2014

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The Leadership Quarterly 25 (2014) 449–467

Contents lists available at ScienceDirect

The Leadership Quarterly

journal homepage: www.elsevier.com/locate/leaqua

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ARTICLE INFO

Article history:
Received 6 April 2011
Received in revised form 28 October 2013
Accepted 29 October 2013
Available online 19 December 2013

Editor: John Antonakis

Keywords:
Collective leadership
Military leadership
Historiometric methods
Leadership in teams
Leadership in networks

ABSTRACT

Many of the prevailing approaches to understanding leadership assume that leadership operates as an individual-level phenomenon, in which one person takes on the role of a leader. However, a number of recently developed leadership models now describe leadership as a shared process. These collectivistic theories present leadership as a dynamic process in which a leader may selectively utilize the skills of followers and distribute elements of the leadership role among these followers as the situation demands. In this study, we conduct an investigation into the viability of core elements of the collectivistic theories through a historiometric analysis of events from the career of a notable leader, George C. Marshall. One hundred and two events from Marshall's career were identified from historical biographies and were then content coded and analyzed with regard to the components of a collectivistic leadership model. The results of this historiometric analysis indicated that there are key antecedents to collectivistic leadership and that the use of this form of leadership can result in positive team outcomes.

1. Introduction

> "When 9/11 came, 46 year-old Brigadier General McChrystal sees a whole new world. First, the things that are obvious, that you're familiar with: the environment changed — the speed, the scrutiny, the sensitivity of everything now is so fast, sometimes it evolves faster than people have time to really reflect on it. […] It also produced something which I call an inversion of expertise, because we had so many changes at the lower levels in technology and tactics and whatnot, that suddenly the things that we grew up doing wasn't what the force was doing anymore. So how does a leader stay credible and legitimate when they haven't done what the people you are leading are doing? And it's a brand new leadership challenge. And it forced me to become a lot more transparent, a lot more willing to listen, a lot more willing to be reverse-mentored…"
>
> [Retired General Stanley McChrystal]

☆ Note: This material is based upon work partially-supported by the U.S. Army Research Institute under contract no. W91WAW-09-C-0090. The statements and opinions expressed in this article do not necessarily reflect the position or the policy of the U.S. Army and no official endorsement should be inferred.
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1048-9843/$ – see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.leaqua.2013.10.012

The concept of leadership has been traditionally defined and studied as a phenomenon centering on a single person in a single role — the leader (Hunter, Bedell-Avers, & Mumford, 2007). While this idea of an individual in a well-defined role has been popular in the world of research, it may be an oversimplification to view leadership as solely an individual-level phenomenon. Leadership, in reality, occurs as a dynamic multi-level process in which the leadership role may be taken on by multiple individuals and passed between a formal leader and a team working with this leader (Dansereau, Yammarino, & Kohles, 1998; Day, Gronn, & Salas, 2004; Gronn, 2002; Yammarino, Dionne, Chun, & Dansereau, 2005). In fact, as indicated in the quote above from Retired General Stanley McChrystal's (2011) TED Talk entitled "Listen, learn… then lead," it is becoming imperative in many organizations that leaders shift their perspective on the role they play — from authoritarian commander to a facilitator and integrator of diverse expertise. Just as the post-9/11 problems General McChrystal faced increased in their dynamism and complexity, so do the problems teams and larger collective structures face in other organizations. And, as it did for the General, it may often benefit leader and team performance to empower those within the team to assume a leadership role when their expertise is the most relevant (Carmeli & Schaubroeck, 2006; Hauschildt & Kirchmann, 2001; Howell & Boies, 2004).

In light of this growing need, a number of leadership scholars have proposed theories conceptualizing leadership in this way (e.g., Gronn, 2002; Pearce & Sims, 2002), and several recent review pieces have examined the current state and potential future directions of the field of "collectivistic" approaches to leadership (Contractor, DeChurch, Carson, Carter, & Keegan, 2012; Yammarino, Salas, Serban, Shirreffs, & Shuffler, 2012). Although many of these theories speak to a similar theme – that the leadership role can and should be shared with followers under certain conditions, they take slightly different approaches and use different labels for it – shared leadership (Carson, Tesluk, & Marrone, 2007; Pearce & Conger, 2003), distributed leadership (Gronn, 2002), participative leadership (House, 1996), and empowerment (Mathieu, Gilson, & Ruddy, 2006). Each of these research areas has begun to build in their own niches, with irregular attempts to integrate the findings. A recent effort by Friedrich, Vessey, Schuelke, Ruark, and Mumford (2009), however, took an integrative approach to the literature and incorporated concepts and findings from these related areas into their collective leadership model and took a step toward laying out the nomological network of this area of research (Mumford, Friedrich, Vessey, & Ruark, 2012).

In a recent review, Yammarino et al. (2012), collectively refer to theories in which there are "multiple individuals assuming (and perhaps divesting themselves) of leadership roles over time in both formal and informal relationships" as "collectivistic" theories of leadership. Although this article, and others, point to this shared foundation among the many related theories, there has been few attempts to integrate their constructs and test the overall phenomenon. Although there is some evidence from existing research that this aggregate concept of "collectivistic" leadership may have a positive impact within organizations (e.g., Carmeli & Schaubroeck, 2006; Hauschildt & Kirchmann, 2001), there is little research that tests the relationships between key components shared by these theories. Our goal in this study was to examine the viability of several core elements – those which were the core antecedents and processes seen most across the collectivistic theories – and also provide added value in testing relationships that have yet to receive much attention in the collectivistic approaches (e.g., communication and collectivistic leadership).

Toward these goals, we conducted a case analysis on 102 leadership events drawn from the career of an eminent leader, General George C. Marshall. General Marshall was chosen for a number of reasons that not only provided a rich source of material to evaluate, but also allowed us to shed light on an individual that played an important role in shaping the modern U.S. Army. Marshall had a long and distinguished career in the United States government, taking on multiple leadership positions, most notably Army Chief of Staff, Secretary of Defense, and Secretary of State. General Marshall was also the recipient of the Nobel Peace Prize in 1953 for his work to stabilize Europe following WWII, including his significant contribution via the Marshall Plan.

General Marshall has been the focus of several in-depth biographies and his long career and multiple positions resulted in rich source material for our study. Additionally, he is a military leader that has maintained high levels of regard from historians, military personnel, and leadership scholars alike (Clarcq, DeMartino, & Palanski, 2011), and we felt examining his behaviors would be a useful study of effective leadership. Most importantly, his approach to leadership has been recognized as one that promoted delegation and autonomy of subordinates and respect for the opinions and expertise of those within his team (Clarcq et al., 2011). Thus, examining leadership as executed by Marshall in these cases, with regard to collectivistic leadership actions, may provide us with evidence of which components of these models have the greatest influence on leader, team, and organizational outcomes. Before turning to a discussion of the specific model being tested, we will first review the collectivistic theories that informed the core constructs and relationships tested in the proposed model.

1.1. Models of collectivistic leadership

The focus of leadership research has traditionally been the individual leader and, sometimes, the direct interactions between leaders and followers. However, a growing number of leadership scholars are now viewing leadership as a collectivistic phenomenon in which the leadership role is taken on, both formally and informally, by multiple individuals over time (Contractor et al., 2012; Yammarino et al., 2012). Beyond the leadership role, relationships between leaders and others can occur both formally and informally across multiple different levels. For example, formal leadership may occur in large and small teams, dyads, departments, networks, and multi-team systems. Informal leadership might involve a leader's personal network, including those both within and outside an organization, as well as the networks of his or her followers. These multi-level leadership relationships and roles are not seen as static, but instead are dynamic systems that change over time based on situational demands.

The collectivistic theories of leadership that have been developed thus far include team and multi-team system leadership, leadership networks, shared leadership, distributed leadership, complexity leadership, and collective leadership (see Yammarino et al., 2012). These approaches to leadership share a number of common features. They are not primarily leader-centric ways of

viewing the phenomenon of leadership, involve leadership at multiple levels beyond just small teams and dyads, generally involve behaviors and skills beyond those typically studied in leadership research, account for both formal and informal aspects of leadership, and tend to describe leadership as a dynamic process that changes over time (Yammarino et al., 2012). We turn, now, to a brief review of each of these extant theories.

Team leadership (e.g., Burke, DiazGranados, & Salas, 2011; Day et al., 2004; Morgeson, DeRue, & Karam, 2010; Zaccaro, Rittman, & Marks, 2001) is an approach to leadership based on a team's shared mental model. Specifically, Day et al. (2004) propose that rather than only being an input to team processes, leadership, at least partially, is an emergent result of team processes. The collective contribution to the emergence and enactment of leadership by members of the team is the collectivistic aspect of this theory. Network theory and analysis (Balkundi & Harrison, 2006; Balkundi & Kilduff, 2005; Brass, 1984; Brass, Galaskiewicz, Greve, & Tsai, 2004) views leadership in the context of a social system. This approach to understanding leadership underlies two important assumptions of collectivistic leadership — that individuals must be aware of and access the expertise of those within their networks, and that networks serve as important formal and informal pathways for communication that leads to the distribution of the leadership role.

In shared and distributed leadership (e.g., Carson et al., 2007; Gronn, 2002; Pearce & Conger, 2003; Pearce, Manz, & Sims, 2008), leadership is conceptualized as a responsibility shared among multiple team members. The team in shared leadership is defined fairly broadly and can be either a formal or informal team, and may occur across multiple levels, but most often involves those that report directly to the leader. The shared and distributed leadership theories propose that decisions made by the team are not the result of a single leader, but rather the result of the collective actions of the team. This tie between decisions and the team means that leadership is inextricably tied to social system dynamics (Gronn, 2002). Complexity leadership (e.g., Marion & Uhl-Bien, 2001; Uhl-Bien & Marion, 2009; Uhl-Bien, Marion, & McKelvey, 2007) is a non-linear approach to leadership which considers leadership across a number of dimensions and interactions occurring over time. Complexity leadership theory views leadership from a relational perspective (Uhl-Bien, 2006), with leadership viewed as a social influence process through which coordination and change occur. Complexity leadership theory views relationships as an outcome of the leadership process as well as a context in which leadership actions occur.

Friedrich et al. (2009) reviewed the literature on the collectivistic theories summarized above and others that might be useful for understanding its antecedents and outcomes. They found that there were common themes and conclusions across the types of theories discussed earlier in this section, and ultimately defined collective leadership as a process in which a leader, or group of leaders, distributes the leadership role, or components of the leadership role, to others based on the skills and expertise required in the situation (Friedrich et al., 2009). The collective leadership model, while similar in some ways to the other collectivistic leadership theories that it draws from, has a number of distinct contributions. First, and foremost, the framework is an integrative model of the existing collective leadership theories. It not only includes key elements of the other theories, but also examines the relationship between them to better understand how they all contribute to the collectivistic phenomenon. Second, in comparison to the other collectivistic approaches, the collective leadership framework elaborates the increased importance of leader cognition within the social context (Mumford et al., 2012). Third, it operates under the assumption that collectivistic approaches do not obviate the need for a single, focal leader.

It should be pointed out that references to "collective leadership" refer to this specific theory, while "collectivistic" refers to the broader body of research that includes the other theories mentioned previously and reviewed in Yammarino et al. (2012). We now develop a model of what we believe to be the key components and relationships that underlie this body of research. We will also present hypotheses of how these components may ultimately contribute to team (and larger collective structures) performance and outcomes.

1.2. A model of collectivistic leadership, critical antecedents and team performance outcomes

1.2.1. General overview

Given that the collective leadership model, discussed briefly above, is an integration of several of the other collectivistic models, we chose to focus on a simplified version that includes the core constructs and processes of the other collectivistic leadership theories. Specifically, to ensure the most added value to the collectivistic leadership literature, we focused on conceptualizing and testing collectivistic actions that bridged across theories, while isolating relationships that were integrative between the theories.

At the core of the collectivistic theories are actions that involve the formal or informal distribution of the leadership role (Yammarino et al., 2012). For the proposed model, we have isolated key variables within these theories that encompass that process of a formal leader, and/or the leaders that emerge, solving a problem collectively. These include not only an explicit distribution of power through empowerment (Mathieu et al., 2006) and delegation (Klein, Ziegert, Knight, & Xiao, 2006; Leana, 1986), but also a more subtle distribution of power through giving team members a voice (Carson et al., 2007), and building a trusting exchange relationship between the leader and followers (Graen & Uhl-Bien, 1995). We propose that these collectivistic actions will be positively related to team performance and outcomes. Additionally, we outline three critical antecedents to collectivistic actions — leader skills, a developed network, and effective communication. Although there are a number of other antecedents that may impact the emergence of collectivistic actions (e.g., affective climate, having a clear mission), these three were chosen not only for the central role they play in several of the collectivistic theories, but also because there is a lack of empirical research demonstrating connections between several of the constructs.

The distribution of the leadership role at the right time to the right people is highly dependent on having a leader that has the skills and competencies to do so. Collectivistic leadership is a cognitively demanding activity, likely requiring intelligence, creativity, expertise and the ability to understand the perspectives of others, in order to effectively read the social network around

them (Mumford et al., 2012). Additionally, in order to effectively distribute the leadership role based on expertise, the leader and team must have a well-developed network. A well-developed network means that, not only are the members connected, but they are familiar with one another's available expertise and consistently engage in information gathering within the network. Finally, in order for the network to be effectively utilized and the leadership role to be both overtly and subtly shared, the leader and team must have effective communication systems — for giving directions, building relationships through empathy, and gathering feedback. This also includes having well-established communication norms. Below we have a summary of our proposed model followed by a more detailed description of the constructs and hypothesized relationships.

1.2.2. Collectivistic actions, team performance, and team outcomes

Though little empirical research has been done, some initial conclusions with regard to collectivistic actions, team performance, and outcomes can be drawn from the extant work on shared and distributed leadership, collaboration, top management teams, and research and development teams (Carmeli & Schaubroeck, 2006; Hauschildt & Kirchmann, 2001; Hiller, Day, & Vance, 2006; Pearce & Sims, 2002). The research on Team and Multi-Team System Based Leadership provides insight on the way in which team processes and team performance capabilities are the mechanism by which collectivistic actions lead to positive team outcomes. In the proposed model presented above, we have combined core variables from this literature into the "team performance" construct — these include team coordination, cohesion, shared situational awareness, decision acceptance by the team, and collective efficacy. These variables were selected because they had the strongest theoretical and empirical ties to both collectivistic leadership actions and desired outcomes (see Friedrich et al., 2009; Yammarino et al., 2012).

It should be noted that these variables, unto themselves, can be viewed as a positive outcome of collectivistic actions — an increased team capacity. However, they also serve as the pathway by which collectivistic actions lead to positive team outcomes. These team performance variables are made up of initial team-level outcomes that result in a team, or members of a team, being better able to successfully engage in problem-solving (Cohen & Bailey, 1997; Day et al., 2004; Gronn, 2002).

In a field study along these lines, Spreitzer, Cohen, and Ledford (1999) evaluated self-managing work teams and found that structuring elements within the team, such as team coordination, expertise, and stability, were related to the effectiveness of the teams. Similarly, Hiller et al. (2006) conducted a field study on the collective emergence of leadership and found that sharing of the planning and organizing responsibilities, providing support to teammates, and engaging in mentoring within the team, were positively related to supervisor-rated team effectiveness. Additionally, a study by Taggar and Ellis (2007) suggests that promoting collaboration norms within a team can lead to improved problem solving. Finally, a recent study by Im, Montoya, and Workman (2013) evaluated internal and external antecedents to team creativity and found that interpersonal coordination and willingness to share ideas (which they termed "social cohesion") were predictive of the team's creative output. Based on the extant findings regarding these team performance processes, and their relationship to team outcomes, we make the following hypothesis:

Hypothesis 1. Team performance (coordination, shared situational awareness, decision acceptance, collective efficacy and cohesion) will be positively related to desired outcomes (solving the problem, solution creativity, solution quality and increased efficiency).

Additionally, a number of studies indicate that the distribution of the leadership role, or collectivistic leadership actions, is positively related to a team's performance, and ultimately problem outcomes. Pearce and Sims (2002), for example, demonstrated that distribution of the leadership role was a significant predictor of team effectiveness. Along similar lines, Carmeli and Schaubroeck (2006) found that having multiple individuals serving in a leadership capacity, with a high level of behavioral integration, generated higher quality solutions. This second study specifically demonstrates the ties between collectivistic actions (multiple individuals serving in a leadership capacity), team performance (behavioral integration), and outcomes (higher quality solutions).

Unlike the Carmeli and Schaubroeck (2006) study, fewer studies evaluate the mechanism that connects collectivistic actions and the ultimate team outcomes. However, several studies have demonstrated a relationship between collectivistic actions and team performance, from which we can infer improved team outcomes. For instance, Boies and Howell (2006) conducted a field study of 35 teams in the Canadian Forces. They found that high mean LMX scores, which would imply the presence of trusting relationships between the leader and the team members, were positively related to team potency, or collective efficacy. Carson et al. (2007) found that the degree to which leadership was shared was positively related to team members expressing a shared purpose, social support and voice. Along similar lines, Korsgaard, Schweiger, and Sapienza (1995) found that giving team members the opportunity to voice ideas leads to greater decision acceptance among the team. Based on the available research demonstrating a link between sharing the leadership role and team performance, and the effects of team performance on team outcomes, we propose the following hypothesis.

Hypothesis 2. Collectivistic actions within the team (empowerment, delegation, voice and trust behaviors) will be positively related to team performance (coordination, shared situational awareness, decision acceptance, collective efficacy and cohesion).

1.2.3. Antecedents of collectivistic actions

1.2.3.1. Leader skills and abilities. Leader skills and abilities are those competencies that a leader may possess at the individual level that may affect leader, team, and organizational performance. Whether the leadership role is more formal or informal, there are certain skills and abilities associated with effective leadership, in general. For example, intelligence, creativity, emotion regulation, and wisdom have all been shown to be related to leader performance (Kickul & Newman, 2000; Mumford, Zaccaro,

Harding, Jacobs, & Fleishman, 2000; Pirola-Merlo, Härtel, Mann, & Hirst, 2002). With regard to collectivistic leadership, it is important that the leader possesses not only both interpersonal skills and abilities, such as network awareness and perspective taking (Balkundi & Kilduff, 2005; Mumford et al., 2000; Pirola-Merlo et al., 2002), but also skills and abilities that contribute directly to problem-solving, such as intelligence, expertise and creativity (Mumford et al., 2000). If collective leadership involves the accurate reading of a social network to effectively distribute the leadership role and solve a problem (see Friedrich et al., 2009; Yammarino et al., 2012), then the focal leader must rely on both social cognition and problem-solving skills in tandem. Zaccaro, Gilbert, Thor, and Mumford's (1991) review of leader social intelligence, behavioral flexibility and effectiveness suggests that a leader's ability to accurately perceive the organizational problem and social context (social perceptiveness), and be flexible in their response to it given situational constraints (including possibly divesting the leadership role), will ultimately be related to their effectiveness. Along related lines, Mumford, Scott, Gaddis, and Strange (2002) propose that leaders of creative teams – those tasked with solving complex, novel problems – will be most successful if they are creative themselves and have expertise in the problem domain. However, they make the caveat that in modern organizations, problems may require varied expertise, and effective leaders will be able to delegate the leadership role to those with the most relevant experience.

Although there is limited empirical evidence, we believe that the extant theoretical work on leader skills and collectivistic actions suggests that this mix of skills and abilities will underlie the leader's capacity for collectivistic actions.

Hypothesis 3. A leader's possession of both social and problem-solving skills and abilities (intelligence, creativity, expertise, and perspective taking) will be positively related to the use of collectivistic leadership actions (empowerment, delegation, voice and trust behaviors).

1.2.3.2. Developed network. Much of the research on network leadership theory focuses on the leader, and how characteristics of the network impact the emergence and decisions of the single, focal leader — an issue pointed out in a recent commentary by Carter and DeChurch (2012). In the present model, we propose that the presence of a well-developed network is necessary for the emergence and success of collectivistic leadership. The "developed network" construct consists of variables that indicate that members of the team are not only connected, but also aware of one another's knowledge and skills, share their knowledge and skills through information gathering, and that the leader acts as a connector to other networks through boundary spanning (Balkundi & Kilduff, 2005; Borgatti & Foster, 2003; Mehra, Dixon, Brass, & Robertson, 2006; Sparrowe & Liden, 2005). The criticality of connections and interactions within networks to the enactment of collective leadership is highlighted by two recent articles by Carter and DeChurch (2012) and Contractor et al. (2012) who demonstrated that evaluating network interactions can be used to show that collectivistic leadership is present, and, in fact, the network may actually be the collectivistic leadership.

In addition, a qualitative study by Klein et al. (2006) in which the behaviors within extreme action medical teams were examined, suggests that when team members understand one another's skills and ability to assume roles, particularly when the leader possesses this information, they are better able to rapidly delegate the leadership role and quickly respond in complex, novel situations. Given that the teams examined were highly skilled and made up of specialists, it provides particularly important insight into how collectivistic leadership emerges through selectively delegating the leadership role to the member with the most relevant expertise. Based on the existing research of network effects on leader emergence and performance, and collective performance in particular, we make the following hypothesis.

Hypothesis 4. The development of a team's network (interconnectedness, familiarity, information gathering behaviors, and leader boundary spanning) will be positively related to the use of collectivistic leadership actions (empowerment, delegation, voice and trust behaviors).

1.2.3.3. Effective communication. In order for collectivistic leadership actions to occur, the leader and team must engage in communication with one another. Communication is the movement of information throughout a network and is a prerequisite for members' understanding where critical knowledge and expertise exist in the network, where problems are, and is critical to a collection of individuals operating under a shared understanding of the group's goals (Mayfield & Mayfield, 2007; Mumford & Hunter, 2005). Communications from a leader to followers can have a significant influence on group processes related to collectivistic leadership. Two critical forms of top-down communication, direction-giving language and empathetic language, may influence followers' ability and motivation to engage in collectivistic leadership (Mayfield & Mayfield, 2007). Importantly, each type of communication can lead to different effects on the team. Direction-giving language is used to clarify expectations and goals, and empathetic language is used to demonstrate compassion and emotion (Mayfield & Mayfield, 2007). Direction-giving language is important to collectivistic leadership, because it is important that team members have a shared awareness of the situation to work collaboratively on complex problems (Mumford & Hunter, 2005). Empathetic language, on the other hand, is important for perspective taking and building a trusting relationship that will allow collective leadership to emerge. The empirical findings on the relationship between communication and collectivistic approaches are scarce, however Kramer and Crespy (2011) recently stated in their review of communication and collaborative leadership, that leaders "become curators of talent who motivate group members to action rather than givers of directives and orders (pp. 1025)."

In addition to the two top-down forms of communication discussed above, it is important to have two-way communication, or feedback exchange, in order for the leader to know when to engage in collective leadership. Regarding the initial quote from General McChrystal, if he was not open to receiving feedback and being "reverse-mentored", he would not have been able to

engage in collective leadership and capitalize on the skills of his younger subordinates. Establishing communication norms goes hand in hand with this. In order for team members to offer feedback and exchange information, there must be clear norms within the team that that is valued. This is also evident in a letter written from General Marshall to Dwight Eisenhower that is included in the sample leadership event provided in Fig. 2. This sample event will be discussed further in the Method section. Based on the extant research on communication and leadership, and collective leadership in particular we make the following final hypothesis:

Hypothesis 5. Effective communication within a team (direction-giving language, empathetic language, feedback exchange, and communication norms) will be positively related to the use of collectivistic leadership actions (empowerment, delegation, voice and trust behaviors).

2. Method

2.1. Historiometric case-study method

To test this leadership model, a historiometric case analysis approach was applied. A historiometric study is one in which hypotheses about human behavior are tested using quantitative analysis of historical records concerning notable individuals (Ligon, Harris, & Hunter, 2012; Simonton, 1990). The historiometric method has proven to be an important one for studying outstanding leadership as it allows access to data on high-level leaders, data which may be difficult or impossible to gather with any other method (Ligon et al., 2012; Simonton, 1999). This is particularly important in this case in which we are examining a new leadership model which may only manifest under very specific circumstances and with high-level leaders. This particular issue drove the decision to focus on secondary (biography) sources in this effort, as identifying the number of leadership events needed for quantitative analysis of the leadership model using primary sources would be particularly difficult. Additionally, this method allows for indirect examination of complex, and difficult to identify leadership and team constructs by measuring the expression of these constructs in behavior. Examining constructs as they are expressed in the situation is critical when the situation plays a significant role in determining which leadership and team processes occur (Antonakis, Avolio, & Sivasubramaniam, 2003; Simonton, 2003).

Finally, this method allows for the study of eminent or notable leaders, a difficult proposition using most other methods for leadership study (Simonton, 1999). The historiometric method also allows us to study multiple instances of leadership from a single notable leader, rather than studying multiple leaders (Simonton, 1980). This approach of investigating one notable leader in multiple, complex situations also permitted us to "control for the leader" so to speak and to focus primarily on numerous leadership instances (cases), in which he/she was involved.

2.2. George C. Marshall

George Catlett Marshall is considered by many to be one of the greatest military leaders of the 20th century (Bland, 1988) and perhaps one of the most effective high-profile leaders overall in the last century (Clarcq et al., 2011; Pogue, 1973). During World War I, Marshall held positions as an operations planner both in the Philippines, a notoriously difficult environment, and on the European front. At the conclusion of World War I, Marshall moved into a number of staff positions for the Army, including working as an aide for General Pershing, teaching at the Army War College, and taking the position of commanding officer at Fort Screven. He was then promoted to command at the Vancouver Army Barracks before finally being promoted to General and being placed in the position of Army Chief of Staff in 1939. Marshall remained the Army Chief of Staff until the end of World War II. At the conclusion of World War II, Marshall was appointed to the position of Secretary of State. He held this position until 1949 when he left the position due to health issues. In 1950 Marshall was appointed Secretary of Defense. He held this position for one year

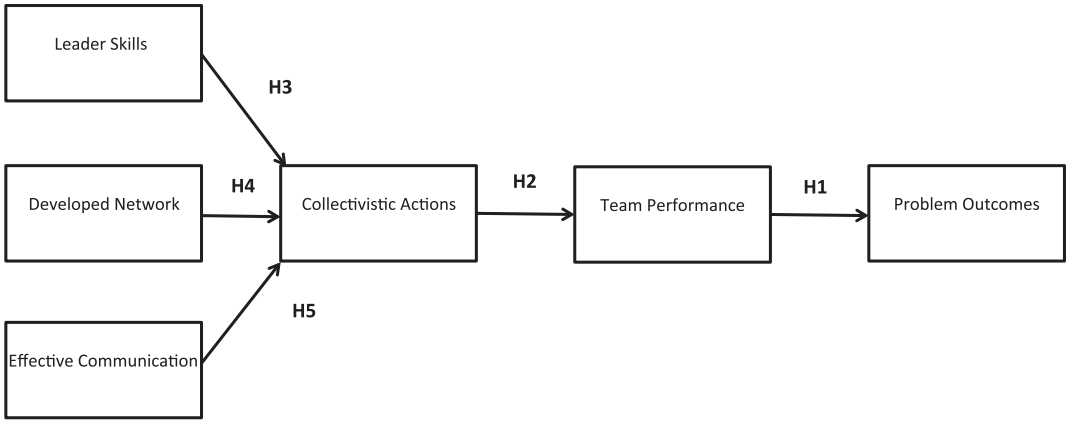

Fig. 1. Proposed collectivistic leadership model.

Marshall's watchfulness also extended to early promotions. He heartily approved Eisenhower's suggestions that Clark and two colonels on the TORCH staff be promoted on the day of attack. The Chief of Staff already had in mind the advancement of Smith. But he did not stop there. If either or both corps commanders gave good performances, he wanted to submit their names at once. "I would be particularly anxious to pick up a regimental commander who does an unusually fine job regardless of whether or not there is a vacancy." A week before the landings he advised: "If battle tests cause you to alter your views or disclose outstanding leadership under adversity, radio me accordingly that first list may not involve us in regrets or failure to take account of outstanding performance."

In a message typical of others he would send Eisenhower during the remaining months of the war – indicative of almost paternal interest on the part of the Chief of Staff – Marshall asked the TORCH commander to deal with him on the frankest possible basis: "When you disagree with my point of view, say so, without an apologetic approach; when you want something that you aren't getting, tell me and I will try to get it for you. I have complete confidence in your management of the affair, and want to support you in every way practicable." Before many weeks Eisenhower was to be especially grateful for the solid backing he received from the War Department.

Excerpt from Pogue, F.C. (1973). George C. Marshall, Vol. 2: Ordeal and Hope, 1939-1942, pp. 411.

Fig. 2. Sample leadership event.

before retiring. As a capstone on an illustrious career, General Marshall was awarded the Nobel Peace Prize in December of 1953 for his work on the Marshall Plan and other efforts to restore stability in Europe following the Second World War.

Marshall provides an interesting case study for a number of reasons. First, Marshall was exceptionally successful as a leader. He was considered a successful leader in every position he held with the exception of his role as a negotiator with the Chinese Communists following World War II (Pops, 2006). This is particularly impressive given the many dynamic and complex situations Marshall faced, particularly the beginning of World War II, in which rapid exchange of information and selection of leaders would play a critical role. Marshall actively planned for these complex and dynamic situations and made a point to structure both those working closely with him, as well as the Army as a whole, to react quickly to address problems as they presented themselves and to adapt as situations changed (Bland, 1988). For example, between World War I and World War II the Army was largely undermanned, underequipped, and had fallen out of public favor (Nelsen, 1993). Marshall was faced with the task of re-organizing and expanding the Army by a factor of forty in a three year period, a goal he completed and was held in wide acclaim for accomplishing (Munch, 1994). He was able to accomplish this through the careful selection of individuals to oversee different aspects of the expansion and made careful adjustments as the situation developed. Most notably, perhaps, is that he utilized methods and took approaches that were not the norm in the command-and-control, highly centralized Army of his day (Clarcq et al., 2011), and thus makes him a unique case and his leadership success within that context important to examine.

George C. Marshall was chosen as the leader for study in this case for the reasons listed above. He was a notable, prototypical leader who often operated in contexts in which rapidly emerging and complex problems were the norm and performed at an extremely high level. Furthermore, his career was very well documented, allowing for a number of events to be studied across the entire range of his career. Marshall provides a case where we can examine his leadership at multiple levels both in and out of combat as well as in and out of a military role. Using the documents regarding Marshall's career allowed us to look for variation in these leadership behaviors within a single leader over the course of multiple events. Additionally, while Marshall's life has been extensively chronicled and attempts have been made at explaining his success as a leader primarily through biographies (e.g., Nelsen, 1993; Pops, 2006), there have been few if any systematic attempts at explaining his leadership success using available research methodologies.

2.3. Sample

The sample used to examine the proposed collectivistic leadership model and its influence on team performance consisted of 102 leadership events, or critical incidents, drawn from seven scholarly historical biographies of George C. Marshall (four of which comprised a single series spanning distinct sections of his life). The procedures recommended by Simonton (1999) for the

historiometric study of eminent individuals were applied when selecting biographies and events for study. Biographies were chosen by a group of three psychologists with experience conducting historiometric studies of leaders. The biographies selected can be found in Table 1. These biographies were selected based on a number of criteria outlined below.

After identifying all available Marshall biographies, an initial check was done on the date of publication for each biography, with any biographies published prior to Marshall's death eliminated in an effort to only include biographies that covered the entirety of Marshall's life. Next, only biographies with two or more positive scholarly reviews were retained for the study. Finally, the remaining group of biographies was reviewed by the group of psychologists based on the level of documentation, level of factual information vs. opinion, citation of original sources, and level of detail in leadership events. Each of these selection criteria were rated on a 1 to 5 scale by the three psychologists, with 1 representing a low level of the criterion and 5 representing a high level of the criterion. Any biographies with an average rating of 3 or lower on any of these criteria were eliminated from the pool of biographies, resulting in the final set of biographies found in Table 1.

Once the biographies were selected they were then reviewed by the researchers for events in which Marshall's performance may have been improved by engaging in collectivistic leadership activities. These events were identified using the list of situations calling for the use of collective leadership developed by Yammarino et al. (2010a, 2010b) as part of an effort to develop measures of collective leadership. A set of situational markers was developed with the purpose of using them as a tool for future measure development. Based on these situational or contextual markers, lists of example collectivistic leadership situations were then developed, with separate lists of example situations calling for collectivistic leadership attached to each construct in the leadership model.

To apply these situational markers and situation examples in the selection of events from the Marshall biographies, rating scales were developed based on the markers and examples developed by Yammarino et al. (2010a, 2010b). With regard to the situational markers, each potential event was rated on a 1 to 5 scale with 1 indicating the markers relevant to the construct in question were not present, while 5 indicated the markers were definitely present. The example situations for each construct were also included in the scale, with the examples presented for each construct. The psychologists identifying events were asked to rate the degree to which the event in question matched the examples, with 1 representing no match, and 5 representing an exact match. Any events rated below 3 on the presence of the situational markers and match with example situations were eliminated from the pool of events for the study.

After identifying these events the researchers then compared events across books (biographies) to check for overlap. This check identified 43 events that were identified as being repeated across multiple biographies of Marshall. Researchers identified the most complete description of each repeated event and used that description for further analysis. If accounts of an event conflicted across biographies, the event was eliminated. This resulted in the final sample of 102 leadership events describing critical incidents in which Marshall engaged in leadership activities and in which collectivistic leadership may have influenced performance. These events ranged between a paragraph in length, in the shortest example, and 16 pages in the longest example, with the average page length of about five pages. Events were identified from multiple points in Marshall's career, with 26% of events occurring prior to Marshall becoming a General, 41% of events occurring while Marshall was a General but prior to becoming Secretary of Defense, and 33% of leadership events occurring after Marshall began work as Secretary of Defense. A sample leadership event used for coding is included in Fig. 2.

2.4. Leadership scales

The measures used in the content coding of these biographies were developed as a rating system for analyzing critical leadership incidents by Yammarino et al. (2010a, 2010b) as part of an effort to develop measures of collective leadership. In the prior effort by Yammarino et al. (2010a, 2010b), a set of leadership markers was developed based on the constructs and subdimensions of the collective leadership conceptual model developed by Friedrich et al. (2009). The constructs identified are made up of groups of similar variables, referred to here as subdimensions of the constructs, which are thought to contribute to effective collectivistic leadership. An average of four subdimensions was identified for each construct. These constructs include leader skills, collectivistic actions, communication, developed network, and team performance.

After identifying these constructs and subdimensions, a set of behavioral markers was developed for the subdimensions underlying each construct. These behavioral markers provide examples of behaviors tied to specific constructs that can be used to content code an individual's actions. The purpose of developing these behavioral markers was to use them as a tool for future measure development. These markers were written by first defining each subdimension, or variable, based on definitions from

Table 1
List of George C. Marshall biographies.

Title	Author	Year of publication	Publisher
George C. Marshall: Education of a General, 1880–1939	Pogue	1973	Viking
George C. Marshall: Ordeal and Hope, 1939–1942	Pogue	1973	Viking
George C. Marshall: Organizer of Victory, 1943–1945	Pogue	1973	Viking
George C. Marshall: Statesman, 1945–1959	Pogue	1973	Viking
General of the Army: George C. Marshall, Soldier and Statesman	Cray	1990	Norton
George C. Marshall: Soldier–Statesman of the American Century	Stoler	1989	Twayne
Marshall: Hero for Our Times	Mosley	1982	Hearst

the relevant area of the extant literature (e.g., shared leadership, leader–member exchange). Next, situations in which the subdimension of interest might play a particularly important role were identified. Based on the definition and situation, two sets of three markers were written for each subdimension of the leadership model. One set of markers was written to reflect the presence of the variable of interest while the other set was written to reflect the absence of the variable of interest. These markers were written in the form of examples of behaviors conducted by a leader or group reflecting the underlying variable of interest. Examples of these markers can be seen in Fig. 3.

Using these markers, a system for scoring critical incidents was developed. This scoring system, adapted from prior rating scales used in biographical research (Eubanks et al., 2010; Mumford et al., 2005; Schwartz, 1994), is made up of a 1 to 5 benchmark rating scale with 1 representing the absence of the subdimension or a very low level of behavior by the leader or leadership group, and 5 representing a high level of behavior indicating that the subdimension is present. Benchmarks were based on the markers developed for each leadership model subdimension. Three judges were asked to use these scales to rate the presence of behaviors in each event that might indicate the presence of each leadership subdimension. An example of these scales can be found in Fig. 4.

In an effort to ensure that the judges who were rating events had both adequate experience with the measure and adequate knowledge of the subdimensions to identify them in the events, raters were trained for 20 h on the scales over the course of one month. All raters were doctoral students in industrial and organizational psychology familiar with the leadership literature and historiometric methodology. Following training, the judges were able to reach an adequate level of interrater agreement. Using Shrout and Fleiss's (1979) method for assessing interrater agreement in a group of judges, a .77 average reliability coefficient was found across the rating scales for leadership behaviors. As a check on the validity of the selected material and leadership ratings, another set of three raters unfamiliar with the study were asked to rate a set of 20 original documents from the Marshall Foundation's Marshall Papers Archive, matched to leadership events in our biography-based sample, on these leadership scales. ICCs between the raters were generally good, with an overall ICC for the leadership scales of 0.74. The raters generally agreed on the degree to which Marshall exhibited the leadership model constructs, specifically leader skills (ICC = 0.91), a developed network (ICC = 0.77), collective actions (ICC = 0.83), and team performance (ICC = 0.73), with the exception being effective communication (ICC = 0.24). This level of agreement between raters provides some validation that the biography excerpts used in the study are reflective of the original source material.

2.5. Performance scales

To identify how the various leadership constructs and the subdimensions of each construct were related to performance for Marshall and the teams he led, a set of performance scales was developed based on the system for content coding the leadership constructs and subdimensions. Due to subdimensions being coded on a per event basis, outcomes needed to be tied to these specific events as well. To accomplish this, a similar method was used to content code each event in terms of leader, team, and

Leadership Construct – Collectivistic Actions
Subdimension – Empowerment
Event/Situation – Leader has limited contact with team members

	Effective		Ineffective
1	The unit leader allows team members to make decisions when he has limited contact with them.	1	The unit leader does not allow team members to make decisions when he has limited contact with them.
2	Team members are self-reliant when they have limited contact with the unit leader.	2	Team members are reliant on the unit leader's approval when he has limited contact with them.
3	The unit leader does not require team members to run decisions past him when he has little contact with them.	3	The unit leader requires all decisions to be run past him when he has little contact with them.

Leadership Construct – Collectivistic Actions
Subdimension - Delegation
Event/Situation - Limited time

	Effective		Ineffective
1	The unit leader seeks help from others when there is limited time to solve a problem.	1	The unit leader works alone when there is limited time to solve a problem.
2	Team members are prepared to take on responsibilities when time is limited	2	Team members do not take on extra responsibility when time is limited to solve a problem.
3	The unit leader distributes tasks to those with relevant expertise when time is limited to solve the problem.	3	The unit leader distributes tasks equally to everyone in the team when time is limited to solve the problem.

Fig. 3. Example collectivistic leadership markers.

Leadership Dimension: Communication Sub-dimension: Direction giving language				
Example Behaviors: Unit leaders provide directions when the problem being worked on is highly ambiguous. Team members' roles are well defined when work is ambiguous Time is spent giving directions when work is ambiguous				
How frequently do these, or similar, behaviors occur?				
Never (1)	Sometimes (2)	Somewhat frequently (3)	Regularly (4)	Always (5)

Leadership Dimension: Communication Sub-dimension: Empathetic language				
Example Behaviors: Unit leaders use empathetic language during emotionally demanding situations Team members express emotions during emotionally demanding situations Expressing emotion is acceptable during emotionally demanding situations				
How frequently do these, or similar, behaviors occur?				
Never (1)	Sometimes (2)	Somewhat frequently (3)	Regularly (4)	Always (5)

Leadership Dimension: Communication Sub-dimension: Feedback exchange				
Example Behaviors: Unit leaders provide feedback on solutions when the problem is unfamiliar Team members seek feedback when a problem is unfamiliar Exchanging feedback is encouraged when problems are unfamiliar				
How frequently do these, or similar, behaviors occur?				
Never (1)	Sometimes (2)	Somewhat frequently (3)	Regularly (4)	Always (5)

Fig. 4. Example collectivistic leadership behavior scale.

organizational performance. Two constructs were identified for leader, team, and organizational performance — short-term outcomes and long-term outcomes. For the purposes of the study an outcome could only be considered short-term if it occurred within six months of an event and was directly tied to it. Long-term outcomes had to occur after a period of greater than six months from the event and did not need to be directly tied to the event by the biography, though a link between the event and long-term outcome had to be identified by multiple raters. As was the case before, after identification of the performance constructs and subdimensions, markers were developed to assist in content coding for the leader, team, and collective performance variables. This scoring system was also based on prior historiometric content coding scales (Eubanks et al., 2010; Mumford et al., 2005; Schwartz, 1994) and consisted of a 1 to 5 benchmark scale with 1 representing the absence of a performance variable and 5 representing the presence of a performance variable. Three trained raters were asked to use these scales to rate performance in each event. An example of the performance scales can be found in Fig. 5.

Using the performance scales, the three judges participated in a rater training program in an effort to ensure adequate experience with the measure and knowledge of the performance measures. All raters were doctoral students in industrial and organizational psychology familiar with the leadership literature and historiometric methodology. During rater training it was found that it was difficult or impossible to consistently identify long-term outcomes associated with the actions taken by the leader or group in each event. Due to this issue, the set of performance variables and measures for long term outcomes were dropped from this study. Following training, the judges were again able to reach an adequate level of interrater agreement. A .76 average reliability coefficient was found across the rating scales for performance as represented by short-term outcomes. Due to the strong positive correlations observed among the short-term outcome subdimensions, ratings on these scales were aggregated by calculating an average score across all subdimensions of short-term outcomes to provide overall indices of the short-term outcomes related to each event.

Solution Quality What was the quality level of the outcome?				
(1) Low	(2)	(3) Mod.	(4)	(5) High
Time and resources were devoted equally to all problems.	.....			Critical problems were given higher priority.
The solutions to critical problems were developed quickly.				Marshall devoted time to planning solutions for critical problems.
A mission critical problem was solved by Marshall alone.				Solutions to mission critical problems were the result of Marshall consulting with team members.

Efficiency How efficient was the solution?				
(1) Low	(2)	(3) Mod.	(4)	(5) High
Marshall had others multitask in a complex situation.	.....			Marshall focused others on one problem at a time.
Marshall held conversations with others when completing simple tasks.				Marshall had others focused on the job at hand.
Marshall took his time solving problems.				Marshall solved problems quickly.

Solution Creativity How creative was the solution?				
(1) Low	(2)	(3) Mod.	(4)	(5) High
Marshall relied on his own knowledge to develop creative solutions to complex problems.	.....			Marshall deferred to knowledgeable team members to develop creative solutions to complex problems.
Marshall demanded creative solutions quickly for complex problems.				Marshall made time to develop creative solutions for complex problems.
Creative solutions were used to solve simple problems.				Standard approaches were used to solve simple problems.

Fig. 5. Example problem outcome scale.

2.6. Controls

In an effort to ensure that conclusions drawn about the influence of collective leadership behaviors on leader, team, and collective performance were not influenced by extraneous variables, two sets of controls were developed: clustering controls and event description controls. Although multiple events from his career were involved, between-subjects controls do not apply here as we are working from a single case, George C. Marshall. Judges were asked to rate each event on these control variables, with an interrater agreement coefficient of 0.91 found for these scales. The first set of controls focused on variables that may have caused clustering of the data. These included the time period in which the event took place, due to potential situational effects on collective leadership, and the author of the biography, due to potential author effects. The second set of controls primarily focused on elements of the event and how the event was discussed in the biography. These controls consisted of a) page length of the event, b) the level or rank of followers responding to the event, c) the amount of time Marshall spent on the event, d) the number of specific sources cited in relation to the event, and e) whether the event was combat or non-combat in nature. These control ratings were found to not be correlated with the model subdimension ratings and did not produce sizeable or significant regression weights in hierarchical regression analyses. Additionally, comparison of model estimates based on career periods using a Chow (1960) test, estimating a multi-group model with grouping based on time-period in SEM and constraining parameters to equality, resulted in a non-significant partial F (1.36, $p = 0.25$) for the three career periods of pre-WWII, during WWII, and post-WWII when testing the constrained model. Given this, these controls are not included in the results presented here and were not included in SEM analyses.

2.7. Analyses

First, it is important to note that due to the nature of the sample we cannot assume independence of observations and thus it was necessary to adjust for the potential effects of clustering (Bertrand, Duflo, & Mullainathan, 2004; Cameron, Gelbach, & Miller, 2011). Given the small amount of clusters, however, we used a robust estimate of the variance (the MPLUS ver 5.2 MLMV estimator). All other analyses were conducted using the *R* statistical software package.

Our first set of analyses consisted of correlating ratings on the model constructs with one another to allow for examination of the relationships between the different leadership variables based on the hypothesized relationships. After completing this analysis, a set of analyses was conducted using hierarchical regressions to examine directly the relationships between the different constructs in the leadership model based on the hypothesized relationships between constructs. For example, our second hypothesis states that collectivistic actions will be positively related to team performance; so in the analysis, the ratings for collectivistic actions were used in a hierarchical regression for team performance. This allows us to draw inferences about the hypothesized relationships between constructs and to identify which variables within those constructs are most closely related to the construct of interest.

Following these analyses, a set of SEM analyses were conducted on the hypothesized relationships between the constructs in the proposed model in an effort to address some of the issues with the more exploratory methods described above and to further examine the relationships between model constructs. We conducted these path analyses using the MPLUS software package. The path models were specified based on the hypothesized relationships between model constructs as illustrated in Fig. 1.

3. Results

3.1. Correlational analyses

The correlations among the model construct ratings are shown in Table 2 along with means and standard deviations for the ratings of the constructs. The ratings generally evidenced the expected moderate to strong positive intercorrelations, with the exception of the developed network construct which had a pattern of weaker correlations with the other constructs in the model. The overall pattern of relationships within the correlations may provide some evidence for the construct validity (Messick, 1989) of the ratings. For example, the effective communication construct had a strong positive correlation with leader skills and abilities ($r = .56$) as might be expected, with a leader's individual skills influencing how effectively they can communicate with their followers. Along similar lines an expected strong positive relationship was found between the team performance construct and problem outcomes ($r = 0.74$) as would be expected, with team performance leading directly to impacts on outcomes. Of the constructs examined, developed network evidenced the weakest intercorrelations, with non-significant correlations with both leader skills ($r = 0.17$) and short term outcomes ($r = 0.06$), possibly indicating that network development is reliant on factors outside of the leader's direct control and does not have a direct impact on the ability of a team to produce good results.

3.2. Hierarchical regression analyses

The results of regressing the problem outcomes measure on the collectivistic actions and antecedent ratings are presented in Table 3, along with those specific variables with sizeable and significant weights. In the case of these constructs, the ratings produced a multiple *R* of .62 ($p \leq .001$) and an R^2 change of .59 ($p \leq .001$) indicating that the overall ratings for the collectivistic actions and the three antecedents were effective predictors of problem outcomes. In this regression analysis, the team performance ($\beta = .71$, $p \leq .001$), developed network ($\beta = -.19$, $p \leq .05$) and leader skills and abilities constructs ($\beta = .17$, $p \leq .05$) produced sizeable and significant regression weights. The control and biographer variables had no significant effects on the regression. This set of results indicates that the overall model effectively predicted problem outcomes, with much of the variation in problem outcomes being accounted for by the team performance component of the model, hypothesized to be most directly related to outcomes, as well as by the developed network and leader skills components of the model. The two components of the model strongly related to direct leader–team interactions, effective communication and collectivistic actions, did not produce sizeable regression weights, indicating that in the case of Marshall, direct interactions between Marshall and his followers did not have as direct of an effect on outcomes. This is unsurprising given the organizational distance between Marshall and those carrying out actions on his behalf in many cases.

Table 2
Intercorrelations of leadership constructs and problem outcomes.

	1	2	3	4	5	6	M	SD
1. Effective communication	1.00						3.22	0.39
2. Developed network	0.34	1.00					3.42	0.56
3. Leader skills & abilities	0.56	0.17	1.00				3.38	0.37
4. Collectivistic actions	0.32	0.65	0.33	1.00			3.45	0.62
5. Team performance	0.35	0.28	0.59	0.46	1.00		3.08	0.47
6. Problem outcomes	0.28	0.06	0.50	0.27	0.74	1.00	3.49	0.59

Note: $r \geq .25$ is significant at .05 level.

Table 3
Hierarchical regression of problem outcomes on collectivistic actions and antecedents.

	β	SE	Sig.
1. Effective communication	.024	.117	.763
2. Developed network	−.191	.092	.039
3. Leader skills and abilities	.174	.142	.046
4. Collectivistic actions	.015	.084	.871
5. Team performance	.711	.103	.000

$R = .79$, $R^2 = .62$, $p \leq .001$; $R^2_c = .59$, $p \leq .001$.

Another set of analyses was conducted to examine the hypothesized relationships between each component of the model in an attempt to gain more of an understanding about the structure and viability of the leadership model presented here. The results of this set of analyses are presented in Table 4 and will be highlighted for each component of the model included in the analysis.

3.2.1. Problem outcomes

Regressing the problem outcomes component of the model on the ratings for the component of the model hypothesized to be related to it, team performance, resulted in a multiple correlation of .54 ($p \leq .001$) and an R^2 change of .53 ($p \leq .001$), indicating that the ratings for team performance were effective predictors of problem outcomes, including that the problem was solved, was high in quality, creativity and efficiency, supporting Hypothesis 1. In this regression analysis, decision acceptance ($\beta = .23$, $p \leq .05$), shared situational awareness ($\beta = .25$, $p \leq .01$), and collective efficacy ($\beta = .29$, $p \leq .01$) produced sizeable and significant regression weights. This result indicates that problem outcomes are well predicted, with the variance being well accounted for by variation in team performance, as predicted by the structure of the leadership model.

3.2.2. Team performance

The ratings of team performance were regressed on the ratings for the model component, collectivistic actions, hypothesized to be related to it in the model, resulting in a multiple correlation of .22 ($p \leq .001$) and an R^2 change of .21 ($p \leq .001$). This result indicates that team performance capability scores are predicted well by the four components believed to be related, supporting Hypothesis 2. With regard to the specific variables, only one sizeable and significant regression weight was found: voice ($\beta = .325, p \leq .01$). These

Table 4
Hierarchical regression of individual model construct relationships.

	β	SE	Sig.
Problem outcomes			
1. Team performance			
a. Decision acceptance	.227	.093	.020
b. Shared situational awareness	.254	.083	.009
c. Collective efficacy	.295	.091	.001
d. Coordination	.184	.090	.078
e. Cohesion	−.081	.085	.309
$R = .74$, $R^2 = .54$, $p \leq .001$; $R^2_c = .53$, $p \leq .001$			
Team performance			
1. Collectivistic actions			
a. Empowerment	−.022	.089	.869
b. Delegation	.086	.077	.530
c. Trust	.183	.087	.163
d. Voice	.325	.077	.005
$R = .46$, $R^2 = .22$, $p \leq .001$; $R^2_c = .21$, $p \leq .001$			
Collectivistic actions			
1. Effective communication			
a. Direction giving language	.037	.083	.657
b. Empathetic language	.016	.093	.854
c. Feedback exchange	.108	.092	.286
d. Communication norms	−.206	.087	.023
2. Developed network			
a. Connections between actors	.304	.097	.013
b. Boundary spanning	.038	.088	.707
c. Information gathering	.389	.087	.000
d. Familiarity	−.045	.108	.652
3. Leader skills			
a. Intelligence	.180	.108	.035
b. Creativity	.124	.083	.128
c. Perspective taking	.044	.104	.637
d. Leadership expertise	.315	.094	.000
$R = .77$, $R^2 = .59$, $p \leq .001$; $R^2_c = .53$, $p \leq .001$			

results support Hypothesis 2, but indicate that most of the variance in team performance is accounted for by the voice component of collectivistic actions, the degree to which followers are given a say in the actions taken by their leader.

3.2.3. Collectivistic actions

Regressing collectivistic actions on the ratings for effective communication, developed network, and leader skills and abilities resulted in a sizeable and significant multiple R and R^2 change ($R^2 = .59$, $p \leq .001$; $R^2_c = .53$, $p \leq .001$), indicating that collectivistic actions may be predicted by these constructs. All three constructs included variables which produced sizeable and significant regression weights. This pattern of results seems to indicate the importance of communication, developed network, and leader skills and abilities in accounting for variation in collectivistic actions and seems to support Hypotheses 3–5. Specific variables producing sizeable regression weights were communication norms ($\beta = -.206$, $p \leq .05$), connections between actors ($\beta = .304$, $p \leq .05$), information gathering ($\beta = .389$, $p \leq .001$), intelligence ($\beta = .180$, $p \leq .05$), and leadership expertise ($\beta = .315$, $p \leq .001$).

3.3. Path (SEM) analysis

Multiple fit statistics were used in conducting path analyses, as recommended by Kline (2010). In particular, we used the chi-square goodness-of-fit, RMSEA, and CFI. The root mean square error of approximation (RMSEA) accounts for the error of approximation in the population, with values greater than 0.10 indicating poor fit (Browne & Cudeck, 1993). The comparative fit index (CFI) is a fit statistic in which values below 0.90 indicate poor fit (Hu & Bentler, 1999). This statistic assesses the fit of the proposed model as compared to a null model based on the amount of variance explained. All SEM analyses were conducted using the MPLUS.

The results of these analyses can be found in Table 5 and Fig. 6. The χ^2 goodness-of-fit test indicated good model fit (χ^2 (76) = 89.75, p = 0.134), with the CFI above the threshold of .90 for marginal model fit (0.932), and the RMSEA below the 0.10 threshold for good fit (RMSEA = 0.041, 90% CI = 0.035, 0.047, p RMSEA ≤ 0.05 = 0.63). These results provide some support for the overall model's fit as a model for predicting problem outcomes based on the constructs of interest. In terms of the primary model paths, all constructs were strongly positive in the hypothesized direction with the exception of the developed network to collectivistic actions path, which was found to be negative. This general pattern provides some support for the overall model as a predictor of problem outcomes and Hypotheses 1, 2, 3, and 5. The strongest relationships were found between team performance and problem outcomes, mirroring earlier findings, and effective communication and collectivistic actions, indicating the potential importance of communication to effective distribution of the leadership role.

4. Discussion

Before moving on to a broader discussion of the implications of these findings, we must point out some limitations of the study. First, in selecting Marshall as the leader for study, a leader evidencing generally above average levels of performance, we may have chosen a leader who generally performs more of the behaviors associated with collectivistic leadership. However, while this may be the case there was enough variability in his performance across the multiple events examined, with scores ranging across the entire range of the scale, to conduct the described analyses and draw meaningful inferences.

Another potential limitation of this study is the use of biographies to examine the occurrence of the relevant leader behaviors. While biographies can provide a good amount of summary information on a leader's activities and behaviors, the researcher is limited to the details and events described by the author and deemed important enough for inclusion in the biography. This limits our ability to examine all potentially relevant events and behaviors that could have occurred during the leader's career. However, given the large amount of documentation available across Marshall's career, the number of scholarly biographies available, and the range of sources available to the authors of these biographies, we feel that the sample of events found is adequate for the study. Providing more credence to the conclusions drawn is the fact that a number of events were identified spanning multiple

Table 5
Leadership model SEM results.

Independent variables	Coef.	SE	*p*-value
Model estimated with SEM (dependent variable is collectivistic actions)			
1. Leader skills and abilities	0.659	0.314	0.036
2. Developed network	−0.552	0.480	0.250
3. Effective communication	0.942	0.291	0.001
4. Constant	0.220	0.146	0.133
Model estimated with SEM (dependent variable is team performance)			
1. Collectivistic actions	0.514	0.087	0.000
2. Constant	0.317	0.075	0.026
Model estimated with SEM (dependent variable is problem outcomes)			
1. Team performance	0.827	0.045	0.000
2. Constant	0.155	0.132	0.121

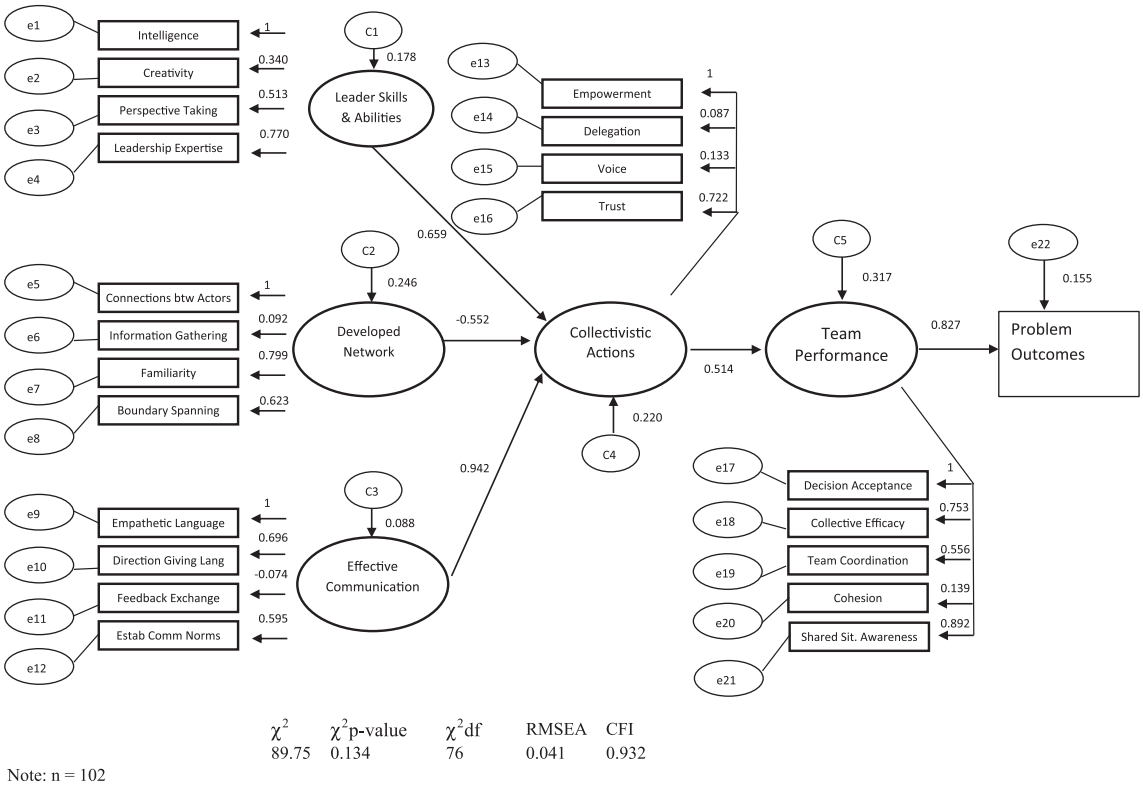

Fig. 6. Leadership model SEM results.

points in Marshall's career, events in which Marshall worked with multiple different groups of people, and these events covered a number of different types of problems (Kazdin, 1980). Additionally, those events documented well enough to appear in the biographies were likely critical events, events with the most important implications for Marshall and others, and thus those events during which leadership was most critical (Hunt, Boal, & Dodge, 1999; Mumford, 2006), making the events good candidates for study. However, we do believe that future research using another method of study would be beneficial to further understand the nature of collectivistic leadership.

Along related lines, since the content is from biographies focusing on the leader, there may have been a "leader-centric" bias in the content and events discussed, and some of the team, and collectivistic elements may not have been fully illustrated. However, we believe that the biographies selected gave thorough descriptions of the teams and relationships that General Marshall belonged to, and, ultimately, a leader-centric focus in the events may actually make our findings conservative.

A significant limitation of the study is the possibility that the relationships examined between leadership constructs and performance, and between the constructs themselves, may be inflated due to methodological issues, specifically common-method variance. Though a number of control variables were examined in an effort to account for potential source biases and these control variables did not seem to affect the relationship between the constructs of interest and performance, it is possible that by using ratings of events drawn from the same biographies to gather information about the predictors and the criteria, the magnitude of the relationships could have been inflated due to common-method bias. In an effort to reduce the effects of this possible bias we conducted model analyses using the MPLUS MLMV robust variance estimator. However, this does not allow us to isolate and purge the common-method variance from predictors. The most common method for addressing this issue, the use of instrumental variables (Antonakis, Bendahan, Jacquart, & Lalive, 2010), is difficult to apply in this situation due to the specialized and limited nature of the sample and makes obtaining information from a source other than rater coding on our predictors extremely difficult, if not impossible. The alternative of modeling the common-method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), while a possible solution to the issue, is not recommended due to concerns about the consistency of the parameter estimates produced (Antonakis et al., 2010). Therefore, we must temper our conclusions bearing this limitation in mind, and suggest future research using alternative methods and analyses to address the concern (for details, see Antonakis et al., 2010).

A final potential limitation in this study is the use of a single leader, Marshall, as the subject for study. Thus, care must be taken when applying these conclusions to other leaders (O'Connor, Mumford, Clifton, Gessner, & Connelly, 1995; Simonton, 1990). While this may limit the generalizability of the conclusions we draw here, the use of Marshall as the subject for study using the methods described provides some advantages that we believe compensate for this issue. First, it must again be stated that collectivistic leadership is not conceptualized as a trait; it is not a quality someone possesses or does not possess. An individual may be very good at applying collectivistic leadership behaviors in one case and may not apply them at all in another case. This

variability in the application of these behaviors was indeed found with Marshall across the events examined. Given the wide variation in the leadership behaviors across events we felt it appropriate to use a single individual for this study. Additionally, the use of multiple events drawn from different situations, problem types, and career stages contributes to the generalizability of the conclusions that can be drawn (Mumford & Van Doorn, 2001). Finally, the use of multiple events from the career of one individual allows for control of a number of individual-level variables that could potentially influence the relationship between the leadership models and performance. This allows us to draw certain conclusions about the model we would not be able to draw if we were accounting for the multiple individual-level variables that might result in differences in the relationship between leadership and performance across subjects. A related note is that, as Markham (2012) has demonstrated, the historical and cultural context is critical for understanding the performance of leaders. The effectiveness of Marshall and his use of collectivistic tactics may be a function of the modern, Western culture in which he was leading.

Given these limitations, we take a cautious tone yet nonetheless believe that the results of this study have a number of potentially important implications for the understanding of the proposed model, and collectivistic leadership more broadly. The first set of implications stems from the hypotheses developed. Our first hypothesis stated that team performance would be positively related to problem outcomes, including that the problem was solved, as well as the creativity, quality and efficiency of the problem solution. The results for this relationship are the strongest of all of the model components and suggest support for the hypothesis. Not only were team performance and problem outcomes highly correlated, it accounted for the largest amount of the variance when regressed on problem outcomes with the other constructs in the model. Additionally, within the path-analysis, the strongest relationship was between team performance and problem outcomes.

The specific hierarchical regression of problem outcomes on the five variables included in team performance, provides some important insight into which team processes appear to be most critical. decision acceptance, shared situational awareness, and collective efficacy were all found to be significant predictors of problem outcomes, while cohesion and coordination were not. What the three significant variables have in common is that they all speak to team members' alignment on the understanding of the problem situation, how they would solve it, and their ability to solve it, rather than the generalized team capacities of coordination and cohesion. These findings speak to the importance of a team, particularly one in which multiple different leaders are acting collectively, having a clear, shared focus on the problem at hand.

The results of our analyses also seem to provide some support for Hypothesis 2, a hypothesis stating that collectivistic actions would be positively related to team performance. There was a moderate correlation between collectivistic actions and team performance, and there was a positive and significant path coefficient between the two. An evaluation of specific variables in the hierarchical regression, however, indicates that it was mostly “voice” driving the relationship to team performance, and not empowerment, delegation or trust. Although surprising, given the empirical support demonstrating the positive effects of sharing the leadership role on team performance (Carmeli & Schaubroeck, 2006; Pearce & Sims, 2002), these results may suggest that the most powerful forms of collectivistic actions are the more subtle ones. It also may indicate that there is still a leader-centric bias in our way of framing collectivistic actions. Perhaps it is not the overt actions the focal leader takes in creating collectivistic leadership (e.g., empowerment and delegation), but rather what is important is follower's perceptions that their ideas and expertise are valued and they are able to step into the leadership role. In light of this, we suggest an important area of study is on the follower perceptions and engagement in collectivistic leadership.

The results of the several analyses also seem to demonstrate support for Hypothesis 3, a hypothesis stating that the leader's skills and abilities would be positively related to collectivistic actions. There was both a significant correlation between leader skills and abilities and collectivistic action, and a significant path coefficient within the broader model, indicating that the two constructs are likely related. On further evaluation of the hierarchical regression, it appears that the variables accounting for most of the variance were intelligence and expertise, and not creativity and perspective taking. While we had proposed that a leader's interpersonal skills, such as perspective taking, would play an important role in the enactment of collectivistic leadership, it may be that intelligence and expertise supersede that and that the puzzle of evaluating the network for collectivistic purposes is more of a general problem-solving task, rather than a problem requiring strong social skills. Support for the importance of intelligence and expertise to leadership, in general, is wide-spread (Fiedler, 1986; Mumford et al., 2000), however we would suggest further study of the importance of social cognition and interpersonal skills to collectivistic leadership, before judgments are made.

The results bearing on Hypothesis 4, which states that a developed network would be positively related to collectivistic actions, seem to demonstrate an inconsistent pattern of findings. Although having a developed network was strongly correlated with collectivistic actions, there was a non-significant path coefficient between the two constructs. Some support was found for two of the specific network variables within the hierarchical regression of collectivistic actions on the three antecedents. Specifically, connections between actors and information gathering were found to be significant. The inconsistent pattern of findings for the relationship between a developed network and collectivistic actions may be due to the historiometric focus on a single individual. Most of the information reviewed was leader-centric, so it was difficult to evaluate the network fully. Future research efforts should approach this in a way that those network pathways can be examined.

Finally, the results of our analyses seem to demonstrate some mixed support for Hypothesis 5, which states that effective communication will be positively related to collectivistic actions. While there was a positive correlation between effective communication and collectivistic actions, as well as a significant path coefficient within the path-analysis, the structure of the specific communication variables is unclear. Within the hierarchical regression, only one variable, communication norms, was significant, and it was negative. While we initially believed that establishing clear communication norms would facilitate an environment where open-communication would occur and feedback and information exchange would be facilitated, it may, in fact, be that having a team that has very clear norms and guidelines for communication may be a signal that it is one in which

communication channels are clearly structured. This rigidity in communication patterns may, then, restrict the organic emergence of collectivistic actions.

Given the general pattern of results, along with the specific path analysis (SEM) results, it appears that, based on this initial study, the proposed model of relationships between the broader constructs of leader skills and abilities, effective communication, collectivistic action, team performance and problem outcomes, is a valid one. The pattern of findings in this study indicates that a model focusing on leadership, not as an individual process but as a complex and dynamic process involving multiple individuals stepping into the leadership role warrants further study to examine the nature of the relationships. The specific hierarchical regression results also appear to point to some clear areas in need of future examination, as we have outlined above.

Another general issue arising in the study was the pattern of effects on problem outcomes produced by team performance. The collectivistic approach and the results of this study seem to indicate that this team-level construct may play a significant role in the effectiveness of leaders, acting as a mediator of individual leader performance. This finding should be expected given the fact that leadership is often defined as a process of influencing followers to act on the leader's behalf (Yukl, 2010). However, this relationship is often lost in the leadership literature, where it is a common practice to treat the leader's followers or the leader's team as a homogenous set of actors, not as a group of individuals with different strengths and weaknesses that need to be accounted for (Hunter et al., 2007). The collectivistic approach, however, calls for an emphasis on the role of followers, considering followers as individuals with unique skills and abilities, and the importance of a leader recognizing the unique skills and abilities each follower possesses. The results of this study seem to indicate that the current push in the leadership literature for models of leadership as a shared or team- and collective-level competency is warranted, as these team- and collective-level processes are very closely related to performance.

One area of emphasis in much of the leadership literature is the interactional skills possessed by leaders, those skills that determine the relationship between a leader and his or her followers (Graen & Uhl-Bien, 1995). While these skills have been shown to be important in previous studies (e.g., Boies & Howell, 2006), and indeed are included in the proposed model, the results of this study seem to indicate that a leader's cognitive skills, intelligence and expertise in particular, may play a role as or more important to performance. This indicates that there may be a need for an increased focus on cognitive leader skills as called for by Mumford, Friedrich, Caughron, and Byrne (2007).

Finally, while the methodology used in this study was a traditional historiometric multiple-case study using secondary sources, alternative methods of studying leaders using the historic record may enhance future studies of collectivistic leadership. This study, along with most historiometric studies of leaders, focused on a *notable* leader, and this may limit our ability to generalize results to the wider population due to a form of range restriction with these leaders usually exhibiting high levels of performance. Studies of less notable leaders were generally considered difficult to conduct due to a lack of records. However, given the trend toward the digitizing of information and documents, studies of these less well-known figures through the analysis of primary sources (e.g., speeches, interviews) are now a more realistic avenue for research (Simonton, 2003). Future historiometric studies of both collectivistic leadership and leadership in general, may benefit from a focus on more "typical" or lower-level leaders. Bearing on this point, this digitization of records allows increased access to film and audio records of leaders, allowing for more direct coding of behaviors. For example, we may actually be able to observe leaders acting in their leadership role and code observed behaviors rather than relying on a limited description of an event from the historical record. Studies using these alternative sources may allow for both the study of variables that would be difficult or impossible to code using other methods as well as the development of more realistic measures for use in the real world.

Overall, this study points to the need for further study of a new approach to understanding leadership, a collectivistic approach, that may provide a viable structure and explanation for a number of questions in the leadership literature, particularly those with regard to the relationships between leaders, teams, individual team members, and their networks. This model, if the current results are replicated and further validated, may also provide a potential future basis for leadership training, as the use of collectivistic leadership actions may increase leader, team, and organizational performance. Future empirical research should continue to be conducted on other potential antecedents of collectivistic actions (e.g., affective climate, problem type) or other possible outcomes (e.g., long-term team performance). Especially important are studies on the relationship between leadership and communication, social networks, and collectivistic actions, as these areas are generally understudied in the realm of leadership (Friedrich et al., 2009). Additionally, the results of this study point to the importance of examining the situational moderators that may influence the relationship between collectivistic leadership and performance (Yammarino et al., 2012) and interventions to facilitate effective collectivistic leadership. Our hope is that this initial investigation will act as a foundation for other research along similar lines and may provide guidance in future efforts to further refine our understanding of collectivistic leadership.

Acknowledgments

We would like to thank Rahul Chauhan, Vincent Giorgini, and Jensen Mecca for their contributions to the present effort. We would also like to thank the editor and the anonymous reviewers for their helpful feedback throughout the revision process.

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