Leadership Development and Social Capital: Is There a Relationship?

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Abstract

Significant resources of time, money and expertise are invested in leadership development programs, and networking is often cited as a benefit of participation in these programs. Previous research has traditionally focused on leadership as an individual attribute, but researchers and practitioners are increasingly recognizing leadership as a social process. Social capital has emerged as an important theme in leadership research, and networking and relationship-building are important steps in enhancing social capital. Based on this review of recent literature, I conclude that the relationship between social capital and leadership is well documented, but we have an incomplete understanding of the dynamic nature of this relationship, and lack sufficient evidence to support a causal assertion that one leads to the other. Researchers and practitioners should develop new leadership development program evaluation methods and designs, in the context of social capital, to answer these questions.

Introduction

The practice of leadership development has been in existence for decades and interest in this field continues to grow (Day, 2000). One need not conduct an extensive internet search to find thousands of leadership development programs (LPD) targeting corporate executives, community leaders, not-for-profit organizations, youth and adult learners. In the specialized area of Agricultural Leadership Development alone, over 111 million dollars of support went to 28 United States programs from 1965 to 2000, and over 7200 program participants had been exposed to approximately 18 to 24 months of training (Helstowski, 2000).

Leadership development researchers and practitioners are increasingly recognizing the social processes involved in leadership (Balkundi & Kilduff, 2006; Uhl-Bien, 2006). Earlier leadership theories (e.g., transactional and transformational leadership theory) tended to emphasize those attributes

possessed by the individual leader, but more contemporary leadership research is focused on relations between actors (Balkundi & Kilduff, 2006; Kouzes & Posner, 2002). Social capital (SC) has emerged as an important concept in leadership development work, and can be defined simply as "the features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit" (Putnam, 1995). Networking is an important step in the process of building social capital (Fredricks, 2003; Zacharakis & Flora, 2005). *How Leaders Create and Use Networks* by Ibarra and Hunter (2007) and *How Leadership Networks Strengthen People and Organizations* by Giovagnoli and Stover (2004) are two more examples of recent writings on the importance of networking to leadership development. Several other scholarly works argue that a relationship exists between SC and leader effectiveness (Balkundi & Kilduff, 2006; Burt & Ronchi (at press); Chia-Chen Kuo, 2004; Fredricks, 2003; Giovagnoli & Stover, 2004; Kilpatrick & Falk, 2003; King, 2004; Terroin, 2006; Zacharakis & Flora, 2005).

The purpose of the present review is to determine the extent to which the literature supports the notion that a relationship exists between leadership development efforts and enhanced SC. This review will examine not only positive aspects of such a relationship, but will also look for potential drawbacks or failures in achieving sustained improvement in SC or networking.

Methods

A thorough review of all literature on leadership theory, SC theory, or measurement of SC is beyond the scope of this paper. I, therefore, focused on scholarly work that specifically addresses a link between the LDP and SC. It should be noted that some of the studies discussed do not mention SC per se, but do discuss the importance of relationships or networking in leadership, and therefore are considered in this discussion.

Certain selection criteria and search limits were utilized to focus this review. A review of leadership development literature by Day (2000) made extensive reference to SC in leadership development work. Partly because of Day's review, and partly to focus on more contemporary research in leadership development and SC theory, the present review focused on articles published since 2000. In an effort to ensure the quality of reviewed references, emphasis was placed on peer-reviewed journal articles. One doctoral dissertation (Black, 2006) specifically addressed LDP evaluation and made reference to a network building effect, so it was included in this review as well.

Several combinations of the following keywords or phrases were used in searching for appropriate references: leadership development, leader

effectiveness, leadership theory, leadership development program evaluation, social capital theory, measurement of social capital, leadership and social capital, networking, social networks, reviews. The search process utilized was similar to those suggested by Creswell (2003) and Galvan (2006). Initial searches of multiple databases and electronic journals were conducted through Cornell University's library gateway, with few limits (temporal or publication type) imposed. These databases included ABI/Inform, Academic Search Premier, Agricola (Ovid), ArticleFirst, BIOSIS Previews (ISI), Business Source Premier, Cornell University Library Catalog, ERIC (Ovid), ERIC Database, FRANCIS, Google Scholar, Human Resources Abstracts, ICPSR, International encyclopedia of the social and behavioral sciences, ISI web of knowledge, JSTOR, LexisNexis Academic, PapersFirst, Periodicals Index Online, ProQuest dissertations and theses, ProQuest Research library, PsycINFO, Social science research network, Sociological abstracts, Web of science, and Web of Science: Social Sciences Citations Index.

After screening the many hits obtained by these preliminary, relatively unrestricted searches, more productive databases were identified for further, more focused (temporal and publication type) searches. Following this round of more focused searches, highly relevant journals began to emerge, so further searches were conducted of those journals' archives. These journals/periodicals included Adult Education Quarterly, Journal of Extension, Journal of Leadership and Organizational Studies, Journal of Leadership Education, Leadership, Leadership and Organizational Development, Leadership Quarterly, and Review of Research in Education. At this point in the review, if not before, several authors, and even specific papers, emerged as important references (e.g., Day, 2000). I paid special attention to other literature reviews identified to this point and cross-referenced those reviews to my growing list of references. As a final check on the coverage of this review, I carefully reviewed the references sections of other key papers to look for additional authors and important papers that I might have missed.

Social Capital Theory

Often referred to as the father of modern social capital theory, Bourdieu (1985) defined social capital as:

> the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to memberships in a group – which provides each of its members with the backing of the collectivity-owned capital, a "credential" which entitles them to credit, in the various senses of the word. (p. 248)

For alternative definitions of SC provided by various authors, see the review of recent literature by King (2004).

Bourdieu (1985) also recognized the role of networks in building SC. He wrote that "the volume of the social capital possessed by a given agent thus depends on the size of the network of connections he can effectively mobilize" (p. 249). Bourdieu identified SC as one of three forms of capital, the other two being cultural capital and economic capital. He argued that while economic capital was immediately and directly convertible into money, both cultural and social capital were convertible into economic capital only under certain conditions. He suggested that SC could only readily be converted into economic capital if investments had been made in advance to ensure that when a relationship is drawn upon, the agents react. Zacharakis and Flora (2005) noted that "networks are the main mechanism through which trust is developed and reciprocity established" (p. 294) and Day (2000) proposed that "networking opportunities build peer relationships across functional areas, leading to the creation of additional SC" (p. 597).

Coleman (1988) likewise pointed to SC as a particular kind of resource available to an actor. Like physical capital, SC can be used to facilitate action for the individual or mutual benefit of the actors involved. Coleman suggested that SC is inherent in the structure of relations between and among actors. Unlike physical capital, however, SC is less tangible and not as easily owned by an individual. Because an individual actor may not realize all of the benefits of an increase in SC, as they would royalties from wholly-owned physical capital, they may be less inclined to make investments in developing SC:

> A property shared by most forms of social capital that differentiates it from most other forms of capital is its public good aspect: the actor or actors who generate social capital ordinarily capture only a small part of its benefits, a fact that leads to underinvestment in social capital. (p. S119)

Coleman (1988) also proposed that SC existed in three different forms. Nahapiet and Ghosal (as cited in Day, 2000) proposed three different aspects of SC, which I find similar to those forms proposed by Coleman. Table 1 offers a comparison of these taxonomies.

Table 1
Three forms of social capital as described by different authors

Coleman, 1988	Nahapiet and Ghosal (as cited in Day, 2000)
Obligations and expectations, which depend on the trustworthiness of the environment	Relational SC – functional assets that are rooted in networked relationships, such as trust and trustworthiness
Information-flow capability of the social structure	Structural SC – structure of interactions and an actors location in relation to his or her contacts provides resources to the actor and the organization
Norms accompanied by sanctions	Cognitive SC – resources embodied in shared representations and collective meanings among people (i.e., norms)

Other authors (Balkundi & Kilduff, 2006; Day, 2000; Kilpatrick & Falk, 2003; Putnam, 1995; Terroin, 2006; Zacharakis & Flora, 2005) have suggested different levels of network connections making up SC, not to be confused with the three forms of SC discussed above. Table 2 summarizes the terminology used by various authors to describe these types of network connections.

Table 2
Network connections in social capital: summary of selected authors and terms

Author(s)	Levels of network connections		
	Internal	External	
		Horizontal	Vertical
Balkundi & Kilduff (2006)	Ego and organizational networks	Ego and Inter-organizational networks	
Day (2000)	Strong (redundant) ties	Weak (non-redundant) ties	
Kilpatrick & Falk (2003)	Micro (individual) -bonding ties	Meso (organizational) -bridging ties	Macro (society) -bridging ties
Terroin (2006)	Bonding	Bridging	Linking
Putnam (1995)	Horizontal	Horizontal	Vertical
Warren (as cited in O'Brien et al.) (1998)	Horizontal linkages		Vertical Linkages
Zacharakis & Flora (2005)	Bonding ties	Bridging ties	

While these authors may use different terms to describe the various types of network connections that exist within SC, a few common themes emerge. Bonding ties generally refer to those ties between members of a group or community or internal relationships. Bridging, linking, or vertical ties are those that are established between communities or organizations; relationships between members of different groups or communities. It is generally accepted that ties or connections within an individual's own organization or community tend to be stronger and more frequent than external ties. Finally, most authors recognize that external ties or diverse membership in organizations are often necessary to arrive at creative and workable solutions to problems that organizations and communities face.

Another area of agreement seems to be that SC enhances the effect of other forms of capital in communities, including physical, financial, human, and environmental capital. None of these forms of capital reach their full potential if SC is not present (Zacharakis & Flora, 2005). Putnam (1993) has argued that SC enhances the benefits of investment in physical and human capital. Kilpatrick and Falk (2003) suggest that enhancing SC allows individuals to share their own knowledge and skills, or human capital, and that the development of trust in communities has been identified as a prerequisite for commitment and action on behalf of the community. Putnam (1995) showed social trust and civic engagement to be highly correlated. Kuo (2004) has noted that SC has a positive moderating effect on team effectiveness.

Finally, not all that is associated with SC is necessarily positive. For a thorough discussion of the risks and benefits of SC, see King (2004), table 1, p. 479. Bourdieu (1985) noted that in order for SC to be transformed into economic capital, investments must be made in advance to ensure that when a relationship is drawn upon, the agents in the relationship will react favorably. Weak, external ties tend to fall apart rapidly if they are not used for an extended period (King, 2004). In other words, SC requires advanced and sustained investment to be effective. Another downside of SC is observed when too much emphasis is placed on strengthening bonding (strong, internal) ties, at the expense of building bridging (weaker, external) ties. This usually leads to an insolated, isolated community with poor external relationships, and does little to overcome resistance to change (Kilpatrick & Falk, 2003). Zacharakis and Flora (2005) used the term cultural reproduction to describe community development projects that reproduced existing leadership structures rather than creating opportunities for expanding community leadership pools. Such efforts often lead to in-bred, self-serving forms of SC – commonly referred to as a "good old boy network" – and such networks tend to discourage newcomers, causing them to drop out prematurely. Finally, Balkundi and Kilduff (2006) suggest that brokerage across

social divides (sometimes necessary to create linking ties) may engender distrust rather than gains.

Having provided a brief review of SC theory, definitions, advantages and disadvantages, it seems a definition of leadership should be provided prior to launching into a discussion of the relationship between SC and leadership. However, given that most readers of this article likely have already spent a great deal of energy considering various definitions and theories of leadership, I will not dwell on the matter at length.

Leadership is defined simply as an influence process (Yukl, 2002). Using that definition in the context of this review of SC and leadership, we can slightly modify it to read: "Leadership is a social influence process" (e.g., Balkundi & Kilduff, 2006). That single adjective takes a simple, yet effective definition of leadership and recognizes that leadership is a social endeavor, implying the central role of relationships in its function. Having provided a simple but useful definition of leadership, let us now turn attention to the relationship between SC and leadership.

Social Capital and Leadership Linkage

Day (2006) reviewed the leadership development literature of the late twentieth century through three different contextual lenses: a conceptual context, in which he distinguished between leader and leadership development; a practice context, in which he examined state-of-the-art organizational development work; and, a research context, in which he summarized recent research that had implications for leadership development. As useful as that approach was, the most significant aspect of Day's work for the present review was how he underscored the importance of developing both social and human capital in organizations.

Day (2006) goes to great lengths describing the difference between leader and leadership development, and between human capital and social capital. Day points out that certain terms are used inappropriately based on a disconnection between the practice of leadership development and its scientific foundation. Traditional conceptualizations of leadership (e.g., transformational leadership theory) emphasize the individual leader, and early leadership research sought to identify traits, skills, and behaviors common to successful leaders (Day, 2000). Training programs that seek to improve such individual-level skills and abilities are more correctly referred to as leader development programs, or "human capital development" in human resource terminology.

Leadership development, then, more correctly refers to programs designed to improve the collective leadership ability of a group, organization, or community.

The literature commonly associates such group capacity with SC. The following analogy is useful in differentiating between the individual and social aspects of leader(ship) development (Day, 2000, p. 584):

Human Capital : Leader (individual) : : Social Capital : Leadership (group)

Programs that address only individual skills and abilities, then, should be referred to as leader development programs. Programs that develop the collective leadership capacity of groups, without addressing individual skills and abilities, should be considered leadership development programs. It is likely, however, that most programs in existence today address some combination of both individual and group capacity to lead, and simply refer to themselves as leadership development programs. Day also notes that networking and action learning are effective leadership development strategies for building SC. He suggests that more research is needed to determine if and how coaching, mentoring, and job assignments may lead to enhanced SC.

Balkundi and Kilduff (2006) provide a theoretical framework for the relationship of social networks to leadership. They offer four interrelated principals of network theory: the importance of relations between actors, embeddedness of actors in social fields, network connections constitute SC (the utility of network connections), and structural patterning of social life. These authors suggest "leadership can be understood as social capital that collects around certain individuals – whether formally designated as leaders or not – based on the acuity of their social perceptions and the structure of their social ties" (p. 421) and "our network approach locates leadership not in the attributes of the individual but in the relationships connecting individuals" (p. 420). Leader cognitions of social networks matter because leader cognitions affect leader behaviors with implications for both leader effectiveness and organizational effectiveness. They suggest that helping subordinates build SC is itself a measure of the leader's effectiveness, due in part to the fact that such enhancement of SC has organizational benefits. Finally, they emphasize that leaders "generate and use social capital through the acuity with which they perceive social structures and the actions they take to build connections with important constituencies within and across social divides" (p. 435).

In their longitudinal study of the economic viability of five rural communities, O'Brien, Raedeke and Hassinger (1998) concluded that SC was indeed a good predictor of rural community viability. Studying five more or less similar communities which had experienced similar major economic and environmental impacts over a six year period, the authors found that those communities where leaders had more extensive SC networks tended to be more successful. In this study, the researchers found a stronger relationship between community viability

and leaders' horizontal (within community) ties, as opposed to their vertical (outside of the community) ties.

Uhl-Bien (2006) offers Relational Leadership Theory (RLT) as an overarching framework for the study of leadership as a social influence process. While not addressing SC specifically, she offers ample evidence to support RLT. She distinguishes it from the recent, predominant relational leadership work known as Leader-Member Exchange (LMX), suggesting that the two perspectives of relational leadership theory can complement each other in future research. An entity perspective looks at the individual as the unit of analysis and interpersonal relationships (e.g., quantity, quality, type) as the variables analyzed. The relational perspective views leadership as a process of social construction; thus, relationships become the basic unit of analysis, not individuals. She shares several good definitions of leadership, as well as suggestions for future directions in leadership research (e.g., how relationships form and develop in the workplace). While not addressing SC specifically, the underlying tie to SC theory is the importance of relationships in leadership.

Kaufman and Carter (2005) noted that lack of SC in rural areas may serve as a catalyst for the implementation of LDPs. They also note that the term capacity building is often used to describe such community based SC enhancement or leadership development efforts, and that such programs usually provide networking opportunities that allow participants to build SC. Whereas Day (2000) noted that action learning (i.e., having participants work in teams on real-life problems) is an effective way in which LDPs can help participants build SC, Kaufman and Carter (2005) and Kelsey and Wall (2003) note that this is precisely where many LDPs fall short. Too often LDPs are effective at improving participant understanding of issues, but fall short in teaching them how to actually apply their learning to lead change efforts in their communities.

If many LDPs fall short in actually getting participants to apply what they have learned, or change their behavior, then increasing diversity in the LDP may offer some assistance. According to Kilpatrick and Falk (2003), shared experiences build networks, trust, and shared values, all of which lead to the development of SC and better community actions and decisions. Such claims of improved adult learning through shared action and interaction are supported by Terroin (2006). Kilpatrick and Falk (2003) suggest that SC is dynamic. It is both used and built through learning processes like those found in many LDPs. They suggest that agriculture could be considered a community of common purpose, similar to an island community. They note that small, isolated communities, like islands, often lack diversity, but that diversity is important in building bridging ties (see the SC discussion above). Such bridging, or external, ties are more conducive to overcoming resistance to change, whereas bonding ties (internal), when exaggerated, tend to make members resist change (as in close-knit, sheltered

agricultural groups). A good mix of bonding and bridging ties "enables the sharing of skills, knowledge, and resources within the group, while at the same time accessing outside resources" (Kilpatrick & Falk, 2003, p. 510).

In her literature review, King (2004) pays specific attention to the relationship between SC and the work of nonprofit managers and leaders. She does not address LDPs per se, but her review serves as a synthesis of relatively recent writing on several themes important to this review, summarized as follows:

- Numerous definitions of SC exist, and most authors agree that defining SC is a major challenge.
- Most authors agree there are different forms or levels of SC, though their terminology varies (e.g., Strong and weak ties, horizontal and vertical ties, bonding and bridging ties – see Table 2 above).
- SC is a resource that can benefit organizations and individuals; it can be accumulated, bartered, created, and mobilized.
- SC is embedded in networks, and actors central in those networks often serve in the role of broker. Actors with more connections, stronger connections, more central locations in the network, tend to be more powerful leaders.
- The SC of leaders is perhaps the most ignored, under-researched aspect of leadership.
- One of the greatest weaknesses of the SC concept is the absence of consensus on how to measure it.
- Researchers are unable to separate SC from its outcomes, making quantitative measures nearly impossible.
- Opportunities for research in SC are endless – but the researcher needs to conceptualize and operationalize them in a meaningful and scholarly way.

Another literature review conducted by Kuo (2004) examined literature that addressed impacts of team leadership on team effectiveness. Among other propositions offered as a result of this review, Kuo identified SC as a moderating variable in the relationship between team leadership and team effectiveness. He also notes that previous research on team leadership and team effectiveness rarely examined the effect of SC in teams; yet another suggestion that we should more extensively study the potential effect of SC and teams, and by extension, leadership.

LDP evaluations link to networking or enhanced SC

Several LDP evaluations suggest networking is an important benefit of program participation. While SC may not be specifically mentioned in some of these papers, a relationship between networking and SC exists, as previously discussed

(Fredricks, 2003; Zacharakis & Flora, 2005). Black (2006) conducted an outcome evaluation of a statewide LDP, and identified three levels of outcomes: individual, organizational, and societal/communal. At the organizational level "network of contacts" and "networking skills" were the outcomes most highly rated by program alumni in survey questionnaires. Carter and Rudd (2000) conducted an evaluation of a statewide LDP, using interview questionnaires with three different groups of stakeholders: LDP participants, their spouses, and their employers. Networking was identified by all three groups of respondents as one of the most important outcomes of the LDP. Diem and Nikola (2005) likewise claimed that the statewide LDP they studied helped members to establish as well as cultivate an extensive network in the agricultural community.

In an exploratory study, Fredricks (2003) developed a survey instrument, used in the case studies of two LDPs, to determine (a) if alumni maintained networks established during their training program and (b) how frequently they used such networks. Fredericks concluded that while the networking opportunities provided by LDPs promoted development of SC, lack of maintenance effort on the part of LDP alumni impeded the ultimate SC building value that might be realized by program participants. In other words, poor maintenance of networks diminished the SC effect of the programs studied.

According to Terroin (2006), action and interaction are necessary for adult informal learning to occur. Because the LDP evaluated in her study provided opportunity for this informal interaction and the development of relationships that foster learning, Terroin concluded that it did indeed help build SC. Similarly, Burt and Ronchi (at press) conducted a field experiment to determine the effectiveness of a Business Leadership Program (BLP) designed to educate participants about the network structure of SC, and found it to be effective in improving executive performance. In short, if executives were taught about the importance of network connections and SC, they were more likely to show performance improvement. However, the authors also determined that active participation is an important predictor of an individual's improvement; passive participants were virtually indistinguishable from non-participants.

More so than any other LDP evaluation encountered in this review, the case study by Zacharakis and Flora (2005) specifically addressed the relationship between leadership development efforts and SC. Unfortunately, their conclusions are not as favorable as some leadership development practitioners might like. Theirs was a case study of a state university extension project which sought to implement long-term community development, based on strengthening SC through participatory research. As they began to map network connections, however, they noted that certain leaders persisted in the network, while others dropped out after a short period of time. They attributed this result to a phenomenon known as cultural reproduction, defined as "the complex ideological and cultural processes

that reproduce social forms such as racism, gender bias, authority structures, attitudes, values and norms" (p. 293). They concluded that while the community development project in question did in fact develop SC, they also noted that this project tended to reproduce existing leadership structures as opposed to creating new leadership pools or cliques. In this case, cultural reproduction was brought about by an overemphasis on bonding (internal) SC ties, without enough emphasis on bridging (external) SC ties. Such an imbalance in the SC network tends to limit the development of new leadership pools – and new ways of solving community problems – in favor of falling back on old leadership cliques and traditional problem solving methods. And as these authors noted, when new leaders do come in to a SC network, they are often the first to drop out when they perceive they are not being effective, leaving the "old guard" or an existing pool of leaders, to occupy leadership roles.

As was noted in the discussion of Kilpatrick and Falk's (2003) work above, diversity may be a key to help avoid this cultural reproduction problem. If SC networks include a diverse array of members, more bridging ties are likely to be built, which in turn may reduce a group's tendency to resist change and increase their tendency to arrive at better solutions. Finally, consistent with the findings of Kelsey and Wall (2003) and the main question posed by Kaufman and Carter (2005), Zacharakis and Flora (2005) noted an inability to generate collective action around issues that had major implications for the community's future. In other words, while the program in question had created opportunities for participants to network and build SC, there was little evidence that they were able to apply what they had learned for effective community problem solving.

Conclusions and Implications

Based on this review, it seems clear that a relationship exists between leadership development efforts and SC (or networks). Many LDPs claim to enhance participant's personal and professional networks, and by extension, their SC (Black, 2006; Carter & Rudd, 2000; Fredricks, 2003; Terroin, 2006). And, therein lies the problem that while the literature provides a compelling argument for a relationship between LDPs and SC, I am less certain that a cause and effect relationship exists. In other words, we may know that LDPs and SC are correlated, but do we have proof that participation in an LDP leads to enhanced SC? Further research is needed to support any causal assertion that LDPs lead to enhanced SC.

The relationship between LDPs and SC may also be dynamic. In some cases a leadership development effort may help build SC, but it may also be true that communities with higher levels of SC encourage leadership, or that individuals with greater SC have a greater capacity to lead or participate in LDPs. Likewise,

while LDPs may build SC, it may also be true that SC is used (i.e., called upon) in the act of leadership, suggesting a depletion of SC held by a person or group. More research is needed to fully understand the dynamic nature of LDPs and SC.

Some leadership development practitioners may be fully convinced that their respective programs enhance participants' SC, and that this is a sustained, positive effect. However, many LDP evaluations have reached conclusions that suggest otherwise. For example, Zacharakis and Flora (2005) concluded that not only were community leaders unable to come to consensus around important community issues, but any SC building effect that the LDP may have had was likely offset by the cultural reproduction of a "good ol' boy" network of leaders. Fredricks (2003) noted that networks developed in LDPs quickly fall apart if alumni fail to make efforts to maintain them.

These are important implications for other researches seeking to determine the SC building effect of LDPs. These findings should also serve as a cautionary note to those LDP practitioners that claim program participation results in network-building or SC-enhancing benefits. Until we assemble adequate evidence to support such causal assertions, we should not make such claims. In fairness to those researchers that have attempted LDP evaluations, I should acknowledge the difficulty in evaluating such programs, especially when trying to provide empirical evidence to support causal inference. In fact, if there is one thing the scholars in this field do seem to be in agreement on, it is precisely that LDP evaluation is difficult.

McLean and Moss (2003) applied Kirkpatrick's Evaluation Framework to an evaluation of the Canadian Agricultural Lifetime Leadership (CALL) program (see Kirkpatrick (1959), (1994) as cited by Burt & Ronchi (at press) and McLean and Moss (2003)). This framework suggests four levels of evaluation: (a) reaction, (b) learning, (c) behavior, and (r) results. McLean and Moss discovered an inverse relationship between the degree of difficulty of evaluating the program and Kirkpatrick's four levels. It was relatively easy to evaluate the reaction of program participants (Level One, often referred to as "smile sheet evaluation"), but it was difficult, if not impossible or impractical to evaluate Results (Level Four, or impacts participants had on industry organizations as a result of their participation in the program). Many authors (e.g. Burt & Ronchi, at press; Grove, Kibel, & Haas, 2005; Russon & Reinelt, 2004) have recognized the difficulty of establishing program causality in the case of such complex concepts as leadership effectiveness. Several threats to such assertions exist, including maturation effect, selection bias and lack of control of other variables (e.g., other simultaneous leadership development training).

Perhaps the most useful insight of this discussion is the argument that depending on the evaluation needs of the stakeholders involved in a program (e.g., board

members, funding agencies), evidence of a relationship (i.e., correlation) between the program treatment and leadership effectiveness may be more practical and just as useful as proof (i.e., causal assertion) of the effect (McLean & Moss, 2003). Or as Kirkpatrick has suggested we will have to be satisfied the evidence we have instead of causal proof, for that is all that exists in the LDP evaluation literature regarding SC.

Those of us with an interest in the relationship between LDPs and SC should look to the literature on SC theory, SC measurement, social network theory and relational leadership theory to inform our evaluation efforts. Practitioners should strive to implement programs that are based on explicit leadership theories. Researchers interested in evaluation should work with practitioners to develop designs that not only meet the researcher's needs, but also help the practitioner to improve the LDP. There are endless opportunities for evaluation research in leadership development and social capital, particularly for those interested in establishing a cause and effect relationship between LDPs and SC.

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Biography

Lawrence Van De Valk is Director of the Empire State Food and Agricultural Leadership Institute, or LEAD New York, a two-year leadership development program for adult professionals involved in New York's Food and Agricultural Industry. Van De Valk is a Senior Extension Associate in the Department of Education at the College of Agriculture and Life Sciences at Cornell University. He has held this position since January of 2001, and is also a graduate of Class VI of the program. Prior to this, Van De Valk was a Professor in the Agricultural Engineering Technology Department at SUNY Cobleskill, a position he held for 11 years. He also has previous work experience with other agricultural businesses throughout the state, and consults with agricultural organizations in areas related to leadership development. Van De Valk has earned a Master's of Arts in Teaching and a BS in Agricultural and Biological Engineering, both from Cornell University; has an AAS in Forestry from Paul Smiths College; and is currently pursuing his Ph.D. in Adult and Extension Education. He is a member of the International Association of Programs for Agricultural Leaders (IAPAL) and the Association of Leadership Educators (ALE), and a recipient of the SUNY Chancellor's Award for Excellence in Professional Service.