Conceptual Foundations of Information Systems Leadership

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Abstract

This article discusses the conceptual foundations of information systems leadership. We aim to bridge the gap between that research and the general leadership research. The article includes two main sections: information systems leadership, and fundamentals of leadership in general. The first section focuses on information system leadership starting with a historical perspective followed by a discussion of context. Then, we highlight what makes information systems leadership effective and provide a summary of the styles, behaviors, and characteristics studied by scholars. The second section focuses on leadership in general and lists the main approaches to leadership theory. We discuss character traits and leadership; describe the main leadership styles that dictate the leaders’ behavior; and, highlight the relationship between leadership and organizational outcome. We conclude the article with a short discussion section that links the general leadership studies to those focused on information systems leadership.

Keywords

Leadership, characteristics, styles, leadership theory, information systems, information technology

Introduction

Is information system leadership different from general leadership? And, can we build on existing leadership research? Those two fundamental questions face information system scholars interested in studying information system leadership. Based on an extensive literature review that was recently completed by the authors (Ghawe and Brohman 2016), it appears that there is scant research on what makes IS leadership different from other leadership roles in organizations. Two findings of the previous study motivated this conceptual article: universally accepted leadership styles rarely appeared in information systems leadership studies; and, observed behaviors and measured characteristics of information system leaders were, for the most part, randomly selected and not linked to any universally accepted standard leadership styles. For example, we see some studies that describe the needs of chief information officers to be charismatic, technical and have tenure with their organizations but stop short of identifying a specific leadership style for those leaders. On the other hand, we see studies that define information system leaders to be either on the demand side or supply side of leadership. Then, pick and choose some behaviors at random to study. Historically, information system leaders had operated within environments that were vastly different from those of the general leadership in organizations. And, although that this might still be the case for the more traditional types of businesses, new forms of organizations open the door for more challenges to information system leaders. These challenges bring them closer to being general leaders of organizations rather than being confined to the technology domain. The literature appears to treat information system leadership as a separate phenomenon rather being a part of a the larger leadership research that have come a long way in establishing universally accepted standard forms of leadership with unique characteristics and behaviors. Consequently, the objective of this article is to present the conceptual foundations of information systems leadership by combining the work of the general and information systems leadership research in one place. This way, scholars can build on existing leadership research rather than starting from a green field.

The article is divided into two main sections: information systems leadership, and leadership in general. The first section starts with a historical perspective, highlights context, effective leadership and summarizes prior research on information systems styles, behaviors, and characteristics. The second section focuses on leadership in general and lists the main approaches to leadership theory, discusses the relationship between leadership and character, and summarizes standard leadership styles. The article concludes with a discussion section that links the two streams of leadership research.
Information Systems Leadership

Is information system leadership different from general leadership? And, do we need to study information system leadership differently? Historically, information system leadership emerged during the past five decades and evolved from a simple managerial role to a major leadership role that has the potential to change the projection of the organization. Furthermore, information system leadership has idiosyncratic aspects stemming from the nature of information systems (Karahanna and Watson 2006) and hence requires its customized research. However, and notwithstanding the differences, it is possible to build on the existing general leadership research rather than re-inventing the wheel. We start from the history.

Historical Perspective

Information systems leadership’s role has changed over the years from a technical manager in charge of mainframes, computers and data processing in the early 1970s to a system planner and controller in the 1990s. The role has expanded since then and acquired several other responsibilities including managing information technology architecture, knowledge management, data, online business and human resources. Over time, organizations increased their dependence on information systems to ensure superior performance and competitiveness. This increased reliance on information technologies added complexity and required management sophistication. Consequently, system managers rose to power and gradually joined the executive suite reporting directly to CFOs, COOs, and even CEOs. The term, chief information officer (CIO), first appeared in the literature in 1981 and the title is given to the most senior executive managing information and communication technologies that support the strategic goals of the organization (Lane and Koronios 2007). CIOs are information systems leaders assuming the responsibilities of information systems management, information technology architecture and infrastructure planning and development, computing technology, Internet and e-business, information security, and knowledge management (Karahanna and Watson 2006). CIOs are hired by a wide range of corporations from the public, the private, the military and non-profit. They are also given central roles in their business strategies to enhance the performance of the organization (Gerow 2012). Onan & Gambill's (2001) research shows little difference between the role of the CIOs in small businesses (less than 1000 employees) and larger companies (greater than 1000 employees) based on surveying 300 companies from a wide range of industries.

Since 2000, rapid changes in technology and communication systems led to changes in the organizational structures and contributed to further distinguishing the CIOs’ leadership role (Horner-Long and Schoenberg 2002). These changes substantiated several roles for CIOs as business strategists, relationship architects, integrators, information technology educators, utility providers and information stewards (Smaltz et al. 2006). All these responsibilities require leadership capabilities that enable CIOs to effectively direct a wide range of complex and diversified fields including security, relationship building, governance, shareholder wealth management, and organizational performance. CIOs interact, educate and influence other top management team members in addition to implementing new technologies and systems (Karahanna and Preston 2013). The increasing complexity of the technology leads to further distinguishing several other information system leadership roles: chief technology officer, chief digital officer, chief knowledge officer, and chief innovation officer (El Sawy et al. 2016). Today’s information system leaders are often members of the firm’s C-level executive team with a range of leadership responsibilities that are not very much different from those of the CEOs. Information systems leaders are now in charge of overseeing the information technology operations and resources, participating in business strategy, offering vision, and ultimately creating business value (Ghawe and Brohman 2016). Consequently, it is important to ask if information system leadership is directly linked to the context of information technology or is it general and the general leadership research is applicable. In the next section, we discuss the context issues in studying information system leadership.

Information Systems Leadership Context

Context is one of the most important elements in study design (Whetten 1989). Context is defined as “situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables.” (Johns 2006, p. 386). Cappelli and Sherer portray context as “the surroundings associated with phenomena which help to illuminate that [sic] phenomena, typically factors associated with units of analysis above those expressly under investigation” (1991: 56) (as quoted in Johns 2006, p. 386). According to Whetten (1989), context is the “Who, Where,
When” where “these conditions place limitations on the propositions generated from a theoretical model,” Furthermore, “these temporal and contextual factors set the boundaries of generalizability, and as such constitute the range of the theory.” (Whetten 1989, p. 492).

The previous section illustrates that historically the context in which information system leaders had operated was vastly different from that of the general leadership in organizations. And, although that this might still be the case for the more traditional types of businesses, new forms of organizations open the door for more challenges to information system leaders. These challenges bring them closer to being general leaders of organizations rather than being confined to the technology domain. In the past, information system leaders were more concerned with aligning their operations to the organization’s strategy (Gerow et al. 2014). Today’s information system leaders are more concerned with executing their businesses digitally (El Sawy et al. 2016). Furthermore, new forms of organizations that are born and operated digitally make information systems leaders operate as general leaders (Chen et al. 2010). Consequently, it is still important to take the context of the organization and the role when studying information system leadership but scholars should not ignore the general leadership research in the process. In the next section, we briefly discuss what makes information systems leaders effective. Then, in the following section, we summarize how information systems leadership styles and characteristics appeared in the literature.

Effective Information Systems Leadership

Effective information systems leadership leads to citizenship behavior, improved support from subordinates, enhanced technical commitment and job satisfaction. It also leads to swift responses to the dynamic needs of the business and its turbulent environment (Karahanna and Watson 2006). Furthermore, effective information systems leadership must have four capabilities. These include the ability to bridge the cognitive gaps between information technology and other business functions; the ability to build and manage teams of distinct specializations; the desire to be heavily involved in business process management; and adaptability to manage change (Jablokow et al. 2010). And, while effective leaders, in general, develop a learning mindset within their organization and this creates a falling dominoes effect on followers, information systems leaders are distinct. This distinction comes from the expectation that information systems leaders need to combine information systems technical skills with an in-depth understanding of the organization across all functions from operational to strategic (Karahanna and Watson 2006). To enhance the effectiveness and influence of information systems leadership, those leaders should report directly to the CEOs, have formal involvement in executive team activities, and have the structural power within the firm by establishing role importance (Gerow et al. 2012).

Leadership Styles and Measured Characteristics and Behaviors

In a previously published study titled CIO Leadership Characteristics and Styles (Ghawe and Brohman 2016), the authors conducted an extensive literature review of existing information systems and chief executive officers’ leadership styles and characteristics. Two findings of that study motivated this conceptual article: universally accepted leadership styles rarely appeared in information systems leadership studies; and, observed behaviors and measured characteristics of information system leaders were, for the most part, not linked to any universally accepted standard leadership styles.

Among the standard leadership styles that are widely considered as universal, only four appeared in the information systems leadership studies: transactional, transformational, servant and strategic (Ghawe and Brohman 2016). Several other, non-standard, styles appeared in the information systems leadership research. These styles are the demand-side, supply-side, factory, support and turnaround leadership (Ghawe and Brohman 2016). In a sharp contradiction to the paucity of leadership styles studied by researchers in the information systems field, more than 145 leadership characteristics, and over 70 distinct behaviors are reported. Unfortunately, one important aspect that was clear in the previous study is that the characteristics and behavior selected by information systems scholars were randomly selected. We grouped these characteristics and behaviors into four distinct groups: fundamental, relationships, expertise and sensing (Ghawe and Brohman 2016). Table 1 provides a summary of the studied characteristics and behaviors (Adopted from Ghawe and Brohman 2016).
Leadership, within an organizational context, is defined as a process that includes influencing the task objectives and strategies, influencing people to implement the strategies and achieve the objectives, influencing group maintenance and identification, and influencing the culture of the organization (Barker 2001). Furthermore, scholars distinguish between leadership and management where “leadership is about doing the right thing for the success of the organization, while management is about doing the thing right.” (Bennis, W. 1989 as quoted in El Sawy et al. 2016, p. 142). But, a universal definition of leadership

| Table 1. Summary of Information Systems Leadership Characteristics and Behaviors |
|---------------------------------|---------------------------------|---------------------------------|
| **Group – Fundamental:** These characteristics and behaviors are stable, robust and enduring. They are independent of the situation and thought to be highly desirable by the information systems leaders' peers and team members. |
| **Characteristics:** Adaptable, Age, Aggressive, Ambitious, Analysis, Assertive, Complacency, Confidence, Conservative, Courage, Creative, Defensiveness, Deliverer, Demanding, Energetic, Ethical, Fairness, Focused, Gender, Honest, Integrity, Intelligent, Introvert, Openness, Organized, Persistent, Powerful, Proactive, Rigidity, Task-focused, Trust. |
| **Behaviors:** Self-Defending, Defending own position, Reward and recognize, Ingratiate, Focuses on achieving results, Lives the values, Exert pressure. |
| **Group – Relationships:** These characteristics and behaviors are related to understanding, motivating, inspiring and influencing people and are often associated with the emotional intelligence characteristics. |
| **Characteristics:** Charismatic, Collaborative, Communicativeness, Controlling, Delegation, Diplomat, Favors, Networking, Extraversion, Influencing, Inspiring, Interpersonal Relationship, Lobbyist, Motivating, Passionate, Persuasive, Relationship builder, Respectfulness, Team player / Sociable. |
| **Behaviors:** Partnerships, Avoidance of close supervision, Coalition, Lists more to his employees, Spend more time structuring the conversation and verifying with their subordinates, Providing feedback, Structuring conversation, Inform executives, Facilitating participation in decision making, Facilitator, Exchange of favors, Capacity to influence the organization, Convince Others to Influence, Inspiring Vision, Encourage Challenge, Demonstrating interest and concern in their subordinates, Relationship builder, Ability to network in order to lobby for both resources and stakeholder support, Motivating people, setting expectations of high standards of performance, Establish initial credibility, Rational persuasion, Ingratiation, Personal appeals, Network extensively, Relationship architect, Foster teamwork, Delegation of authority, Gives his subordinates more freedom to interpret high standards of performance, Establish initial credibility, Rational persuasion, Ingratiation, Personal appeals, Network extensively, Relationship architect, Foster teamwork, Delegation of authority, Gives his subordinates more freedom to interpret factual information themselves. |
| **Group – Expertise:** These characteristics and behaviors are related to specific education, tenure and work experience of the information systems leaders. They are associated with technical leadership and in-depth knowledge of the specific nature of technology and business savviness. |
| **Characteristics:** Business-Savvy, Competent, Education, Geek / Nerd, Innovativeness, Negotiator, Planning, Technical, Tenure - Job / Organization. |
| **Behaviors:** Set clear expectations, efficient resource allocation, collection and dissemination of data for corporate planning and performance evaluation, Directing, Maintain good executive relationships, Partner with executives wisely, Change agent / Business expert, Organizational designer, Business system thinker, Business domain knowledge, Share Knowledge, Verifying, Informing, Leverage successful projects, Educator, Innovator, Innovator & Creator, Prioritize Activities, Exploiting technology, Professionally challenging, Gather information, System thinker, Information steward, Technologist, Informed buyer,, Infrastructure builder. |
| **Group – Sensing:** These characteristics are associated with the capability to act at the right time, respond to risky situations and plan strategically. They represent shrewdness and sensemaking, agility and entrepreneurial mentality. |
| **Characteristics:** Agility, Decisive, Entrepreneurial, Futurity, Reading the market, Risk-taking and risk aversion, Sensing, Strategist, Vision. |
| **Behaviors:** Soliciting new ideas, Opportunity seeker, Entrepreneur, Interpret external IT developments, Establish Strategic Controls, Strategist, Anticipating Opportunities, Visionary leadership. |

But, two fundamental questions remain. First, why information systems scholars ignored the universally accepted standard leadership styles when they studied information systems leadership? And second, why the selected sets of studied leadership characteristics and behaviors appear to be random? We believe that the answers to those question are related to the general believes that information systems leadership is unique and does not follow the standard styles. And, information about the standard leadership styles, behaviors and characteristics are scattered in the literature that it is simply not convenient for information systems scholars to use them to guide their research. And, while the first cause, the uniqueness of information system leadership, is not fully answered in the literature, the second cause can be easily addressed as we do in the second half of this article.

**Fundamentals of Leadership**

Leadership, within an organizational context, is defined as a process that includes influencing the task objectives and strategies, influencing people to implement the strategies and achieve the objectives, influencing group maintenance and identification, and influencing the culture of the organization (Barker 2001). Furthermore, scholars distinguish between leadership and management where “leadership is about doing the right thing for the success of the organization, while management is about doing the thing right.” (Bennis, W. 1989 as quoted in El Sawy et al. 2016, p. 142). But, a universal definition of leadership
is still eluding scholars, so the majority of them study leadership without defining it or settle for the conventional leadership wisdom. The latter group asserts that “leadership is all about the leaders and their ‘functions’ in the organization; leadership is the total of the leader’s performance, and performance is the result of some characteristics of the leader vis-a-vis conditions of the environment.” (Barker 2001, p. 474). Consequently, leadership theorists, as we see next, attempt to explain leadership as the relationship between the leader’s abilities, traits, characteristics and actions within a specific context and given the nature of the followers (Barker 2001).

Schools of Leadership Theory

Most of the leadership theorists, including the information systems leadership scholars, follow one of six main schools of leadership theory (Turner and Müller 2005). These schools are the trait school, the behavioral or style school, the contingency school, the visionary or charismatic school, the emotional intelligence school, and the competency school. The trait school assumes that leaders are born, not made, and they share common traits. The behavioral or style school assumes that effective leaders can be made and those leaders adopt certain styles or behaviors. In contrast, the contingency school suggests that the situation impacts the effectiveness of the leader. The visionary school focuses on the nature of the interaction between the leader and his or her followers particularly at the time of change. The emotional intelligence school adopts the notion that the leader’s emotional intelligence has a greater impact on his or her success as a leader than does the leader’s intellectual capability. Finally, The competency school closes the circle by emphasizing the importance of the leader’s competencies and his or her ability to learn and adopts his or her behavior to the specific situation at hand (Turner and Müller 2005). In the next section, we focus our attention on the relationship between character traits and leadership.

Character Traits and Leadership

The trait approach had dominated the initial decades of scientific leadership research (Zaccaro 2007) and was popular up to the 1940s. This approach assumes that effective leaders are born, not made and share common traits. Kirkpatrick and Locke (1991) argue that effective leaders exhibit the following traits: strong drive and ambition, desire to lead, motivation, honesty, integrity, self-confidence, cognitive ability and knowledge of the business. These traits are necessary, but not sufficient. For example, the ability to execute distinguish successful from not so successful leaders and hence has an important impact. Consequently, the trait approach asserts that leaders have an identifiable set of personality and cognitive traits. Also, the trait approach maintains that leaders are discernibly different from other executives and that a generic set of leadership traits is universally applicable to any business environment (Horner-Long and Schoenberg 2002). Some authors, however, distinguish between skills and traits stating that skills are abilities to do things, satisfy needs, and make decisions, effectively. But, traits are “patterns of individual attributes, such as skills, values, needs, and behaviors, which are relatively stable in the sense that they tend to repeat over time.” (Strang 2007, p. 431).

In general, the trait approach focuses on three main areas: abilities, personality and physical appearance (Turner and Müller 2005). Abilities are associated with hard management skills while personality is associated with self-confidence and emotional variables. Interestingly, the physical appearance covers aspects like size and appearance which are rarely addressed by leadership researchers who often focus on the context. For example, in the context of technology project leadership, Strang (2007) provides a leadership skill-trait-behavior process model. He asserts that “the four basic traits which seem to be shared by most successful leaders are [...] intelligence, maturity/broad interests, strong inner motivation/drives (self-confidence and self-efficacy), and consideration of others needs/values (emotive sensitivity).” (Strang 2007, pp. 431–432). Nevertheless, Zaccaro (2007) argues that combining traits and attributes and integrating them in conceptually meaningful ways, are more likely to predict leadership than additive or independent contributions of several single traits. Furthermore, the acquisition of the leader’s skills and expertise occurs mostly through experience and training and often exhibits a constant evolution for effective leaders. Thus, a defining a core of these dominant leadership trait patterns reflects a stable tendency to lead in different ways across disparate organizational domains (Zaccaro 2007). But, the trait approach was disdained for its inability to offer clear distinctions between leaders and non-leaders and for its failure to account for situational variance in leadership behavior (Zaccaro 2007). In the next section, we discuss these two aspects and link leadership to characters in addition to highlighting the role of situational factors.
Leadership and Character

Leadership, character, and virtues are strongly linked. Therefore, acting with character is to show virtue and virtues are central to character. Consequently, character is revealed in the moral and ethical choices leaders make. For example, Sarros et al. (2006, p. 683) define character as “doing the right thing despite outside pressure to the contrary” and consider it as “an essential leadership attribute.” Sarros et al. (2006) identify three character dimensions and list seven leadership virtues. The three character dimensions are self-reliance, cooperativeness, and self-transcendence while the seven leadership virtues are: humility, courage, integrity, compassion, humor, passion and wisdom. Alternatively, Peterson and Seligman (2012) identify six core character virtues: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence. Those virtues appear to transcend both time and culture (Wright and Quick 2011). Nevertheless, Sarros et al. (2006) recognize that both social and individual psychological factors influence the expression of character. Hannah and Avolio (2011) distinguish between character and character-based leadership and argue that character serves as an antecedent to exemplary leadership styles. They address the ontology of character as a leadership construct by distinguishing between the locus, the transmission, and the reception of leadership. Then, they define the locus of leader character as representing internal aspects of the leader such as his or her personality, values, moral reasoning and identity (Hannah and Avolio 2011). Character-based leadership, however, is morally-based (Quick and Wright 2011) and several styles are distinguished by its fundamental adherence to a core moral framework. These styles include servant, spiritual, values-based, and authentic leadership. This position is different from the one taken by Hannah and Avolio (2011) who argue that character-based leadership is a general construct somewhat agnostic as to any specific leadership style, and therefore character, as an antecedent, may drive a variety of different models of exemplary leadership. They further assert that “leader’s character could therefore be used to build out our understanding of transformational, ethical, authentic, servant, spiritual, or other leadership models based on two factors: 1) the character makeup of the specific leader, and 2) what aspects of their character makeup is active in a certain context.” (Hannah and Avolio 2011, pp. 981–982).

The behavior of a leader may or may not be directly linked to his or her character as many forces may intervene and influence such behavior. For example, Stenmark and Mumford (2011) demonstrate that situational variables may have a complex effect on ethical decision making and identify some situational variables that impact leaders’ ethical decision making. Similarly, Hannah and Avolio (2011, p. 982) state that “leader behavior can thus show within-situation consistency due to repetitive sources of priming within a particular situation, yet large between-situation variance also exists.” They also indicate that “it is plausible that there are subsets of activated character strengths related to each of the various potential transmissions of character-based leadership” and propose that “unique character signatures may predict transformational leadership, while others may predict ethical, authentic, and other forms of leadership. Importantly, these antecedents or signatures could stem from a combination of an individual leader or between-leader differences, as well as the specific aspects of character activated in one situation versus another (i.e., within-person differences)”. Consequently, certain and difficult situations, particularly if repeated, combined with the leader’s chosen response and behavior define his or her leadership style. Therefore, and according to Badaracco (1998), the defining moments are those decisions taken cumulatively over many years under situations in which our professional responsibilities unexpectedly come into conflict with our deepest values. These decisions form the very basis of an individual’s character. By repeating this process again and again throughout their work lives, leaders can craft an authentic and strong identity. Furthermore, “successful leaders complement their knowledge of leadership science through the mastery of hands-on practice and experience.” (Quick and Wright 2011, p. 986). As a result, certain unique character signatures combined with the leader’s response and behavior over a long period and across several situations define his or her leadership style. We summarize and discuss these leadership styles in the next section.

Leadership Styles

During the past few decades, several leadership styles (paradigms) have been identified and become widely accepted as standard styles of leadership. This section provides a brief description of each one of these leadership styles and highlights the major characteristics associated with it. And, although only a few of them appeared in studies related to information systems leadership (Ghawe and Brohman 2016), several of them are widely applicable and even practiced by information systems leaders.
Conceptual Foundations of Information Systems Leadership

Transactional Leadership is characterized by reward and fear-based motivation. Leaders provide their followers with reward-based transactions that motivate them to perform specific tasks. This type of leadership serves the valuable role of setting unambiguous performance standards and expectations despite its reliance on power (Carter and Greer 2013). This style of leadership is positively associated with short-term high performance. However, when contingencies involve aversive reinforcements, the effectiveness of the style declines. Some authors associate this style with managerial or supervisory roles rather than leadership (Carter and Greer 2013).

Transformational Leadership is characterized by developing a vision, communicating this vision and inspiring others to follow it. Transformational leaders help followers identify with the organization’s values, mission, and visions. Transformational leadership’s impact is more apparent over a long period and results from building trust and influencing the internal mindset of the organization’s people (Carter and Greer 2013). Leaders of this style often are considerate of their followers’ needs and inspire hope and trust. They provide a stimulating environment; inspire and empower their teams (Avolio et al. 2009). Transformational leaders exhibit strong drive, motivational behavior, honesty, integrity, cognitive ability, self-awareness, and self-confidence, in addition to expertise as general characteristics (Avolio et al. 2009; Carter and Greer 2013). Transformational leaders, over the course of their careers, constantly develop themselves and encourage followers to do the same (Avolio et al. 2009).

Charismatic Leadership is distinguished by the unique set of leader’s characteristics that inspire followers to share a common vision and set of values. It is action oriented through discipline, self-sacrifice, risk-taking, and unconventional expertise (Carter and Greer 2013).

Narcissistic Leadership is similar in characteristics to charismatic leadership but harbors the negative aspects of it. For example, the narcissistic leaders are characterized by sensitivity to criticism, poor listening skills, lack of empathy, and narcissism. There is evidence that narcissistic leadership has some positive aspects including persuasion, risk-taking, and attracting followers (Carter and Greer 2013).

Authentic Leadership is characterized by self-awareness, transparency, high morality and balanced processing which includes thoughtfulness and judiciousness (Carter and Greer 2013). This leadership is also associated with trust, citizenship, and commitment. Authentic leadership is considered to incorporate some other styles of leadership including transformational, charismatic, servant and spiritual leadership but there is little evidence that links authentic leadership to organizational performance (Carter and Greer 2013).

Servant Leadership has several distinct characteristics—empowering and developing people, humility, authenticity, interpersonal acceptance, providing direction, and stewardship (Carter and Greer 2013; Gregory Stone et al. 2004). Servant leaders are altruistic and place the good of those being led over their self-interest. They share power, build community, and lead by setting an example of exemplary behavior to achieve the common good for the individuals and organization (Carter and Greer 2013). This type of leadership is associated with job satisfaction, safety concerns for others, and organizational commitment of followers. It is also positively associated with team effectiveness (Carter and Greer 2013).

System Leadership is characterized by the ability to see the larger system, by fostering reflection and more generative conversations and shifting the collective focus from reactive problem solving to co-creating the future (Senge et al. 2015). System leaders are realistic risk takers through engaging the expertise of others. They are innovative, tenacious, inclusive and transparent. They are also humble, fair, visible and responsible. System leaders create a work culture that fosters an ongoing reflection and collaboration and leads to learning and growing on the job. They engage people across boundaries; have concern for others outside their organization; and are committed to learning over time through disciplined practice and cooperation with other system leaders (Senge et al. 2015).

Resilient Leadership demonstrates agility, distinctiveness, and alignment and is characterized by flexibility, adaptability, and innovativeness. Resilient leaders foster good working relationships, clear communication and strong buy-in at all levels of the organization. Resilient leaders create an environment where members of their teams learn from each event that challenges the organization. This proactive and progressive environment leads to behavior that embraces the vision of the organization and preserves its elements towards renewal and resiliency (Allison 2012).
Leadership and Organizational Outcome

Market observations and academic research indicate that leadership has a profound impact on organizations. Some leaders, within the span of a few years, can change their firms’ position from declining to leading or from competitiveness and innovativeness to trailing. The organizational outcome may be broadly assessed by observing a firm’s prosperity, stagnation or decline. Furthermore, a leader’s style often has a profound impact on the performance of the members of his or her organization and on its culture leading to change the organization’s outcome. It is not uncommon when the leadership changes, a change in organization outcome follows (Jung and Avolio 1999). Also, strategic choices and the process of decision making are closely associated with leadership characteristics. For example, Quigley and Hambrick (2015, p. 829) assert that “in the United States, executive characteristics were more strongly associated with strategic choices in recent decades than in earlier postwar decades.”

Different leadership styles are associated with linked values emphasizing economics and concern for stakeholders. Also, there is evidence highlighting the relationship between the values of strategic leaders and innovation (Carter and Greer 2013). According to Giberson et al. (2009) who studied the relationship between CEO characteristics and organizational cultural values, “organizations need to seriously consider the fit between the current or desired organizational culture and CEO characteristics.” Giberson et al. conclude that “several of the CEOs’ personality traits were significantly related to the extent to which members viewed their organizations as characterized by different culture values.” (2009, p. 133).

And, while the relationship between organizational ascendance and leadership characteristics has received the majority of the researchers’ attention, the relationship between organizational decline and leadership characteristics has also received some attention. (Whetten 1980). The organizational decline is described by Carmeli and Sheaffer (2009) regarding difficulties in adapting to the environment, stagnated organizational processes, a phase preceding crisis, and a substantial, absolute decrease in the organizational resource base, which occurs over a specified period. The decline could be distinguished from downsizing as an involuntary corporate downturn due to internal or environmental factors, whereas downsizing is an intentional, proactive, and often reactive managerial strategy aimed at generating sustainable fit and adequate responses to external-environmental turbulence and uncertainty. Destructive leadership plays a major role in changing the course of organizations toward a declining one when other factors continue to be favorable. Carmeli and Sheaffer (2009) identify two psychological leadership failings as precursors of organizational decline. These failings are leadership risk-aversion and leadership self-centeredness—the two characteristics detrimental to organizational viability. Leadership risk-aversion is defined as “the disinclination of a person to agree to an outcome with a vague payoff rather than another outcome with a more obvious but potentially lower expected payoff.” Leadership self-centeredness is either ethical egoism or rational egoism where the first one is defined as “the belief that individuals should do what is in their own self-interest,” and the second is defined as “the belief that it is rational to act in one’s self-interest.” (Carmeli and Sheaffer 2009, p. 365). Furthermore, research asserts that destructive leaders possess five critical characteristics: charisma, personalized use of power, narcissism, negative life themes, and an ideology of hate (Padilla et al. 2007).

Interestingly, in the last 40 years, the business environment has become more dynamic and fast-paced; technological changes have heightened; product life cycles have become shorter; and, domestic and foreign competition have increased. All these changes have been documented as contributing to a new era of “hypercompetition,” and to an increase in the impact of leadership characteristics and styles on organizational performance (Quigley and Hambrick 2015). These same years have also witnessed the rise
of the information systems leadership as a distinct and impactful force that changed the organizational landscape. Information systems leadership has moved from attempting to align their contribution to business strategy (Gerow et al. 2014) to conducting business digitally (El Sawy et al. 2016).

Discussion

Machiavelli dared to suggest that common people could become successful leaders by their abilities and through the skillful application of specific principles (Barker 2001). Since then, context and the followers have become part of any scientific leadership discussion. The same can also be said about information system leadership. Leadership literature distinguishes between universal and contingency leadership theories. Universal theories of leadership suggest that leaders share an identifiable set of common characteristics. Contingency theories, on the other hand, claim that a leader must match his or her environmental and organizational settings, suggesting that the different situational contexts of technology companies dictate a distinctive set of leadership characteristics. Another approach identifies four contingency modes of effective leadership: factory, support, turnaround and strategic (Horner-Long and Schoenberg 2002). An alternative view that distinguishes information systems leaders is the separation of information technology leaders into supply side and demand side. The first side represents the educator, the information steward, and the utility provider. The second side represents the strategist, relationship architect, and integrator. Consequently, the norms of the environment tend to dictate the behavior of the effective information systems leaders. Nevertheless, an information systems leader needs four sets of characteristics: fundamental, relationships, expertise and sensing (Ghawe and Brohman 2016). And, most likely he or she needs to pursue a strategic leadership style. However, researchers can rely on any of the six leadership theoretic approaches to study information systems leadership instead of targeting individual characteristics, or specific behaviors that may or may not belong to any particular style. Furthermore, the general leadership research appears to have closed the gap between the characteristics and the behavioral approaches to study leadership and suggests several universal leadership styles. Therefore, it is also possible to eliminate such dichotomy from information systems leadership research.

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