 1986) and identity and identification process theories (McCall & Simmons, 1978), it is somewhat unexpected that leadership theories that apply these constructs fall on the periphery of the network and exhibit very small node sizes. Similarly, the lack of interconnections between social identity, identity and identification processes, followership, and social networks are surprising. Implicit leadership theories – the idea that leadership and often charisma are more readily attributed to persons who behave as expected of leaders (Offerman, Kennedy & Wirtz, 1994) – are also missing. Self-sacrifice is another leadership behavior relevant and absent from the network. Recent integrative charismatic leadership research seems to have set aside integrative tests of fundamental tenants of charismatic leadership theory. Social network approaches to charismatic leadership offer a new perspective for exploring these tenants through assessments of intergroup attributes and the processes whereby an emerging charismatic leader achieves charismatic attributions (e.g., Galvin, Balkundi, & Waldman, 2010).

The distal placement of public leadership and the absence of strategic leadership suggest that organizational scholars continue to recognize that this form of leadership is not limited to

public office holders, CEO's, or top management team members, but rather can be found throughout organizations (Bass, 1985). Nevertheless, the absence of strategic leadership from the network indicates that scholars are not extensively pursuing integrative research on charismatic leadership at this level of the organization. Also, notably absent from our findings are integrative studies with cross-cultural topics – an area for future research noted by Mhatre and Riggio (2014) and relevant because charisma is not attributed uniformly throughout the world (Bass, 2008). Diversity related topics, especially with regard to women leaders, are notably absent.

Insert Figure 1 about here

Transformational Leadership

The domain of transformational leadership (Bass, 1998), although retaining the notion of charisma, as exemplified by its prominent place in the network (Figure 1b), extends beyond the charismatic research tradition from which it developed. Integrative transformational leadership research has apparently diverged but not entirely departed from its roots. While there are several conceptions of transformational leadership, the four-component model of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration dominates the literature (Bass, 1998; Bass & Avolio, 1994; Mhatre & Riggio, 2014). Transformational leadership has captured the most attention among leadership theories from researchers for decades (Dinh et al., 2014; Gardner et al., 2010). Transactional leadership features prominently in the network, signifying that researchers are still interested in distinguishing these behaviors from transformational leadership, and are now doing so in an integrative way. Indeed, these two forms of leadership are compatible, with transactional serving as the foundation for

transformational behaviors (Bass, 1985, 2008).

The central connections in the transformational leadership network involve trait theory, and a cluster of leader and follower cognitions with leadership in teams. These results suggest that transformational leadership researchers have not abandoned the age-old question of “what traits make someone a good leader?” Indeed, the connections between the trait, implicit, and transformational leadership approaches suggest that the qualities that contribute to leadership, as well as perceptions of leadership, remain an ongoing area of interest within the transformational paradigm. However, the clustering of cognitions and teams research suggests that these inquiries have been combined with modern and timely questions related to how transformational leaders are recognized by and impact followers alone and in groups.

Transformational leaders, in theory, dramatically impact followers and change how they see and interpret the world (Bass, 1985, 1998). The linkages with and between relational leadership, followership theory, cognitions, and leadership in teams suggest that while there has been a great deal of research examining how leaders transform followers, research seems to now acknowledge the reciprocity inherent in the leader-follower relationship – a heretofore lacuna in transformational leadership research (Mhatre & Riggio, 2014). Given the emerging focus on followers in the leadership literature (Uhl-Bien, Riggio, Lowe, & Carsten, 2014), it seems that researchers interested in this often-studied theory are pursuing it in light of modern research questions, suggesting that transformational leadership theory will remain at the forefront of leadership research for some time to come – despite calls to abandon it (van Knippenberg & Sitkin, 2013). The central role of leadership in teams in the network is perhaps a response to House’s (1999) call for research into team-focused transformational leadership. The appearance of identity and identification processes and social identity leadership theories constitute an

unexpected finding because, unlike charismatic leadership, identification is not the primary mechanism whereby transformational leaders are expected to influence followers. Instead, the leader's shared vision of a mutually desirable future serves as the primary source for idealized influence (Bass, 1998).

Contextual leadership theories, though not as heavily integrated as traits, cognitions, transactional theories and leadership in teams (as reflected by the smaller node), are still strongly related to transformational leadership. Most likely, the modest number of integrative studies is due to the inherent difficulties involved in capturing complex contextual features in a research design. Where contextual leadership integrates, it does so with these aforementioned heavily integrated theories (i.e., cognitions, transactional, and teams.) Transformational researchers have therefore been pursuing research into leadership within the context of team dynamics throughout all levels of the organization. This is apparent from the presence of, but more distal placement of, strategic leadership as compared to the central position of leadership in teams more generally. Substitutes for leadership theory (Kerr & Jermier, 1978) is present and connected to followership, signifying an interest in follower attributes as boundary conditions for transformational leadership.

There are some interesting absences from the transformational leadership network, namely, leadership and diversity as well as destructive leadership. While gender differences in transformational leadership have been frequently researched (Eagly, Johannesen-Schmidt, & van Engen, 2003), our findings suggest that this line of inquiry has not branched out to integrate additional leadership theories. The "dark side" of transformational leadership or "pseudo-transformational" leadership (Bass & Steidlmeier, 1999), a phenomena that prompted interest in authentic leadership (Avolio & Gardner, 2005), is a concept that has not apparently been

integrated into transformational leadership research in a comprehensive way. The presence of ethical leadership at the periphery of the network shows interest in the converse of “pseudo-transformational” leadership – authentic transformational leadership. Though transformational leadership arose from interest in public leadership (Burns, 1978), this concept is absent from the network, suggesting that integrative analysis of transformational leadership in this context has not been at the forefront of researchers’ more recent interests. Finally, cross-cultural research, leadership emergence, and leadership development are also noticeably missing. This is surprising considering transformational leadership’s global dominance within the leadership field.

Strategic Leadership

Strategic leadership refers to a leader’s ability to “anticipate, envision, maintain flexibility, think strategically, and work with others to initiate changes” (Ireland & Hitt, 2005: 63); these are skills that facilitate an organization’s capacity to adapt to rapid environmental changes (Arrfelt, Wisemank, & Hult, 2013). Hence, strategic leadership is focused on “leadership of” organizations, as opposed to “leadership in” organizations (Boal & Hooijberg, 2001). Research in this area focuses on the highest levels of organizational leadership (e.g., CEO, top management teams). Supporting Avolio’s (2007) prediction of integration potential, strategic leadership is integrated with macro, meso, and micro level theories. This approach reflects the largest quantity of perspectives as reflected by the greater density and complexity of the network (Figure 2a), and the highest quantity of integrated theories (20 supporting theories). Such network density/complexity is not surprising in light of the complexity of forming strategic decisions within highly uncertain organizational environments (Arrfelt et al., 2013).

Strategic leadership research is similar to, yet fundamentally different from leadership at lower levels of an organization. Indeed, researchers have discovered that leadership at the top

levels differs in five fundamental ways. Specifically, upper echelon leaders: 1) set organizational strategy; 2) engage in more boundary spanning activities; 3) create organizational structures and policies (versus work within them); 4) indirectly affect lower level leaders through hiring practices, etc.; and 5) serve a symbolic role, especially in large organizations where they are “public people,” a role that is lacking for lower level leaders (Hiller & Beauchesne, 2014). An examination of the network (Figure 2a) shows that transformational leadership is a central feature, indicating that this form of leadership is the most often studied theory – perhaps due to the origins of transformational leadership as a “public” leadership theory, focusing on executives from the political realm (Burns, 1978). However, integrative strategic research is not limited to this domain, as transactional, trait, situational, charismatic, and leader-member exchange theories are also present in the network. This breadth suggests that rather than a specific “executive leadership” theory with its own dimensions and scales, this stream of research relies heavily on other leadership areas and adapts those principles to the unique aspects of leadership at the executive level. Perhaps this is why strategic leadership shows the most integration.

The strategic leadership network depicted in Figure 2a reflects a cluster that integrates information processing and decision-making, cognitions, and contextual theories, but omits followership. Hence, research into leadership at the strategic level is focused on leaders’ responding, adapting, and interacting more with organizational units, as shown by the strong link to team leadership, and the broader context, rather than individual followers. This cluster reflects the top leaders’ role in key decision-making on behalf of the organization (e.g., corporate strategy). Situational leadership and leadership flexibility are supporting theories for this cluster, suggesting that researchers are interested in how top level leaders adapt to address situational contingencies and organizational stakeholder expectations. Interpersonal, rather than

intrapersonal processes appear to hold a much greater role for understanding strategic leadership. Researchers seem most concerned with how: a) strategic leaders behave, exercise influence, and reward and punish; b) distribute and/or share leadership activities/responsibilities; and c) think about organizational and environmental challenges. These leadership phenomena are implicated by multilevel processes, as leaders influence, and are influenced by, an evolving social-relational context to create innovation and change within complex organizational systems. Finally, the presence of traits and romance of leadership suggest that researchers have not lost sight of the traits necessary for success at the top organizational levels (Peterson, Walumbwa, Byron, & Myrowitz, 2009), nor potential infatuation with such a leader (Meindl, 1990).

Absent from this network are a host of recent entries into the leadership literature (e.g., ethical, authentic, and servant leadership; Avolio & Gardner, 2005; Brown & Trevino, 2006; Liden, Wayne, Liao, & Meuser, 2014). A contrasting form of leadership, destructive leadership (Einarsen, Aasland, & Skogstad, 2007) is likewise absent. Leadership emergence is also omitted, perhaps because leaders selected for these top positions have already “emerged” before having the necessary prerequisites for such a role. Part of a top leader’s role is to set direction and drive corporate culture. Absent from the network, however, are the identity and identification processes that unfold to bind or distance organizational members based upon the nature of the leader’s mission and strategic choices. Finally, given the overlap between entrepreneurial concerns for strategy and organizational formation, the absence of entrepreneurial leadership theory suggests an opportunity to extend integrative strategic leadership research into the early stages of organizational formation. Connections between leadership in teams, participative leadership, and power/influence suggest that strategic researchers are interested in the complex question of how strategic leaders share/delegate their influence to and within teams.

Insert Figure 2 about here

Leadership and Diversity Theories

The globalization of modern organizations has brought forth new challenges in leadership, particularly as workforces have become demographically diverse, spanning national boundaries. These include the underrepresentation of women and ethnic minorities in leadership roles. In fact, despite the dramatic influx of women in the labor workforce, recent estimates indicate that a mere 16.9% of Fortune 500 organizations are helmed by female executive officers (Catalyst, 2013), with fewer women of color holding executive board seats (3.2%). This disparity has attracted the attention of leadership scholars interested in factors that obstruct the attainment of leadership by women and ethnic minorities (e.g., Heilman & Haynes, 2005), even though women are at least as “good” at leadership as men (Eagly, Johannesen-Schmidt, & van Engen, 2003). Though we set out to include racial differences in this category, we found that all articles in our sample focused on gender diversity. Similar to strategic leadership research, which draws on a variety of theoretical paradigms to explicate a specific leadership context, the presence (or absence) of women versus men in leadership roles represents yet another specific leadership context for this stream of research.

Extant integrated research on leadership and diversity has focused predominantly on the processes that impact the attribution of leadership to women, as reflected by the presence of trait theory, leadership attribution theories, implicit leadership theory, and leadership and followership cognitions (Figure 2b). This follows from an investigation of gender role theory and role congruity theory (Eagly & Karau, 2002). Given the theoretical overlap between these

theories and implicit leadership (Offerman et al., 1994), it is surprising that implicit leadership does not feature even more prominently in the network. Transformational leadership and traits also feature prominently, suggesting that women leaders' enactment of transformational leadership and trait differences and similarities with men are of significant interest to gender and leadership researchers. Transactional and leader-member exchange likewise appear, but only peripherally and disjointedly from each other and transformational leadership, suggesting that gender diversity researchers have not compared and contrasted various leadership models. This omission exists not only with respect to how women versus men engage in these forms of leadership, but also in regard to their respective effectiveness in using them. The absence of emerging leadership theories (e.g., ethical, destructive) further demonstrates this void. The influence of the social-relational context has received some attention, as shown by the inclusion of identity and identity process theories, leader-member exchange, leadership and teams, and cross-cultural leadership. However, integrative applications of these theories remains limited, while there is curious absence of research on social networks and how relational resources may impact the emergence of women to positions of power. Also less central to research on leadership and diversity are theories such as charismatic, transactional leadership, adaptive, strategic, and public. The peripheral location of these theories suggests that the dominant stream of research in this leadership domain remains focused on exploring "why," "when," and "how" women are perceived as leaders (Eagly & Carli, 2007). Emerging leadership perspectives (e.g., ethical leadership) are ripe for inclusion in the diversity (gender) and leadership category. Finally, there is a need for integration of racial diversity into this theory, which is critical to understand the "double jeopardy" encountered by female minorities (Rossette & Livingston, 2012).

Shared / Participative / Delegation / Empowerment Leadership Theories

Shared leadership refers to a form of leadership that is distributed and shared among multiple participating individuals, rather than being produced by a single individual (Carson, Tesluk, & Marrone, 2007; Pearce & Conger, 2002). We include in this category theories that focus on delegation, participative, and empowering leadership behaviors in order to examine a broader phenomenon, that is, how leaders share/distribute authority, influence, and responsibility. Early insights into the circumstances under which leaders should delegate decision making responsibility to a group versus retaining it was provided by Vroom, Yetton and Jago's leadership participation model (Vroom & Jago, 1988; Vroom & Yetton, 1973), and some integrative work using that model has continued (Vroom & Jago, 2007). In the last decade, research on shared leadership, delegation, empowerment, and participative decision groups has grown dramatically – a trend that parallels the increased use of teams in organizational contexts (Davison, Hollenbeck, Barnes, Slesman, & Ilgen, 2012; Kozlowski, Gully, Nason, & Smith, 1999). Compared to traditional hierarchical forms of leadership, these leadership structures allow different members of a team to assume leadership and/or responsibility as tasks and contexts vary (Morgeson, 2005). This is advantageous to organizations operating within complex and turbulent environments, as it provides team members and executive decision makers with greater access to the social capital and material resources needed to adapt their strategies to changing contexts, thereby enabling greater organizational flexibility and performance (Devine, Clayton, Philips, Dunford, & Melner, 1999; Hackman, 1992).

Leadership scholars have been interested in understanding shared leadership from dynamic, relational perspectives, which include leadership emergence, leader-member exchange processes, relational leadership, social network approaches, and leadership and teams (Figure 3a). The importance of these themes can be seen by their central clustering and node size in the

network. The study of these shared/delegated leadership styles is nearly synonymous with the investigation of leadership in teams, which suggests that researchers are primarily interested in how this form of leadership is enacted within the context of team dynamics. Additionally, a focus on leadership development is suggested by its presence within the network, as well as that of leadership skills and competence and leadership emergence theories. Leadership scholars have also attended to the cognitive micro-processes that may facilitate shared leadership. Notably absent are traditional leadership theories, such as charismatic, transformational, transactional, and trait theories, which emphasize more stable types of leadership structures. Also absent are complexity theory (Uhl-Bien & Marion, 2009) and information processing theories, which seems to be a lacuna given that context and an ongoing evaluation thereof influences how these forms of participative/shared leadership are (successfully) enacted (Vroom & Jago, 1988). Finally, the absence of E-leadership (Avolio, Kahai & Dodge, 2000) and cross-cultural leadership (House, Hanges, Javidan, Dorfman, & Gupta, 2004) is problematic, given the salience of these topics to today's distributed workforce.

Insert Figure 3 about here

Trait Theories/Perspectives

Trait theory is the oldest of the modern leadership approaches, beginning with social scientists' desire to discover hereditary traits that predict leadership (Galton & Eysenck, 1869) and the Great Person theory (Carlyle, 1841). Researchers were interested in defining the set of personality traits that predisposed one to successful leadership. Stogdill's (1948) influential review concluded that the trait approach had failed to produce a consistent set of traits that

predicted leadership emergence and effectiveness, motivating subsequent studies into the behavioral approaches (e.g., Stogdill, 1963), and effectively shutting down advancement in the area of traits in favor of these new approaches (Judge, Bono, Ilies, & Gerhardt, 2002). Even as recently as 1991, Zaccaro, Foti, and Kenny wrote, “trait explanations of leader emergence are generally regarded with little esteem” (p. 308). More recently, researchers have renewed interest in leader traits in part due to better personality assessment and meta-analytic research tools; trait research has again resumed a forefront position in the interest of researchers (Dinh et al., 2014), second only to transformational leadership since the turn of the millennium. Researchers have conducted meta-analytic investigations of traits and leadership (e.g., Eagly et al., 2003; Judge et al., 2002), as well as meta-analytic integrations of traits and behavioral approaches (DeRue, Nahrgang, Wellman, & Humphrey, 2011), transformational and transactional leadership (Bono & Judge, 2004), and leader-member exchange (Dulebohn, Boomer, Liden, Brouer, & Ferris, 2012).

In our network analysis, trait theory is connected (Figure 3b) most prominently with cognitions, and clusters with transformational and charismatic leadership, suggesting that researchers have viewed these commonly researched leadership styles similarly when exploring their relations to leader traits. The inclusion of implicit leadership (Offerman et al., 1994) and relational leadership (Uhl-Bien, 2006) in this cluster suggests that researchers are attentive to follower expectations for leader traits, as well as how leaders with certain traits provide order to the social systems. It is interesting that followership theory (Carsten, Uhl-Bien, West, Patera, & McGregor, 2010) is not likewise connected, suggesting an avenue of growth for this research stream. The prominent node sizes of contextual and relational leadership reveal that scholars are interested in integrating these with trait research, suggesting that the orientation of trait researchers has advanced beyond finding the “one best set” of traits, to a more holistic contextual

view incorporating situational variables. The skills approach (Mumford et al., 2000) is likewise present, suggesting an incorporation of who the leader “is” with what the leader can and has learned. Leaders emerge because of traits, but also because of skills relevant to the position. The connection between leadership development and leadership skills, coupled with the lack of connection with these two and leadership emergence (Smith & Foti, 1998), suggest that trait researchers have not investigated how a combination of traits and skills can be developed to aid in leader emergence (perhaps limiting focus to effectiveness).

Social identity and identification processes suggest that leadership in groups emerges in part due to characteristics of the emergent individual that match with follower/group member prototypes of group ideals (Hogg, 2001), and this congruence provides the emergent leader with influence. However, none of these theories are connected with each other, though they are strongly present in the network (i.e., large node size). This suggests that trait researchers have yet to combine the ideas of the social identity theory of leadership, implicit leadership, emergence, and influence in strongly coherent tests. Further, given the importance of these ideas for the attribution of charisma to a leader, it is notable that connections between charismatic leadership, social identity and identification processes, emergence, and traits are absent.

While some researchers have investigated the “dark side” of personality (e.g., Resick, Whitman, Weingarden, & Hiller, 2009) with regard to leadership, destructive leadership is absent from the trait network, suggesting that, as DeRue et al. (2011) comment, researchers have yet to fully integrate the breadth of traits with the fullness of leadership behaviors and orientations. While certainly some meta-analytic integration work has been accomplished, as noted above, newly emerging theories (e.g., ethical leadership) have yet to be integrated with trait research in a substantial way. Finally, the absence of cross-cultural leadership and leadership and diversity

from this network suggests that these areas are ripe for integration with trait theories.

DISCUSSION AND FUTURE RESEARCH

Although there is a fair degree of overlap between leadership approaches that are studied in isolation and also investigated along with other theories, this is not the case for all frequently studied leadership approaches. Specifically, charismatic, transformational, and strategic theories were shown to be frequently studied in Dinh et al.'s (2014) review and were also dominant in the current article as the focal leadership theories in studies that integrated two or more supporting theories. Other theories among the most studied as identified by Dinh and colleagues (2014), including leader-member exchange, team leadership, systems approaches, and leader emergence approaches were *not* identified in the current investigation as being focal approaches in many studies that integrate three or more leadership theories. It is possible that theories that are heavily studied as focal theories in integrated research are more conducive to being investigated at multiple levels of analysis, making them more suitable for integration with a wider range of other theories. For example, charismatic, transformational and strategic leadership are clearly relevant at the organizational level of analysis given that common outcomes of these approaches reside at the organizational level in such variables as organizational effectiveness. But these leadership approaches also affect teams and individuals in the organization. For example, the individual consideration displayed by transformational leaders may enhance individual-level attitudes and behaviors, but also influence teams in the form of variables such as team potency. On the other hand, approaches such as leader-member exchange are much more focused on individual level outcomes only, such as work behaviors, job satisfaction, and withdrawal behaviors. Similarly, team leadership is pertinent mainly at the team level.

Suggestions for Future Research: A Question of Parsimony

In contrast to the generally held belief that there is little integration in the leadership literature and the claims to that effect made by Glynn and Raffaelli (2010), our review clearly shows that researchers have made substantial efforts toward integrating leadership theories in their research. In fact, far more of the leadership articles published in the top 10 journals included more than one theory (617; 71.41% of the articles in our data set) than those that focused on only one theory (227). Even extensive efforts at integration, defined as the integration of three or more leadership theories were quite prevalent with 293 articles (33.91%). These extensive integration efforts cut across many leadership approaches, rather than being restricted to a small subset of theories. It seems that integrated studies in the leadership literature may be more common than had heretofore been recognized. Nevertheless, our analysis also suggests that within the realm of any single theory, the integration of supporting theories is still in its infancy.

Because our review is descriptive in nature, it is not clear to what extent integrating theory helps to explain key workplace outcomes. In future research, we suggest that meta-analytic techniques be used to test competing combinations of leadership approaches as they relate directly to antecedents and outcomes of leadership and as mediators of relationships between the antecedents and consequences of leadership. With such an approach, single leadership approaches could be compared against each other, but also different combinations of leadership approaches could be evaluated against other single theories and other combinations of theories. This might help to answer questions such as, “Are certain combinations better in predicting some outcomes than others?” Assessing combinations of theories might also reveal theories that do not contribute incremental variance in explaining outcomes. Such theories might be candidates for abandonment to achieve greater parsimony.

We also recommend exploring contextual variables that may determine when certain

combinations of leadership approaches are more salient than others. Given that we did not find a dominant set of leadership theories that have been combined in extant studies, there may not be sufficient degrees of freedom to conduct such analyses at present. However, with the steady growth of research that integrates multiple leadership approaches, use of meta-analysis to evaluate combinations of leadership theories may be possible in the near future.

The startling finding that 49 different leadership approaches were identified in studies published in the top ten journals raises the question, “How many leadership approaches are necessary to cover the full domain of leadership?” It is unlikely that 49 approaches are needed. In fact, as Marvin Dunnette (1966) argued 50 years ago, redundant constructs violate the parsimony principle of scientific research, and thus thwart progress toward understanding phenomena of interest. It is through integrative and comparative programs of research, such as those focused on leadership reviewed here, that the wheat can be separated from the chaff. Culling the vast array of leadership theories is essential if we are to achieve parsimony.

One way to introduce greater parsimony in leadership research is for researchers to engage in thorough literature reviews before introducing new leadership theories. Researchers must assess the degree to which the domain of the proposed theory overlaps with existing theory. In addition to literature reviews, the assessment process can be enhanced by engaging in the first steps of scale development: critical incident interviews and content analysis. If interview respondents and content experts do not provide support for a new theoretical perspective, the approach might be dropped. Perhaps rather than introducing a new leadership approach, it is only necessary to identify moderators that explain the contextual boundaries of existing theories.

If a new approach seems to show promise after a thorough literature review, critical incident interviews and content analysis, research testing the new approach should incorporate

alternative hypotheses (Platt, 1964) involving competing leadership approaches and combinations of approaches so that the central processes of leadership can be identified. The task at hand is formidable given that only a subset of the 49 leadership approaches can be assessed in a single study. Thus, an ambitious program of research designed to allow key theories to rise to the surface and unnecessary ones to sink to the bottom (i.e., theoretical pruning; Leavitt, Mitchell, & Peterson, 2010), is critical for better leadership understanding.

Beyond additive approaches, an even greater degree of integration might be accomplished with approaches in which the fabric of each theory is interwoven to create a unique theory, rather than just the summation of several parts of two or more theories. For example, the differentiation of interpersonal relationships that characterizes leader-member exchange (Dulebohn et al., 2012) could be fused with the servant leadership theory focus on developing each followers' unique potential (Liden et al., 2014), by building theory on how leaders differentiate between followers in bringing out the full potential in each. Such integration would represent a new theoretical perspective as opposed to the simple summation of features.

Additionally, the field is often driven by methods. For example, transformational leadership research coalesced around one specific measurement tool, and when this happens measurement can define theory and limit theoretical development (van Knippenberg & Stitkin, 2013). Similarly, a focus on meta-analysis as the predominant form of literature review may limit integration because meta-analyses' focus is on estimating effects of stable leadership factors and generalizing to an underlying population. Meta-analyses typically include only a few moderating factors due to sample size requirements, and thus limit comprehensive integration.

On the other hand, network analysis as a theory development approach supports different social and methodological determinants of science. It emphasizes the relational aspects of theory

and is thereby inclusive rather than exclusive. Exploring the multiple central relations identified in Figures 1-3 also should encourage flexible, integrative methodologies rather than emphasizing constructs tied to specific questionnaires. The challenge for future research is to develop “umbrella constructs” that can subsume groups of nodes shown in these figures while also offering insight regarding the meaning and processes linking groups of nodes.

Suggestions for Future Research: Theoretical Neighborhoods as Integration Guidelines

Glynn and Raffaelli note that we have few standards by which theories can be synthesized and integrated and suggest that theory advancement requires researchers to “preach beyond their own choir” (2010:394). Yet, knowing one should reach beyond their own “camp,” does not instruct one regarding where to go. Our network graphs provide just such instruction, and provide a picture of the beginning of standards of integration surrounding focal theories. While the discussion of our results point out important lacuna in each individual network, our network graphs expose even more complex opportunities for integration.

The social network literature provides insight as to how further integration can be achieved using our network graphs, specifically in the social network constructs of “ego networks” and “neighborhoods” (Hanneman & Riddle, 2001: 357). Here, an “ego” corresponds to an individual “focal” node, such as a person, group, organization or whole society; a “neighborhood consists of ego and all nodes to whom ego has a direct connection. Importantly, the neighborhood includes all of the ties among all of the actors to whom ego has a connection.” In our analysis, we find it informative to view the focal theories displayed in Figures 1 - 3 as the ego, and the integrated middle range theories (Pinder & Moore, 1979, 1980) that exist within the focal theory’s network as its neighborhood. Hence, the relationships depicted in Figures 1 - 3 can be conceived of as reflecting the “theoretical neighborhoods” for which the focal leadership

theories occupy a central location. Note that the construct of a theoretical neighborhood is related to but distinct from the construct of a nomological network (Cronbach & Meehl, 1955). The latter includes the theoretical framework that identifies the focal constructs, the empirical framework that specifies how these constructs are operationalized, and the linkages among and between these constructs. In contrast, we define and operationalize the term *theoretical neighborhood* as the network of theories that have been integrated with the focal (or ego) theory. The implications of our graphical depictions of theoretical neighborhoods become clear: theories that occupy the same neighborhood are ripe for integration. While some of this potential has already been realized, as is apparent from the connections between the focal and supporting theories reflected by the theoretical networks, great opportunities remain for further exploration of the interrelationships within these networks. As such, scholars who conduct research within a particular theoretical neighborhood should strive to “get to know their neighbors.”

Moreover, just as it can be rewarding to forge relationships among neighbors who are not well acquainted, we believe efforts to promote the connections among leadership theories that share the same neighborhood, but are not well integrated, constitute particularly fruitful avenues for future research. While the content domain is too complex and diverse to ever produce a meaningful grand theory of leadership, an appreciation of theoretical neighborhoods may instead produce a more fully integrated set of focal middle range theories, and thereby reduce the fragmentation that currently plagues the field. Hence, our network figures depict theoretical neighborhoods that provide clear roadmaps for future leadership theory building and empirical research. Indeed, the resulting set of integrated focal middle range theories can be compared to a quilt, where unique and precious patches of fabric are ultimately woven together to produce an integrated whole.

To illustrate this potential, we revisit the theoretical neighborhood for transformational leadership depicted by Figure 1b. Previously we discussed how transformational leadership theory had strong linkages with some theories (e.g., trait, transactional, leader and follower cognitions, leadership in teams), while other theories had peripheral relationships (e.g., strategic leadership) or were absent (e.g., leadership and diversity, destructive leadership) from its network. Certainly, the integration of conceptually relevant theories that are currently absent from the transformational theory neighborhood provides promising avenues for research. Less obvious, however, are opportunities to pursue integration among supporting theories that reside within its neighborhood, but are not yet integrated with one another. For instance, in addition to occupying a peripheral position within the transformational leadership network, leader-member exchange theory is completely disconnected from its “neighbors”. Hence efforts to integrate leader-member exchange theory with other theories in the transformational leadership neighborhood may be particularly informative. For example, the connections between leader-member exchange, identity/identification processes, and social identity theories of leadership with transformational leadership merit exploration. Indeed, a viable proposition suggested by the intersection of these theories is that followers will identify strongly with leaders who possess prototypical attributes (Hogg, 2001) and congruent values (Shamir, 1994), thereby fostering high quality leader-member exchange relationships (Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997), and enabling leaders to exercise transformational influence (Kark & Shamir, 2002).

While an exhaustive delineation of such propositions is beyond the scope of this manuscript, this example illustrates the insights that the theoretical neighborhoods we have identified can provide by suggesting promising opportunities for integrating leadership theory.

We urge scholars familiar with the featured middle-range theories to explore the potential for enhancing their research by pursuing the opportunities for further integration elucidated by our work. Toward this end, additional theoretical neighborhoods for leadership in teams and decision groups, ethical leadership, leader and follower cognitions, leadership emergence, leadership development, emotions and leadership, implicit leadership, leader-member exchange, authentic leadership and identity and identification process theory of leadership are available as an on-line resource (LINK). Due to space limitations, we are unable to provide our own in-depth analysis of these neighborhoods here, but we do so in the Online Supplement. We hope that making these figures and analyses available on-line will stimulate integrative research into a wider array of leadership theories beyond those we formally analyzed.

Concepts and measures available through network analysis suggest other potentially fruitful avenues for future research (Hanneman & Riddle, 2011). For instance, clustering approaches can use nearest or farthest neighbor algorithms, yielding chainlike or more tightly related clusters, respectively. If tighter clusters of theories were shown to reflect higher levels of integration, one implication would be that theorists should go beyond pursuing linkages with the nearest neighbors, to promote linkages with the entire theoretical neighborhood. However, often researchers only know their nearest neighbors well. One advantage of our graphic approach is that it identifies one's entire neighborhood, and may prompt more inclusive theorizing if one becomes acquainted with more distant neighbors.

Another advantage of our graphical approach is that it can be used to represent the direction of relationships. For example, the distinctions between in, out, and reciprocal neighborhoods could be used to advance theory. While most analyses of ego networks depict symmetrical relationships that reveal the presence or absence of connections, it is also possible to

depict ego neighborhoods that reflect the direction of the linkage. An *out neighborhood* would include theories for which ties are directed *from* the focal (ego) theory; an *in neighborhood* would include all theories that form ties directed at the focal (ego) theory. It is also possible to define a neighborhood that is limited to theories that have reciprocal ties with the focal theory.

Strengths and Weaknesses

Our network analysis research strategy has several strengths: a dataset containing a large body of leadership literature, an extensive and broad literature search technique, and the use of double blind coding of the focal theories. Our handling of the data is also a strength: the use of an Access database that restricts entry to predefined categories so that articles do not “slip through the cracks” through improper coding; it also provides a quick way to combine the data for analysis to answer a variety of questions quickly – a tool that proved necessary as we proceeded with our inductive analysis. Inductive analysis also was a strength, as it addressed the fundamental question “what’s out there” in terms of integrative leadership research. Finally, graphical representations offered a viable technique for interpreting underlying patterns across a vast set of research investigations.

As with any quantitative review, we are limited by the data extant in the literature. Here, while it is an important finding in and of itself, we note that the body of work that integrates three or more theories represents a minority of leadership articles (293 of 864, or 33.91%), and these were not centered on a small body of leadership theories, but rather spread across 49 theories (42 of which were focal in one or more of the studies; Online Supplement Table 3). Among the articles that did include multiple leadership theories, there was substantial variability in the degree to which the theories were integrated. For example, at the low end of the integration spectrum, some research focused on one leadership theory and the only integrative

research was achieved by statistically controlling for the effects of other leadership approaches. Conversely, the high end of the integration spectrum involved different leadership approaches included in theoretical models and in the formation of hypotheses. We did not attempt to differentiate between articles based upon the degree or nature of theoretical integration because of small sample size. Likewise, our use of a numerical cutoff (3+ theories) for categorizing an article as representative of theoretical integration is also a weakness, and it notably excludes articles that do weave two theories together. Also, in some cases, theories have been subsumed under later theories (e.g., charismatic into transformational). Our coding reflects when authors expressly used the precursor theory/research stream in their hypothesizing/theorizing, but not when the reliance is implicit and unspecified by the researcher(s). In sum, given that only 33.91% of the articles integrated three or more theories, combined with the variability in the degree and nature of integrative research, it is clear that integrative work in the leadership literature is in its infancy, limiting our conclusions.

Conclusion

Scholars have lamented the lack of integrative research within the leadership literature. Our analysis shows that, while some meaningful work has been done, this kind of inquiry is in its infancy and spread across the majority of leadership theories, with only a few key topics receiving sufficient attention for inclusion in our analysis. Hence, in this regard, we concur with Glynn and Rafaelli (2010) that by and large, scholars seem focused on theories central to their investigations, without considering how that theory functions in concert with other leadership topics. In other words, they operate like new residents, who are minimally acquainted with their neighbors. More deliberate attention to a wider taxonomy of leadership during study design and execution promises to advance the field of leadership by providing simultaneous contributions to

more areas of concern for leadership scholars than is presently common. This research will yield data necessary to address a growing need for leadership theory parsimony. Moreover, our network analyses identify potential connections among the supporting middle range and focal leadership theories that reside within the same theoretical neighborhood, and thereby provide a roadmap for future theoretical integration.

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Figure 1
Network Analysis Interrelating Leadership Theories for Understanding (a) Charismatic and (b) Transformational Leadership based on Theoretical and Empirical Articles.

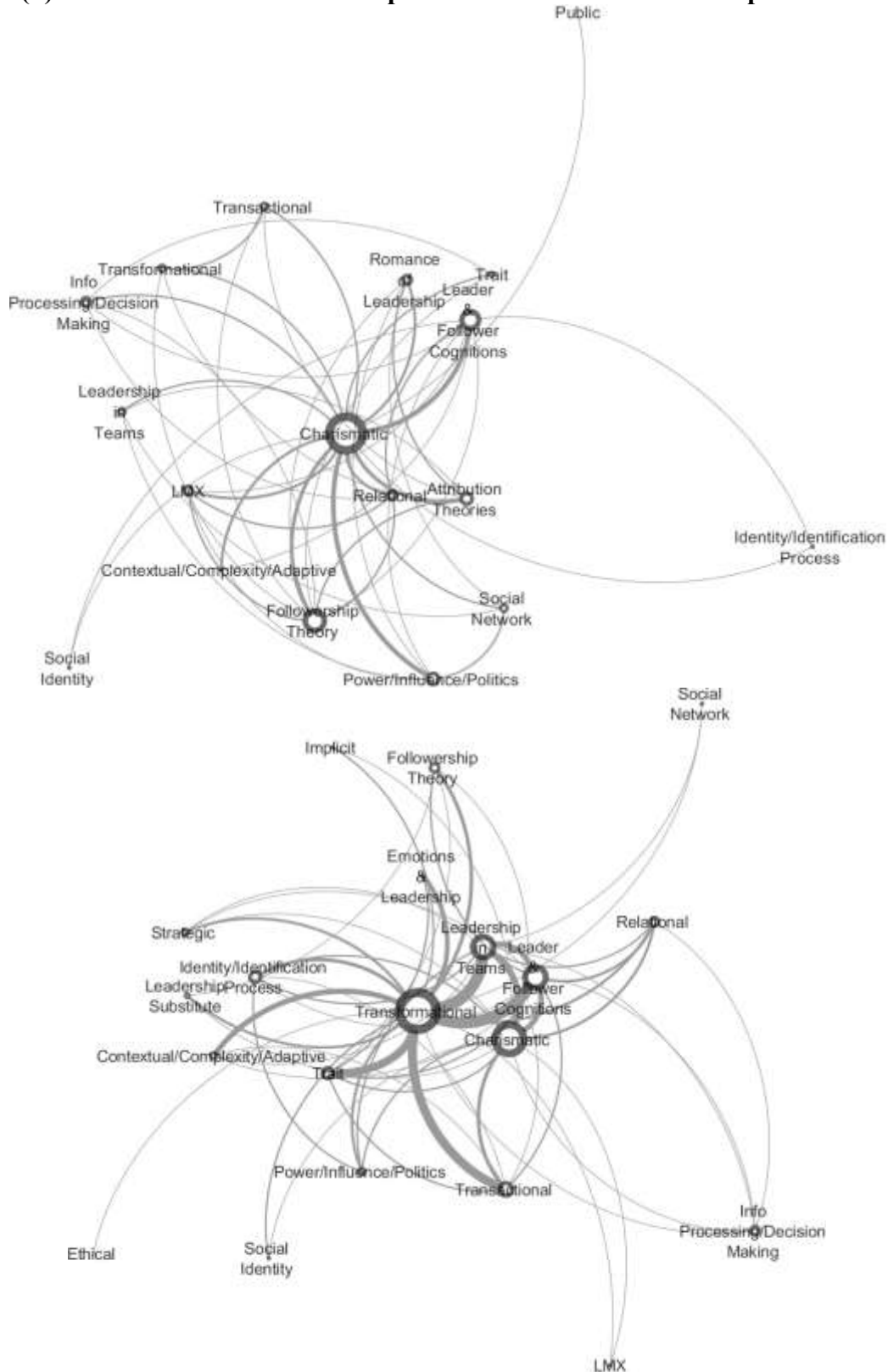


Figure 2
Network Analysis Interrelating Leadership Theories for Understanding (a) Strategic Leadership and (b) Leadership & Diversity based on Theoretical and Empirical Articles.

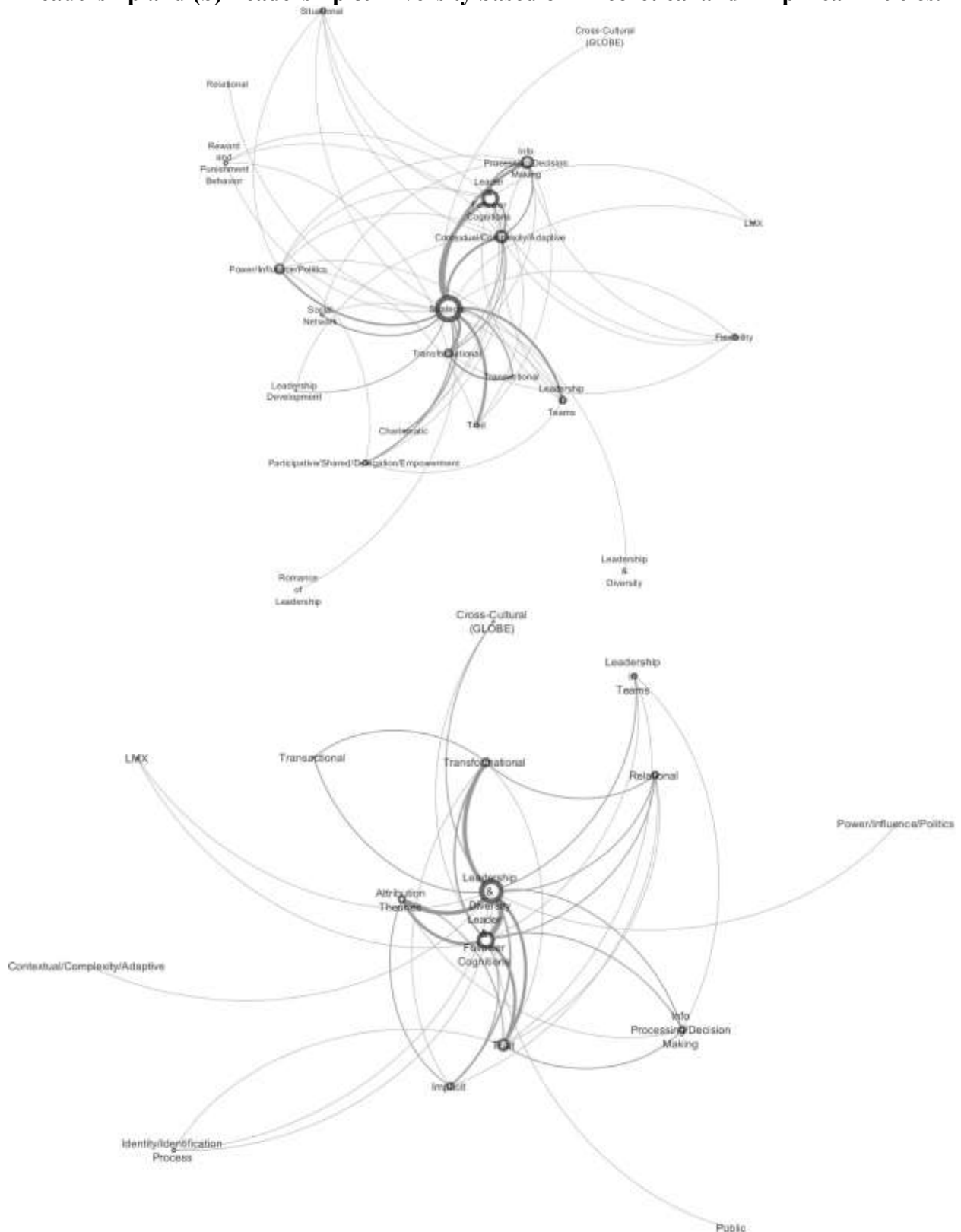


Figure 3
Network Analysis Interrelating Leadership Theories for Understanding (a) Participative/Shared Leadership and (b) Trait Leadership based on Theoretical and Empirical Articles.

