



## Leaders, followers, and time

Allen C. Bluedorn<sup>a,\*</sup>, Kimberly S. Jaussi<sup>b,1,2</sup>

<sup>a</sup> 404D Cornell Hall, University of Missouri, Columbia, Missouri 65211-2600, USA

<sup>b</sup> School of Management, Binghamton University (SUNY), PO Box 6000, Binghamton, NY 13902-6000, USA

### ARTICLE INFO

#### Keywords:

Leader-follower dyads  
Entrainment  
Polychronicity  
Speed  
Temporal depth  
Punctuality

### ABSTRACT

In order to consider leadership from a temporal perspective, we examine extant leadership research that refers to temporal variables in its theorizing and/or empirical testing. We consider rhythmic patterns manifested in leader and follower behavior and employ entrainment, polychronicity, pace/speed, punctuality, and temporal depth as categorization concepts for the analysis. Further, we propose general theoretical statements about temporal dimensions and their prospective roles in relationships and processes related to leadership.

© 2008 Elsevier Inc. All rights reserved.

### 1. Introduction

The temporal imagination refers to one's ability to recognize and understand one's own temporal behaviors within the temporal contexts in which one lives and works (Bluedorn & Standifer, 2006). And while leadership scholars have been advocating self-reflection as a key component of leadership development, to date that advocacy has not typically encouraged leaders to examine their temporally related behaviors, or to develop a temporal imagination.

Yet, the consideration of temporal influences on leadership is not a completely novel path for exploration. For example, in considering the CEO suite, Das (1987) found a positive correlation between a CEO's personal time horizon and the planning horizon the CEO used in conducting the firm's business. This empirical relationship suggests (1) that individual CEOs affect the temporal contexts in which they work (i.e., bringing their own time horizons to bear on the planning horizons used in their firms), and (2) that these temporal contexts are the contexts which the leaders have created, at least in part, for and with their followers.

Das's work is just one example of how the literature has considered time and leadership over the years. There are other examples, which we will briefly describe shortly. Our overall aim in this article is to shed light on how temporal influences affect leaders and followers and ultimately the effectiveness of the leadership process and relationship. We also want to stimulate scholars' and practitioners' temporal imaginations about how leaders can affect the larger temporal contexts in which they act, and to prompt future research to investigate the role of temporal dimensions in leadership research and practice.

Before continuing, we would like to describe our approach to creating this review. First, we engaged in an iterative process of searching major management and psychology-related academic databases that identified both leadership and temporal variables in the abstract. From there, we examined articles with various combinations of time and/or leadership as key words. We undoubtedly missed some articles that discuss variables related to time and included others that addressed time as it relates to leadership but did not present the temporal variables in the same fashion we do herein. Given this approach, this article represents a rich sampling of the extant literature versus a completely exhaustive review. It also represents our thoughts about how future research might explore the temporal facets of leadership processes and dynamics.

\* Corresponding author. Tel.: +57 573 882 3089.

E-mail addresses: [bluedorna@missouri.edu](mailto:bluedorna@missouri.edu) (A.C. Bluedorn), [kjaussi@binghamton.edu](mailto:kjaussi@binghamton.edu) (K.S. Jaussi).

<sup>1</sup> Tel.: +1 607 777 4396.

<sup>2</sup> The authors are listed alphabetically and each contributed equally to the article.

We turn now to a brief overview of how time in general has been considered in the leadership literature. In this overview, we first reference studies in very general terms that do not fall clearly into our later focus on five temporal variables. To do so, we discuss research that addresses time and leadership from a leader-centered approach, then from a follower's perspective, and finally from a relational approach. We conclude this overview section by noting team- and strategy-focused leadership-and-time research before proceeding to separate discussions of five temporal variables, implications, and possibilities for future research.

### 1.1. Time and leadership research: leader-focused

Leader-focused research typically concentrates on the leader as the key to leadership, and considers variables that impact the leader's ability to lead. With leaders as the focal point of leadership, scholars have been interested in how leaders spend their time at work. Early on, Mintzberg (1973) studied how leaders and managers spent their time at work; and since then, a number of studies have estimated that leaders spend at least 70–90% of their time communicating with subordinates (Bligh & Hess, 2007). From this perspective, time was of interest to scholars when it was *the leader's time* being considered.

In addition to how leaders *spend their time*, questions about how *demands on a leader's time influence a leader's ability to lead* have also been addressed, especially regarding effects on the leader's decision-making ability. For example, Mumford, Friedrich, Caughron & Byrne (2007) suggest that leaders will balance forecasting activities against time demands. Mumford et al. (2007) also note that external time pressure will impact a leader's decision-making ability by limiting access to, and application of, schematic information they may have when time is short. Mumford et al.'s body of research suggests that *time demands* do indeed impact a leader's ability to lead *by affecting the decision-making processes*.

*The time or historical period* in which leadership is occurring has also been considered in terms of how it affects a leader's ability to lead. For example, the *time period* during which the leadership takes place will influence the type of leadership viewed as most effective and/or needed. Weber's (1924, 1947) work (and the large body of work in this area that has followed it) suggesting that charismatic leaders will emerge during times of crisis, is just one demonstration of this. Other leadership research has outlined how *the temporal context of a leader's decisions and actions* will depend on the leader's hierarchical level in the organization (Jaques & Clement, 1991; Zaccaro & Klimoski, 2001; Kaiser, Hogan & Craig, 2008). Thus, works such as these suggest that *the temporal context, both proximal and environmental, is very important to what constitutes effective leadership outcomes*.

Leadership scholars have also considered *how aspects of leadership can change over time*. Avolio & Bass (1995) argue that a leader's individualized consideration changes the level of analysis at which it operates over time; they argue that over time, individualized consideration is diffused from the individual level to the work group/team level, then to the organizational level. In a similar vein, O'Mahony & Ferraro (2007) found that leadership behaviors in an open-source community changed over time and became more organization-building over technically oriented in content. Finally, Martinko, Harvey, & Douglas (2007) note that attributions in leadership situations change over time; they suggest that the actor–observer bias in attribution theory is exacerbated as the tenure of the leader increases. All of these studies (and others) across different time periods suggest that longitudinal studies should continue to add significant value to the leadership literature because they suggest *leadership changes over time*.

Additionally, research has noted that *leaders use time as a signal and also look back in time*. Such efforts to learn from history can negatively influence the ability to lead effectively; Finkelstein (2006) found that by considering historical cases, leaders actually learned the *wrong* things from earlier times and set themselves up to fail. In terms of how leaders *use actual time to signal to their employees their values and priorities*, Dragoni (2005) notes that when leaders value employee development and learning, they provide employees with time off from work for developmental activities. As we will discuss later, Boal & Schultz's (2007) work considers how strategic leaders use time to tell effective stories about their organization's history and future. These works suggest that leaders can *mistakenly look back in time*, and they can *use time to signal important values*.

Time has also been considered with respect to leadership through the lens of the life-cycles of leaders, their development, and their performance. This within-career or within-position view of time considers *a leader's development and effectiveness across a given time frame*. Work in this area has been conducted by Hambrick & Fukutomi (1991), Boal & Bullis (1991), Boal & Hooijberg (2000), Finkelstein & Hambrick (1996), and Giambastista (2004), among others. For example, Giambastista (2004) found that basketball coaches' performance changed over time to reflect a life cycle model of effectiveness, with growth in the first three years and a "four year itch" evidenced by performance drops.

Further considering leaders' development over time, Bartone, Snook, Forsythe, Lewis & Bullis (2007) consider temporal depth (a concept we will discuss in detail later in the paper) implicitly at one point in their theorizing of West Point cadets' stages of psychosocial development and how they follow Kegan's developmental stages. Temporal horizons change depending on developmental stages, and these authors argue that more research needs to be conducted to understand the developmental stages of individuals and their corresponding capacity for leadership behaviors. Combined, this body of work suggests that *leaders develop over time, and their effectiveness changes over time*.

Whether leaders *exhibit behaviors at the appropriate time* has also been considered in scholarly research. Casimir (2001) argues that the temporal ordering and time interval of task versus socioemotional leadership behaviors will affect leadership outcomes. This multi-study work suggests such timing and ordering of behaviors is important, and that socioemotional behaviors should be displayed by leaders just prior to displays of task-oriented behaviors. Casimir's work suggests that rather than a sum total, or mean approach to the display of leadership behaviors, scholars need to consider if those behaviors are *delivered at the appropriate time*.

Time and leadership have also been considered with respect to leading for creativity and innovation. Halbesleben, Novicevic, Harvey & Buckley (2003) present a competency model for leading innovation effectively, and propose a nine-dimension construct,

“awareness of temporal complexity,” as critical for leaders. Their work will be discussed in more detail later in this piece, when we consider five specific temporal constructs.

### 1.2. Time in leadership research: considering the follower

Research considering leadership from the follower's perspective has also addressed time. Key to this work is the fundamental premise that *follower expectations and perceptions of a leader may or may not change depending on time*. For example, Vecchio & Boatwright (2002) suggest that (following Situational Leadership Theory) less mature followers will have less time with their supervisor, and thus will expect less consideration-based leader behavior. While they did not find empirical support for their assertion, other scholars continue to consider follower perceptions related to time with a leader. Avolio & Bass (1995) suggest that the amount of time any given follower spends in a context will determine perceptions of the amount and nature of individualized consideration from the leader. Offering further support for this relationship, Foti, Knee & Backert (2008) describe how follower perceptions of leaders form over time.

Contributing a different angle to this line of theorizing, Hunt & Ropo (1996) posit that follower perceptions of a leader's actions within and across time periods should be considered from a levels-of-analysis perspective. They suggest that agreement might vary among followers regarding their leader's actions during or between specific time periods.

Agreeing that time plays a role in follower perceptions of leadership, albeit one of stability rather than change, Implicit Leadership Theory (ILT) scholars (e.g., Lord, Brown, Harvey & Hall, 2001) also address time in their theorizing. This perspective describes the role of time as one of stability when it comes to follower prototypes of ideal leadership. Research in this area suggests that individuals' mental schemas about how a leader should behave are stable over time, and are uniquely held by individuals (Epitropaki & Martin, 2004). Finally, as individuals spend time with their leaders, they create leader prototypes that influence how they view their next leader (Ritter & Lord, 2007) through the process of transference.

This work, combined with the studies above (and others) suggest that *followers' perceptions of leadership may or may not change over time*, and that *temporal intervals should be considered and tested using appropriate analytic techniques to determine if they represent variables operating at different levels of analysis*.

### 1.3. Time in leadership research: leader–follower relationships

Although the works just discussed focus on either the leader or the follower, many scholars consider the relational space between the leader and follower, and focus on leadership at what eventually becomes the dyadic level. This approach considers *how the relationship of leadership develops over time*, considering stages of the relationship and *relationship tenure* as the backdrop for different relational processes to occur. Individualized leadership theory takes this approach. It identifies a process by which a leader might support a follower's self-worth, which in turn induces the follower to act in ways that are worthy of the leader's support for self-worth, thereby making the leadership relationship more robust and shared between the dyad members (Dansereau et al., 1995). Dansereau et al.'s multi-sample research suggests that the leader–follower relationship evolves over time, with leader and follower having completely independent perceptions of the leadership, which over time turns into a dyadic phenomenon.

Adopting a different explanation through which the bond may grow, Boyd & Taylor (1998) note that *length of time* and the *frequency* with which leaders and followers are together increase the chances for friendship to develop. Because their work is theoretical, it does not include an empirical test of this idea. Considering yet a different process mechanism for the relationship to develop, Scandura's (1999) work examines justice perceptions as a key variable. Outlining a time-based model and noting that justice perceptions become important for the perceived quality of the relationship *at a unique time* during the relationship, Scandura considers time in terms of the tenure of the leader–follower relationship. If questions about distributive and interactive justice are not answered for the follower, Scandura's work suggests that across time, procedural justice perceptions will deteriorate and the leader–follower relationship will return to early stages of development. Her work, combined with the others just described, suggests that the leader–follower relationship is qualitatively different and operating at different levels of analysis, depending on *the length of time the relationship has been in existence*, and on *which processes are occurring in the relationship at which point in time*.

Crossing the leader, follower, and relationship foci, Liden, Wayne, Zhao & Henderson (2008) put forth a measure of servant leadership that they argue adds value to the literature for considering leadership above and beyond transformational leadership and LMX. One of the items included in the servant leadership dimension of emotional healing is “My manager takes time to talk to me on a personal level.” Here, Liden et al. are acknowledging that leaders devoting time to connecting with followers is an important part of a follower's perception of effective leadership. However, we would argue that perceptions of *how much time* equals *taking time to connect* will not necessarily be the *same* perception or expectation for leaders and followers. Depending on each party's temporal perspective and implicit leadership prototypes with respect to temporal variables, expectations for time spent connecting will vary. As another point for how the Liden et al. paper considers time, interestingly, it reports the average tenure of the leader–follower relationship in the statistics relating to the study sample, but did not integrate that construct into the theorizing or empirical testing of their construct. The possible implications of this will be discussed later when we put forth possibilities to consider for future research.

### 1.4. Time in leadership research: other arenas

While the studies above were grouped by whether the leader, the follower, or the relationship was the focal point of the research, we also want to note work in two other areas regarding leadership and time. In particular, literature about team leadership and strategic leadership has considered temporal variables. Work in these areas has studied how *a leader's time*

*intervening with followers depends on the length of time and urgency of an event, and how leaders are connected through an organization's life over time.*

Regarding leading teams, recent work by Morgeson & DeRue (2006) closely examines events that impact teams. This study considers temporal characteristics (duration and urgency) of those events and how they influence the amount of time a leader spends intervening as a result. Morgenson and DeRue's study suggests that the response time of a leader can depend on the type of task at hand—for example, when safety issues were at stake, leaders responded very rapidly to the issue. Their study also suggests that the greater the urgency of an issue (including looming deadlines) the more structuring behaviors leaders display. They describe a “fine line” that team leaders walk in managing the timeliness of the team's activities while also needing to allow the team to develop on its own.

With respect to an organization's life and its strategy, Leavy (1996) considers the role of time in terms of leadership and strategy. Leavy asserts that leaders are connected to each other and to the strategic process over time in terms of succession and in their connectedness with the history of the organization. This interconnectedness over time among leaders and weaving of connections into the fabric of the organizational story has also been addressed by other scholars studying strategic leadership (e.g. Boal & Schultz, 2007), which we will consider in greater detail later in the article. The key point from the temporal work regarding leadership that has been done in these areas is *that temporal characteristics of the event or organization will influence the leadership in a potentially interdependent fashion.*

As the works discussed above exemplify, scholars have addressed time and leadership across history in a variety of different ways. In fact, *because relationships between leaders and followers occur over time, it is difficult, if not impossible, to consider leadership without time playing a role* (whether or not it is acknowledged by any given study). Yet, our review of the literature suggests that the formal use of temporal variables in leadership research has been scarce and scattered; work from temporal theory has not made its mark on many examinations of the leader–follower space or the leadership process. We turn now to considering the small body of work that has been done with respect to leadership as it relates to five specific temporal variables considered by the mainstream temporal literature.

Although there are many temporal dimensions that could characterize leader–follower relationships, we will focus on just five of them in our analysis here because these five are clearly fundamental to all human relationships. There is, therefore, at least somewhat of a conceptual and empirical base for them in the social science and organizational science literature. We do not claim that these five are the most important temporal variables; rather, these five were identified as fundamental for understanding temporal phenomena by Bluedorn (2002) and subsequently analyzed by Bluedorn & Jaussi (2007a) from a multi-level of analysis perspective. As such, they represent a solid foundation from which to begin consideration of leadership processes and relationships.

We will examine leaders and followers by considering the phenomenon of entrainment as well as along the four general time dimensions of polychronicity, pace/speed, temporal depth, and punctuality. We will then examine the theoretical and applied implications of our theoretical discussions and findings. In addition, we will offer our thoughts about possibilities for future leadership research including these temporal dimensions.

## 2. Theoretical foundations of temporal dimensions in leadership

In this portion of the article we will introduce several concepts that help integrate our discussions of the leader–follower relationship in the context of temporal dimensions. One such concept is entrainment, which we will consider shortly. We then turn to a discussion of four other temporal dimensions—polychronicity, pace/speed, punctuality, and temporal depth—and consider how each of these dimensions has explicitly or implicitly been considered by leadership scholars.

### 2.1. Entrainment

Entrainment is a phenomenon originally studied in biology (e.g. Aschoff, 1965, 1979) that was introduced to the social sciences by Hall (1983), and within the social sciences, to the organizational sciences by McGrath & Rotchford (1983). Although Bluedorn & Denhardt (1988) followed up with their own discussion of entrainment, it was Ancona & Chong's (1996) elaboration of the concept and demonstration of its applicability to organizational analysis that stimulated broader concern with entrainment in organizational analysis and research. Entrainment is “the adjustment of the pace or cycle of an activity to match or synchronize with that of another activity” (Ancona & Chong, 1996, p. 253). Such matching or synchronizing could involve purely physical phenomena such as the pendulums in two clocks coming to oscillate together (Strogatz & Stewart, 1993), life forms of all kinds coming to organize their circadian rhythms in consistent alignment with the earth's cycles of lightness and darkness (Ancona & Chong, 1996), and the starting and stopping times of the work shifts for guards at the Trenton State Prison reflecting the scheduled arrival and departure time's of Trenton's trolley system (Bluedorn, 2002, pp. 146–148).

While entrainment has been considered across levels of analysis and with respect to inanimate objects, we would like to specify that in this discussion we follow Bluedorn & Jaussi (2007a) and extend entrainment theory, considering it a phenomenon that can occur within and between levels of individuals and collectivities. We believe that because of known psychological processes that drive individuals towards learning, similarity, identity enhancement, and consensus, it is appropriate to apply this theory to micro-level interpersonal behaviors.

From the pendulums of clocks to the starting times of prison guards, all of these examples reflect entrainment because they all involve the “adjustment of the pace or cycle of an activity” in such a way that the pace, cycle, or both come to “match or

synchronize with that of another activity”: the oscillation pattern of one clock’s pendulum with another’s, sleep patterns with the earth’s periods of lightness and darkness, and the prison’s shift schedule with the trolley car schedule. But these examples may suggest an inaccurate view of entrainment, especially when it comes to the matching or synchronizing of rhythms. Entrainment does not imply that the phases of two rhythms will come to coincide so that the comparable phases in each rhythm will occur at precisely the same times. Although this is certainly possible and constitutes one form of entrainment, the key factor that distinguishes two entrained rhythms from two non-entrained rhythms is whether *the phases of each rhythm occur at a consistent time in relation to each other*. Thus if the comparable phases of one rhythm consistently follow or lag the phases in the other rhythm, the two rhythms are just as entrained as two rhythms whose phases occur simultaneously. The same is true when one rhythm’s phases consistently proceed or lead the phases of the other rhythm. (see [Bluedorn, 2002](#), chapter 6, for a detailed discussion of the synchronous, leading, and lagging forms of entrainment.)

In the context of the leader–follower relationships, and consistent with the general feature of social life that the more powerful can keep the less powerful waiting more so than vice versa ([Levine, 1997](#)), the more powerful might also determine the pace of status differentiated groups ([Chen, Blount & Sanchez-Burks, 2004](#)). [Bluedorn & Jaussi \(2007a\)](#) provided a generic illustration of leading entrainment, noting that a leader’s schedule can take precedence and may be more powerful than that of the subordinate. With the leader’s schedule one rhythm, and the subordinate’s the other, the employee would likely arrive for scheduled appointments with the boss a few minutes before the scheduled appointment rather than later, due to the negative sanctions that could accompany a late arrival. Thus the phases of the two rhythms would not coincide exactly, but they would occur in a *consistent* relationship with each other; to wit: the subordinate would consistently arrive a few minutes *before* the appointment with the boss. In [Bluedorn’s \(2002\)](#) terminology, this would be leading entrainment because the phase from the entrained rhythm (the subordinate’s) precedes the phases of the leader’s rhythm in regard to their appointments.

This example of a leader–follower relationship also illustrates a final concept associated with entrainment, the concept of a zeitgeber. [Ancona & Chong \(1996, p. 253\)](#) explained a zeitgeber as a signal that reveals a rhythm’s phases and by that serves as a tangible synchronizer or pacing agent. As an agent, the zeitgeber is a signal from the more powerful rhythm, the rhythm that will potentially “capture” other rhythms. In the example above, the leader was the zeitgeber. Yet, at times, the formal subordinate may be the zeitgeber (rather than the boss). For example, labor laws and organizational policies may prescribe matters of employment such as number of hours that may be worked in a day or week as well as the potential flexibility of starting and stopping times. Such parameters are a source of power for subordinates that the higher-ranking member of the dyad is forced to obey and which provide temporal parameters (e.g., starting and stopping times) the boss will be legally required to accommodate, hence rhythms to which the boss’s schedule and work routines will have to be aligned. As the illustrations suggest, either the leader or subordinate can play the zeitgeber role. Thus this role is important in understanding leader–follower relationships, for it captures an inherent power dynamic that may otherwise be overlooked. Also of significance in the illustrations above is the mutual negotiation of the dyad’s overall entrainment pattern over time which, to some extent, will always be subject to re-negotiation.

The development of such a mutually negotiated entrainment pattern is strongly suggested in some leadership research. Specifically, [Dienesch & Liden \(1986\)](#) note that mutuality, a basic concept of social exchange theory, underlies the scope of LMX. We argue that without explicitly describing it, by including notions of mutually created standardized patterns in their theorizing of LMX, [Dienesch & Liden \(1986\)](#) allude to entrainment occurring in the process of relationship formation. According to their work, mutuality is involved when leaders create the context for the relationship and subordinates behave in a responsive fashion to that relationship.

In fact, the very definition of LMX crafted by [Scandura, Graen & Novak \(1986\)](#) (which [Schriesheim, Castro & Cogliser, 1999](#), put forth as a clear and detailed depiction of the LMX phenomenon) implicitly suggests that entrainment may be underlying LMX in several ways:

Leader member exchange is (a) a system of components and their relationships (b) involving both members of a dyad (c) involving interdependent patterns of behavior and (d) sharing mutual outcome instrumentalities and (e) producing conceptions of environments, cause maps, and value ([Scandura et al., 1986, p. 580](#)).

Entrainment is implied in aspects (b), (c) and (e) (and possibly (d)) in that the interdependent patterns of behavior and the production of conceptions of environments, cause maps, and value all have temporal aspects that will need to be identified, negotiated, and shared by both leader and follower if the relationship is to be high quality and productive.

Research on individualized leadership (e.g., [Dansereau et al., 1995](#)) describes a cycle of a rhythmic pattern between a leader and a follower whereby the leader offers support for self-worth to the follower and the follower reciprocates with performance worthy of the support for self-worth. In considering their work, we note that this pattern of behaviors between the leader and follower suggests that entrainment is possibly happening and may well be an underlying influence in moving leadership from an individual level variable to a dyadic one.

Indeed, the entrainment in leader–follower dyads may be but one link in a chain of embedded entrainment linkages necessary for the entire organization to become entrained with elements of its environment. [Halbesleben et al. \(2003\)](#) cite several studies that revealed organizations had to increase the rate at which they changed to match the rate of technological change in their environments. In order to achieve entrainment between organizations and their environments, Halbesleben et al. note research indicating improved states of entrainment between organizations and their environments is often associated with changes in organizations’ leadership. And most directly relevant to our analysis of leader–follower dyads, [Halbesleben et al. advocate proactive entrainment efforts involving “incremental steps that occur throughout all levels of management” \(2003, p. 441\)](#). That

such incremental steps would involve *all levels of management* means that entrainment, or at least entrainment efforts, would ultimately involve all leader–follower dyads entraining to a larger zeitgeber in an organization. This process of how mutually negotiated entrainment patterns develop in leader–follower dyads may then be important for not only a better understanding of the leader–follower relationship, but for a glimpse into how the organization as a whole succeeds or fails to satisfactorily adjust to environmental conditions, which is a strategic consideration indeed.

## 2.2. Polychronicity

Polychronicity was first identified and described by anthropologist Edward Hall (1981, 1983) and later defined formally by Bluedorn (2002, p. 51) as “the extent to which people (1) prefer to be engaged in two or more tasks or events simultaneously and are actually so engaged (the preference strongly implying the behavior and vice versa), and (2) believe their preference is the best way to do things.” The reference to *simultaneously* in this definition can refer to two related forms of behavior. First, simultaneously could refer to literally engaging in two or more tasks at the same time such as driving and talking on a cell phone simultaneously, which happens to be a poor combination of tasks to engage in at the same time because doing so increases the chances of an automobile accident occurring by three to four times (Redelmeier & Tibshirani, 1997; McEvoy et al., 2005). Second, in the context of polychronicity, simultaneously can also refer to a back-and-forth engagement with several tasks in which one task is engaged for a time, then a second task is engaged, and then the first overall task is returned to. This contrasts with a pattern of engagement representing a low level of polychronicity (often termed a monochronic pattern) in which tasks are engaged in a serial fashion where one task is engaged and completed entirely before moving onto the next task. In terms of polychronicity, both the literal and the back-and-forth variants qualify as polychronic forms. Of course, the choice is not binary, between a monochronic and a polychronic pattern; rather, there are infinite degrees of polychronicity ranging from the absolute monochronic approach through extremely high levels of polychronicity. We should note that though they are related, polychronicity is not identical to the behavior pattern known as multi-tasking. This is because relatively polychronic patterns of task engagement, by themselves, are not necessarily about attempts to accomplish more tasks during a certain amount of time, making multi-tasking just one type of polychronicity, but not the only type (see Bluedorn & Jaussi, 2007a,b; Waller, 2007, for a detailed discussion of the relationship between polychronicity and multi-tasking).

Polychronicity's impact on the leader–follower relationship is potentially very important. As already noted, polychronicity is a fundamental aspect of most human relationships. And in the case of leaders and followers it may be especially critical. We can cite the example given by Hall (Bluedorn, 1998) and elaborated upon by Bluedorn & Jaussi (2007a) of a leader–follower dyad consisting of a German manager, who was relatively monochronic, with a French subordinate, who was more polychronic. And this leader and follower had a difficult time working together. But why? Hall's observations of a married couple may provide the answer.

Hall observed a married couple who had trouble getting along with each other, and he noted that they differed significantly in their polychronicity. So he did something both simple and profound. He explained to them what this behavioral difference was and that it was not a deliberate attempt by either the husband or the wife to irritate the other and so should not be taken as a personal affront. And the couple started getting along better (Bluedorn, 1998).

Like most people, the wife and husband were apparently not consciously aware of the polychronicity continuum and that people varied in their behaviors along it. Rather, they were only aware of the other doing *something*, which they probably would have had a hard time pinpointing or describing exactly—lacking as they did the polychronicity lens—that annoyed them. Which led them to commit an attribution error, that of seeing each other as deliberately trying to irritate or upset the other. The new polychronicity frame led to a change in attribution—just different ways to do things rather than “he or she is trying to make me uncomfortable”—and with a new attribution came a change for the better in their relationship. There is no reason to believe that the same, or at least equally negative (i.e., lazy, incompetent, etc.) attribution errors were not being made in the leader–follower dyad comprised of the German manager and the French subordinate. And one suspects that a reframing similar to the one that occurred with the wife and husband would have helped this leader–follower dyad improve its relationship and effectiveness.

Although it would be naïve to suggest that simply explaining such differences will always result in such desired improvements, perhaps this simple intervention can produce positive results far out of proportion to the cost and effort it takes. For even if ASA theory (Schneider, 1987) is correct and leaders and followers will seek out leaders and followers similar to themselves, respectively—and Bluedorn's (2007) results support this proposition, at least for followers—the ASA sorting process will seldom be perfect, so simply understanding these differences might be enough to improve relationships between leaders and their followers. Indeed, this suggestion is consistent with Halbesleben et al.'s (2003) several propositions that link *awareness* of temporal dimensions with positive outcomes, albeit their focus is primarily on innovation.

One specific way a greater awareness and understanding of polychronicity could lead to enhanced leader–follow relations is by enabling the leader to conduct more valid evaluations of the follower's work. This is indicated by research (Persing, 1992; Slocombe & Bluedorn, 1999) that reveals a relationship between the temporal patterns used to perform work and the evaluation of that work. Thus while polychronicity has been related to actual performance outcomes (Conte & Gintoft, 2005), a proper understanding of polychronicity should help managers focus their evaluation judgments on the outcomes of work efforts rather than the pattern (i.e., degree of polychronicity) of those efforts themselves. Performance evaluations involve attributions, and attributions have been found to influence leadership and follower outcomes (see Martinko et al.'s., 2007, thorough review), so it is important to note that the role of attributions about specific temporal constructs such as polychronicity and the potential for the outcomes just discussed are noticeably absent from the leadership literature. Perhaps, if becoming consciously aware of polychronicity and understanding that it is just another way of doing things alters frames and reduces attribution errors, higher follower perceptions of evaluation fairness may result

if leaders focus on work outcomes rather than work processes (i.e., on the quality of the work rather than on whether the follower works monochronically or more polychronically).

It is difficult, in some cases very difficult, for individuals to entrain who differ greatly in their polychronicity, regardless of the entrainment form (leading, lagging, or synchronous), even if some people do demonstrate substantial flexibility in their polychronicity which allows them to adjust to different situations (Cotte & Ratneshwar, 1999). Perhaps entrainment of polychronicity patterns is not the solution to leader–follower difficulties as much as simply recognizing the differences in such patterns. Or maybe it is necessary to recognize such patterns before the entrainment challenge can be addressed successfully.

With the volume of leadership research that has examined task-focused leadership (e.g., see Bass, 1990 for a detailed review; Casimir, 2001) we found it striking that no studies considered polychronicity with respect to leadership. Imagine the possibility of considering a leader's polychronicity as a variable in research examining the impact of task-based behaviors; if a polychronic leader was delivering task-focused leadership, that leadership would be qualitatively different than if it came from a monochronic leader. And, depending on the preferences of the follower (similar to SLT), a leader's polychronicity may or may not have a significant impact on the follower's ability to complete the task at hand.

### 2.3. Pace/speed

Another aspect of the leadership and leader–follower relationships relevant to temporal theory is pace, or speed, which refers to “the frequency of activities in some unit of social time” (Lauer, 1981, p. 31). In general, the mechanism underlying the desire for speed is about efficiency (except in the case of thrill/risk seeking). Speed can be linked to efficiency (Bluedorn, 2002, p. 105), and it can also be linked to effectiveness. Indeed, the link between speed and effectiveness has been supported by research examining top executives and their strategic decision-making times (e.g., Eisenhardt, 1989). And while speed and leadership have been studied from a decision-making perspective, there are several aspects of speed ideal for consideration in terms of leadership. Included in this realm are things such as the speed of relationship development, the speed of responses, the speed at which meetings are held, and the speed of daily interactions (e.g., are the interactions “quick” thought/standard Type A interactions standing in the hallway, or are the interactions more relaxed and longer lasting each time they occur?). As is always the case when any two individuals interact, a leader and follower eventually develop norms regarding the speed at which each of the above will occur if the relationship is to be successful. When the various objects of speed present in a leader–follower relationship are conducted in an entrained fashion with a consistent rhythm and pace, both parties will be comfortable and the relationship should be more likely to be productive.

Leadership research has focused on aspects of speed to some degree (c.f. Sparrowe & Liden, 1997) but in general focused on the concept of immediacy of follower responses to leader requests for action. Sparrowe & Liden (1997) use Sahlin's (1972) anthropology-based social exchange framework and note the role of this temporally related construct. They describe *immediacy of returns* as one of three key determinants of the type of exchange relationship that forms between a leader and follower, and explain that it can result in less than high-quality LMX. When immediate reactions from the follower occur with respect to leader requests, it can make the relationship too focused on a “tit for tat” basis, thereby limiting the true quality of the relationship and creating a ceiling for LMX at the mediocre level (Sparrowe & Liden, 1997).

Uhl-bien & Maslyn (2000) considered both leader and follower immediacy in the relationship and found it to be negatively related to higher quality LMX. Although this work applies temporal theory to leadership theory, it captures only the speed element with respect to executing leader requests. Uhl-bien & Maslyn's (2000) study suggests support for Sparrowe & Liden's (1997) model, and the proposition that the task-focused nature of immediacy limits the leader–follower relationship to one of transactional exchange. Yet to date no study has measured or controlled for leader and follower speed preferences; perhaps certain preferences might complement one another and lay the groundwork for friendship (e.g. Boyd & Taylor, 1998) and higher quality relationships to develop.

As mentioned briefly early in this article, the processes involved in the formation and solidification of leader–follower relationships have also been of interest to leadership scholars (e.g., Graen & Scandura, 1987; Sparrowe & Liden, 1997). These scholars offer implicit support of the need for speed entrainment in the reciprocity involved with the sponsorship and assimilation processes. Sparrowe & Liden note (1997, p. 542):

During sponsorship, members rely heavily upon their leaders for outcomes derived from social network structure. When members are fully assimilated and have established generalized reciprocity relationships with their leaders, those leaders can be expected to benefit from the social resources and relationships derived from members' networks under sponsorship. During assimilation, the flow of social resources and their effects on leader and member outcomes is expected to originate from the member's network as well as from the leader's.

We would argue that if the speed, or pace, at which these different stages occur should be entrained, the leader–follower relationship will be stronger, for both parties will be operating at a speed constructed relative to the other's, thereby satisfying the “in-synch” preference (Blount & Janicik, 2002). Pace in terms of the leader–follower relationship has also been addressed by Graen & Uhl-Bien (1995). They note that over time, the time span, or pace, of reciprocity changes from quicker (immediate) to longer (indefinite) as the leadership develops.

In a different vein, research considering speed has also been considered with respect to leaders' actions. Cha & Edmonston (2006) found that during a CEO's tenure, windows of time related to punctuality and speed (or lack thereof) in completing

performance reviews and responding to issues were labeled as hypocritical to the company's values. A time delay was perceived as laziness and as violating the value of openness. Hunt & Ropo (1996) describe a need for speed in action taking among fast-track leaders. They suggest that speed is necessary in order for the leadership results to be visible to followers before their fast-track assignment is over and they are on to the next assignment. Erdogan, Sparrowe, Liden & Dunegan (2004) suggest that supervisors consider punctuality and speed in each interaction with followers, based on the accountability premises that are present in low and high LMX relationships. They give the example of a supervisor who will emphasize timely completion of expense reports with one subordinate (Low LMX) but not with another (high LMX), depending on whether the LMX in the relationship is low or high. And Casimir (2001) found that leader pressure for speed from followers in terms of task completion was viewed unfavorably by followers. In order to mitigate this negative follower response to leader requests for speed, Casimir's research suggests that leaders offer supportive statements contiguously with the requests for speed in task completion.

#### 2.4. Punctuality

The question, "Was Sally on time for the meeting?" seems to involve nothing more than a glance at the clock. However glancing at the clock does not address the question of whether Sally, the other meeting participants, or any other observers would *judge* Sally to have been "on time" or not. For the issue of punctuality, whether one is on time, early, or late, is properly seen as what Berger & Luckman (1966) call a social construction. Thus Levine, West & Reis (1980) found significant differences between residents of Brazil and the United States in terms of when people would be judged to be "on time" or "late" for a variety of events, the amount of time defining "on time" or "late" varying by both country and event, thus providing an additional example of the socially constructed nature of punctuality.

As the comparison between Brazil and the United States suggests, appointment times are really intervals rather than precise points, that there is a range surrounding each appointment time not just the specified time. This is sometimes expressed in phrases such as "the party begins at sevenish," the "ish" communicating that the party will begin in the *vicinity* of seven o'clock, and that arriving exactly at seven is neither especially important nor desired. But intervals are finite and still serve as deadlines, which can affect group behavior (Gersick, 1988, 1989) as well individual motivation (Locke, Shaw, Saari & Latham, 1981), the latter by providing self-generated feedback about task progress (Hackman & Oldham, 1976).

Preferences for punctuality have been positively linked to preferences for schedules and deadlines (Bluedorn, 2002). Because they can serve as a structure inducing, ambiguity-reducing strategy (Lewis & Weigart, 1985), preferences for schedules and deadlines might also be associated with intolerance for ambiguity, a personality dimension. If that is the case, leaders and followers without similar preferences for working in this fashion (i.e., following a schedule precisely or loosely—or at all) will experience a difficult time developing a truly entrusted, shared, negotiated rhythm and pace because of the personality-based root of these preferences. For as research has demonstrated, personality tends to be stable over time and therefore is not likely to be influenced by another individual (Costa & McCrae, 1994; Soldz & Vaillant, 1999).

Because punctuality is closely related to speed, immediacy (discussed previously) is also closely related to punctuality. In terms of deadlines, if the deadlines are created with an immediacy preference, punctuality is implied and expected. If deadlines are constructed without an emphasis on immediacy, punctuality is not likely to be as critical.

In considering how leader and follower personalities impact their relationships, researchers have considered behaviors related to time as they relate to conscientiousness. For example, Bernerth, Armenakis, Feild, Giles & Walker (2008) considered the congruence between leaders and followers on conscientiousness, theorizing that conscientious employees will have a better likelihood of following their conscientious leader's preferences for punctuality.

Punctuality is an important leadership consideration because as Bluedorn (2002, p. 103) notes, "a concern for punctuality leads to structures beyond just being on time." The structures resulting from a shared perspective and reality (entrainment) regarding punctuality will often facilitate a high-quality relationship between leader and follower because notions of what it means to behave in a fashion that indicates taking a situation seriously and how the work will be delivered will create a shared mental model about how the task and relationship will unfold.

#### 2.5. Temporal depth

Temporal depth consists of the temporal distances into the past and future that individuals and collectivities typically consider when contemplating events that have happened, may have happened, or may happen (Bluedorn, 2002, p.114). Thus temporal depth is about distances into the future and into the past, with work such as Bluedorn & Ferris's (2004) combining both distances into the concept of total temporal depth. Though similar, temporal depth differs from the time horizon concept because the latter has referred just to distances into the future.

Individuals' past and future temporal depths have been found to be significantly and positively correlated in several studies (Bluedorn, 2002, pp. 265–272; Bluedorn & Martin, 2008; El Sawy, 1983), with the past depth seemingly determining the future depth (El Sawy, 1983). When applied to leadership, what initially appears to be a simple idea—past, future, or total temporal depth—is actually much more complex and requires a more fine-grained examination. For example, Judge & Spitzfaden (1995) demonstrated that executives actually work with multiple temporal depths rather than just one. This may be the result of the dynamism of an organization's environment, which Bluedorn & Ferris (2004) found was negatively correlated with an organization's total temporal depth. Hence a leader's temporal depth might be affected significantly by the context created by factors both inside and outside the leader's organization.

For example, Bligh & Hess (2007) analyzed the leadership of Alan Greenspan and considered his time horizon for the implications of monetary policy by studying his immediacy and activity in this regard. In doing so, they were considering Greenspan's temporal depth (calling it immediacy to refer to frames of the present, thereby meaning something different than the LMX literature's use of immediacy, which refers to speed of response). Bligh & Hess note that the nature of his job necessitated that Greenspan's temporal depth be rather shallow because immediacy, or referring to everything with a "present" stance, was a very key concern for him. When the nation was experiencing periods of reduced economic activity and/or uncertainty, Greenspan's language indicated a more shallow temporal depth, centering on the near present and not looking far into the future. This emphasis on a narrow interval of temporal depth anchored in the present was also used when futures funds rates were declining and forecasts for short and long-term GDP were down as well. Bligh and Hess note that Greenspan was a pragmatic leader (c.f. Mumford & Van Doorn, 2001) because of his focus on the current state of affairs and communicating the present rather than employing rhetoric about the distant future and his vision for that time period.

Hunt & Ropo's (1996) theorizing suggests that leaders will have different time frames for accountability depending on where they are in the organizational chart, with lower level managers having time spans of up to three months to upper level leaders having from 10 to over 20 years of accountability in their time span, or frame. Essentially, Hunt & Ropo's work addresses the notion that leaders' future temporal depth, as it relates to their job, is determined by the complexity of the task that accompanies their position in the organization.

Mumford et al. (2007) propose that leaders will select strategies for dealing with crisis or change depending on, in part, the time frame they adopt. Additionally, Cha & Edmonston (2006) describe how a CEO's temporal depth related to growth (and stemming from early deaths of relatives and thus a short career temporal depth for himself) was perceived by followers as growth driven by greed. Taken together, these two studies suggest that leaders and followers should acknowledge their individual temporal depths and negotiate the temporal depth parameters for significant activities regarding tasks and organizational orientations. Stronger leader–follower relationships will clearly facilitate this negotiation for a shared understanding of temporal depth regarding both the past and the future.

Herold, Foder, Caldwell & Liu (2008) address a follower's temporal depth as it relates to a follower's identification with a transformational leader, noting that higher levels of transformational leadership lead followers to want to identify with the leader for a longer term. While they do not note this occurrence as reflective of a follower's temporal depth, it is implied in their statement about followers with a transformational leader during an organizational change "... followers should be more invested in the longer term relationship and the future it portends than in the more immediate change." (Herold et al., 2008: 349).

Boal & Schultz (2007) essentially addresses temporal depth, while not calling it exactly that, as necessary for strategic leadership to exist. Defining strategic leadership, they refer to Boal's (2004) statement that "... Strategic leadership forges a bridge between the past, present and the future..." They also describe how strategic leaders use time in their storytelling, focusing "principally on the organization's past history" (Boal & Schultz, 2007: 412). Boal and Schultz continue to describe how a strategic leader in a complex adaptive system will both influence and be influenced by organizational members' perceptions of time, and whether those perceptions view time in a linear or a cyclical manner. They describe a linear perspective on time as viewing the past as unique and directly connected to the future, and a cyclical one as a "sequence with a set of broadly recurring events" (Boal & Schultz, 2007: 418). They also describe Crossan, Cunha, Vera, & Cunha's (2005) ideas about improvisation in organizations, which allow complex adaptive systems to reconcile both the linear and the cyclical perspectives and view both the past and the future as blending to create the present.

One of Boal & Schultz (2007) key contributions is the notion of leaders using time in storytelling to facilitate a cohesive organizational identity. They articulate how strategic leaders create what they term a *temporal coherence* to the organization's life history by grouping events around critical points in time for the organization. By considering the organization's life history, as well often their own personal life history, these leaders are reaching into their temporal depth and using it to help organizational members in their sensemaking process about their roles in the organization and the future of the organization.

### 3. Implications for theory, future research, and our temporal imaginations

The primary aim of this review is to encourage scholars and practitioners in our field to develop and use our temporal imaginations. Our hope in doing so is that research on leadership, a process that inherently involves time, can move forward in new directions. In keeping with this goal, we would like to address the importance of theorists and empirical researchers alike not limiting themselves to the "intellectual straightjacket" (Davies, 1995, p. 17) of Newtonian time.

Newtonian time is the time of the clock and the calendar (see Bluedorn, 2002, chapters 1 and 2, for a detailed discussion), and it has become the increasingly dominant way people consciously think about time, social scientists included. Here, we will refer to it as clock time, as is often done in the literature (e.g., Clark, 1985; Orlikowski & Yates, 2002).

Clock time contrasts with event time (Clark, 1985; Gersick, 1994; Crossan et al., 2005), which is time that is defined by events, not the meter of a calendar or a clock. Thus the stone, bronze, and iron ages are defined, not by the radiometric dates assigned to artifacts, but by the types of tools made and used in historic and prehistoric cultures. Calendar dates can be assigned through radiometric dating procedures, but those dates do not define the ages. Instead, the ages are defined by the set of events involved to make and use particular kinds of tools. And the distinction between clock and event time has been used effectively in organizational research, both empirical (Gersick, 1994) and theoretical (Crossan et al., 2005; Orlikowski & Yates, 2002). Of particular relevance to our current concern with the limitations of clock time is Clark's (1978, 1985) research, which reveals not only temporal differentiation in organizations, but that both clock time and event times can co-exist in the same organization and

be used in significant ways. Thus the two forms of time are not mutually exclusive in organizational or other social contexts. And, they both play key roles in leader–follower perceptions, processes, and outcomes.

Leaders and followers alike must recognize that as important as clock time is, and we do not deny its importance, clock time does not tell the entire story. To tell a more complete story (i.e., develop a more complete theoretical description and understanding), event-time's involvement must be recognized and leveraged as well. This is what Casimir's (2001) research demonstrated in revealing the importance of the sequence in which leadership behaviors (events) occur (i.e., that socioemotional behaviors should occur just *prior to* task-oriented behaviors). So now having added event and clock times to our temporal imaginations, we will describe in terms of these two times the five temporal variables on which we have focused much of our discussion.

In terms of clock time and event time, pace/speed is a clock-time phenomenon. Punctuality involves both forms of time because the definition of punctual conduct varies with the event (Levine et al., 1980), thereby making punctuality a temporal variable with both clock- and event-time components. Temporal depth can be either a clock-time or event-time phenomenon, or both, depending on whether distances into the past and future are framed in clock time units such as days and years, or framed in terms of the number of major and minor events that have happened or may transpire. Polychronicity is almost wholly an event-time phenomenon, especially if it is considered by itself rather than in combination with other dimensions such as pace/speed.

In some ways entrainment involves both forms of time, but in a different way than punctuality or temporal depth. Entrainment can involve clock time when the zeitgebing rhythm is so regular that it can be anticipated confidently at a particular time of the calendar year (e.g., the holiday retailing season associated with the Christmas holiday). When this degree of regularity occurs, clocktime (the calendar) is certainly involved, sort of as a proxy for the rhythm of genuine concern, which is associated with an event (e.g., the holiday retailing season). Similar highly predictable rhythms with zeitgebing properties can occur within shorter periods such as the week (e.g., on Tuesday I have lunch with my friend) or day (e.g., we get a cup of coffee at 9:00 a.m.). Again, the original zeitgebing rhythm was an event, but when the underlying events becomes so regular, clocks and calendars can serve as proxies for those underlying events.

Overall, we caution researchers and practitioners against deliberately staying within the clock-time straightjacket because it will ultimately lead to severely constricted and distorted temporal imaginations. And having thus provided a general warning and prescription, we will proceed to suggest more specific ideas for leadership theory and research.

### 3.1. *Entrainment, leadership, and predictability*

As the entire notion of entrainment is built upon rhythmic synchronization, a discussion of entrainment therefore prompts a discussion of predictability. The repeated interactions of entrainment serve as the basis from which to determine predictability. Since much of leadership research focuses on leaders setting followers' expectations (Bass, 1990), it strikes us that entrainment holds particular promise for leadership research and practice. Because predictability necessarily involves expectations of when something is going to occur, through entrainment some subset of behavioral expectations will be managed and met. Why might leaders and followers want to increase perceptions of predictability? Predictability has been discussed as a foundational part of rational, routine, cognition-based trust in that it provides individuals with evidence of behaviors that help them avoid trusting blindly (Wicks, Berman & Jones, 1999; Mills & Ungson, 2003). And, since so much of leadership research addresses leadership and trust (cf. Burke, Sims, Lazzara & Salas, 2007), temporal dimensions and the predictability that often accompanies them represent fruitful areas for future leadership research to explore.

But there is more to entrainment than simply predictability. Because entrainment involves synchronicity, it involves a mutual dependency. Much like the way leaders and followers build and create mutual dependency in their exchange-based relationships, entrainment may well play a critical role in the creation of a leadership relationship.

#### 3.1.1. *Entrainment and high-quality LMX*

Literature considering the leadership relationship from an exchange perspective has alluded to the role of entrainment without ever specifically addressing or identifying the construct. For example, Bauer & Green (1996) discuss Graen & Scandura's (1987) three stages of LMX (role taking, role making, and role routinization). The very term "role routinization" implies that entrainment occurs through the routinization process. However, to the best of our knowledge, no published manuscript within the LMX literature (or any leadership literature) has addressed the role of entrainment in facilitating high-quality leader–follower relationships. We will return to this discussion of entrainment and LMX research shortly when we discuss future research for considering leadership through the five different temporal lenses. There, we discuss in greater depth the window of opportunities we see for syntheses of entrainment with LMX research. Before doing so, however, we would like to caution future research about having a "romance of entrainment" as it relates to leadership.

#### 3.1.2. *Optimal levels of entrainment for leaders and followers*

Our consideration of leadership and the five temporal dimensions discussed herein all point to positive outcomes for leader–follower relationships when leaders and followers entrain their temporal behaviors, albeit within the limits allowed by fundamental personality traits. It seems to follow that if entrainment is generally expected to enhance leadership effectiveness, then the more entrainment, the better (more meaning "tighter" or more similar patterns, rhythms, and paces). Indeed, we have just suggested that when high levels of entrainment are present between a leader and a follower, leader–follower dynamics, processes, and outcomes will be stronger. Although we neither disagree nor argue the opposite, we do suggest that overly high levels of

entrainment may be less than optimal; we now suggest that entrainment at levels less than the maximum, perhaps at levels characterized as moderate, may be better rather than maximum levels of rhythmic similarity. And we argue this for several reasons.

First, some degree of entrainment will augment a leader–follower relationship because of the inherent predictability and synchronicity that exists with entrainment. Yet there might be an optimal level of entrainment beyond which entrainment can be too high. Too much entrainment might possibly lead to too similar of a mental model, too much dependency, which might perhaps result in leader–follower homogeneity in thinking and a narrow focus for productive discourse and differing perspectives.

Second, Sparrowe & Liden's (1997) work indicates that when immediacy is too high, the quality of the leader–follower relationship is limited because the focus becomes too task oriented. Since an overly high level of entrainment could produce high levels of immediacy, a danger of too much task orientation (perhaps at the expense of relationship or social exchanges) might limit the quality of the leader–follower relationship. This illustrates an indirect effect too much entrainment might have on LMX. However, as we argued earlier, some entrainment regarding immediacy (thereby making it shared across both parties of the dyad) will enhance the quality of the LMX over the follower-only immediacy Sparrowe & Liden's (1997) outline.

Third, overly tight coupling between two entities can lead to the extreme amplification of effects, such as when the resonance between two physical forces (a version of entrainment) tears apart a bridge (Bluedorn, 2002, p. 179). Further, overly tight coupling can lead to “normal” accidents (Perrow, 1984). In general, the overly close entrainment of rhythms seems to be associated with the negative effects that come with excessive amplification which can lead to pathological exaggeration, phenomena that some slack and the flexibility characteristic of moderate levels of entrainment would help reduce or avoid.

### 3.2. Future research

Although an increasing number of scholars are conducting both empirical and theoretical research on time and organizational topics, the contributions of leadership scholars have been at best tangential to this trend, albeit with exceptions (e.g., Broberg, Bailey & Hunt, 2007; Halbesleben et al., 2003; Reeves-Ellington, 2007). With so little explicitly time-focused research having been conducted in the leadership domain, the field presents abundant empirical and theoretical opportunities for interested leadership scholars. So next we build on the review and discussion above and outline a few promising avenues for such research.

#### 3.2.1. Entrainment

The entrainment concept represents a rich construct for examining the formation and maintenance of richer leader–follower relationships. Because it refers to something shared by two parties (a common rhythm), it may help facilitate efforts to develop theory to support the fundamental premise of individualized leadership theory, that leaders differentiate between subordinates and form a unique relationship with each subordinate. Relative levels of entrainment may be one dimension strongly affecting how leaders differentiate followers, thereby influencing the respective quality of each relationship.

Future research in the area of implicit leadership theory might consider how entrainment and temporal dimensions can influence a follower's implicit model of leadership. For example, does entrainment potentially substitute for one's ideal leader, with synchronicity being more powerful than ILT? Cronshaw & Lord (1987) suggest that followers' process information about their leaders and then construct a leadership image. The use of entrainment in consideration of this process can yield answers to questions such as “Do differing levels of entrainment between leaders and followers create halo effects on the resultant leadership image that is created?” As of yet, we have no knowledge as to whether entrainment may indeed produce positive biases towards leaders or towards followers.

The growing body of dyadic research has recently received scrutiny for not devoting sufficient attention to the *processes* by which quality relationships are created (Sparrowe & Liden, 1997). Given this call for new lenses with which to understand the processes underlying the resultant relationship, LMX frameworks could benefit from the application of temporal theory, and entrainment theory in particular.<sup>3</sup> More often than not, discussions of LMX bring up issues regarding levels of analysis. As entrainment involves synchronization in behaviors from two parties, so perhaps through the inclusion of entrainment, LMX research may be able to sharpen its focus on more accurately depicting the level of analysis at which the relationship is perceived.

Sparrowe & Liden's (1997) work also presents an opportunity for the application of entrainment. As noted earlier, their work has identified immediacy as a dimension on which to evaluate leader–follower exchanges, and it refers only to a one-sided (follower) indication of followers wanting to implement leader requests quickly. High levels of immediacy signal a very task-oriented relationship built on a task-based exchange rather than of a high-quality relationship built on trust. From a temporal theory perspective overall and specifically from the application of entrainment, we suggest that immediacy, should it *be entrained and shared* in terms of its foundation in the relationship, may actually be a key foundation for a high-quality relationship. The mutually negotiated mirrored behaviors of immediacy between a leader and follower might include immediacy of content sharing, relationship building, trust-building social exchange types of interactions, not just task-based interactions.

Focusing on process, LMX scholars have identified three key components to the creation of the relationships between leader and follower: role taking, role making, and role routinization (Graen & Scandura, 1987). From a role theory perspective, each of

<sup>3</sup> We recognize that LMX theory and research has been criticized for not explicitly measuring the dyadic nature of the relationship. Thus we put forth our theorizing about entrainment and its application to LMX theory with the caveat that the perceptions of entrainment must be present from both parties of the dyad.

those steps will involve the notion of mutuality (whereby both parties can contribute to the dimensions) (Dienesch & Liden, 1986), and therefore entrainment might be operating across all three. Future research could address whether this is occurring across one or more of the stages.

We would also like to build on the point that entrainment provides consistency and predictability, key aspects for forming attributions (e.g. Martinko et al., 2007). These attributions are necessary but not sufficient conditions for trust to develop between individuals (e.g. Burke et al., 2007). As such, future leadership research might consider how entrainment serves as a process mechanism through which trust is developed between leaders and followers.

Research on transformational leadership (e.g. Avolio & Bass, 1995; Bass, 1990) has implicitly addressed time and in particular has done so in the dimension of individualized consideration. While designed to capture a follower's feelings that his/her leader cares about him/her as an individual, it also implicitly involves the amount of time a leader spends developing a follower. This notion of the amount of time a leader spends with individual followers was tapped by Liden et al.'s (2008) measurement of servant leadership, and we urge future leadership research to continue to consider this element of time with respect to follower feelings of a leader caring about them as individuals. Time and entrainment serve as the perfect organizing framework for this examination, for individual leaders and followers who can find their temporal rhythm regarding the timing for mentoring, developmental activities and conversations, and personal, caring conversations will be dyadic in terms of their common perceptions of the effectiveness of the relationship. Outcomes from such entrainment, including commitment to the leader, leader commitment to the follower, and follower productivity would likely follow, thus making research in this area fruitful.

Finally, future research might consider the impact of entrainment on leading for creativity (Halbesleben et al., 2003). Questions such as "What is the impact of leader/follower entrainment on follower creativity as output and the leader's creativity in terms of leading with creativity?" might be examined. Shared mental models have been related to entrainment (Standifer & Bluedorn, 2006), so a shared mental model accompanying entrainment might facilitate more dynamic conversations about matters that would otherwise appear to be seemingly random connections. Conversely, the shared mental model might produce too much comfort and actually harm creativity. Only research can resolve this issue.

### 3.2.2. Polychronicity

Leadership prototypes specify the qualities and behaviors expected from good leaders, so future research might examine how these prototypes consider polychronicity as it relates to prototypes for ideal leadership. The question of whether prototypes differ for leadership at different hierarchical levels in the organization exists as well. For example, the higher one goes in an organization the greater the complexity involved in the job. Do follower prototypes for leaders at these different hierarchical levels differ in terms of expectations for polychronicity? Do followers implicitly expect a leader higher up in the organization to be more polychronic? Similarly, do implicit leadership prototypes for leadership at lower levels of the organization employ expectations for less polychronicity and more focus, for instance on one thing at a time (e.g. each individual managerial task or issue)? Finally, if a follower has polychronicity as a key attribute of his/her view of an ideal leader, and then is faced with a monochronic leader, how will this impact the ability for leadership to occur? Implicit leadership theory scholars might turn their attention to considering these questions.

Also, future research might consider questions about how does similarity and/or difference in polychronic preferences between leader and follower impact the quality of the leadership relationship? Are complements, or similarities, in preferences ideal? How do these similarities and differences affect the task and/or relationship environment? Further, do leaders have different preferences for polychronicity when it comes to task versus relationship behaviors? Can leaders be polychronic, but only in one aspect of leadership?

### 3.2.3. Speed/pace

While immediacy, as it relates to speed, has been put forth with respect to leadership, it has addressed just one of many possible speed-related components of a leader–follower relationship. As the focus thus far has been only on follower responses to leader requests, the leadership field is wide open for research in the area of immediacy of communication, relationship development, and routine interactions.

Communication research suggests that immediacy can influence athletes' perceptions of coaches (Haselwood et al., 2005), students' perceptions of teachers (Punyanunt-Carter & Wagner, 2005), and even student effectiveness (Houser, 2005). Yet, while Sparrowe and Liden's work suggests that task-related immediacy will not allow a high LMX relationship to form, this body of communication theory suggests that followers associate immediacy with a more positive and supportive relationship. Future research might attempt to reconcile these findings and untangle the implications of task versus relationship behavior immediacy as well as the individual versus dyadic nature of the perceptions of immediacy. Research investigating these kinds of questions regarding immediacy in the formation of leader–follower relationships might yield some very interesting results.

### 3.2.4. Temporal depth

The area of temporal depth holds great promise as an area into which leadership research might delve. In particular, the realm of strategic leadership has started to ask questions considering this variable, but there are still many questions to be asked. For example, which depths would (or should) be more dominant for a strategic leader, those about the past or those about the future? Both the popular and academic press has idolized a leader's ability to focus on the future, but how far into the future should their focus fall? And should it be grounded in the past? How much of the past—how far back? And in what domains? Do followers have implicit leadership prototypes about what degree of temporal depths signals an ideal strategic leader? Also, how does a follower's

own temporal depth influence their view of whether a leader is a strategic leader or not?" Finally, is there such a thing as a polychronic kind of temporal depth—as in a temporal depth that reaches deep and far into the histories or futures of many domains simultaneously? Given that complex, radical innovation is a key concern for many leaders, perhaps such a construct is one that will separate the successful from the unsuccessful in terms of strategic leadership.

The role of national and organizational cultures as they relate to a leader's and/or follower's temporal depth, and the embedded nature of those cultures will also serve as an interesting platform for future research. Work on future orientation has been conducted (Ashkanasy, Gupta, Mayfield & Trevor-Roberts, 2004), but future orientation is about the *emphasis* on the future compared to the past or present; temporal depth, about how *far* into the future and past people, including leaders and followers, think about things. This difference needs to be recognized because there may be significant interactions between orientation and depth. The impact of national and organizational culture on the temporal depths of leaders and followers is clearly a largely unexplored subject, (not unlike the impacts of culture on the other temporal variables we have discussed), thus providing great opportunities for original work.

Finally, how does one's temporal depth, particularly with respect to the past, influence the creation of a leader prototype? For example, with a deeper temporal depth, perhaps individuals will use implicit models from far back in history, versus just from their own lifetime. Similarly, with a more immediate temporal depth, perhaps implicit stereotypes are formed more from leaders one encounters in one's more immediate working life. Future leadership might explore questions such as these and also consider whether the processes of transference (cf. Ritter & Lord, 2007) and prototype matching (Lord, Foti & DeVader, 1984) differ depending on temporal depth. For example, do individuals with shallower temporal depth match leaders to ideal prototypes while individuals with longer temporal depths adopt transference? Or vice versa?

#### 4. Conclusion

Human beings have the ability to exercise at least partial agency in the development, not only of their own temporal behaviors, but also of the larger temporal contexts in which they live and work. Regardless of whether these temporal contexts are conceptualized as timescapes (Adam, 1998) or temporal commons (Bluedorn & Waller, 2006), to exercise informed and deliberate choices regarding their development requires a well-tutored temporal imagination irrespective of whether the timescape or temporal commons encompasses an entire society or simply a dyadic leader–follower relationship. To the end of developing such temporal imaginations and promoting their use in understanding and managing leadership processes and leader–follower relationships, we have described the implications for leaders and followers of five temporal phenomena: entrainment, polychronicity, pace/speed, temporal depth, and punctuality. We believe these are important temporal phenomena for advancing leadership theory and research, and there are undoubtedly many others. The task now falls to scholars in the field of leadership studies to activate their temporal imaginations and add time and temporal phenomena to the rich domain of leadership theory and research.

#### References

- Ancona, D., & Chong, C. L. (1996). Entrainment: Pace, cycle, and rhythm in organizational behavior. *Research in Organizational Behavior*, 18, 251–284.
- Adam, B. (1998). *Timescapes of modernity: The environment and invisible hazards*. London: Routledge.
- Aschoff, J. (1965). The phase-angle difference in circadianaperiodicity. In J. Aschoff (Ed.), *Circadian Clocks: Proceedings of the Feldafind Summer School, 7–18 Sept. 1964* (pp. 262–276). Amsterdam: North-Holland Publishing.
- Aschoff, J. (1979). Circadian rhythms: General features and endocrinological aspects. In D. T. Krieger (Ed.), *Endocrine Rhythms* (pp. 1–61). New York: Raven Press.
- Ashkanasy, N., Gupta, V., Mayfield, M. S., & Trevor-Roberts, E. (2004). Future orientation. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies* (pp. 282–342).
- Avolio, B. J., & Bass, B. M. (1995). Individual consideration viewed at multiple levels of analysis: A multi-level framework for examining the diffusion of transformational leadership. *The Leadership Quarterly*, 6, 199–218.
- Bartone, P. T., Snook, S. A., Forsythe, G. B., Lewis, P., & Bullis, R. C. (2007). Psychosocial development and leader performance in military officer cadets. *The Leadership Quarterly*, 18, 490–504.
- Bass, B. M. (1990). *Bass & Stodgill's handbook of leadership: Theory, research and managerial implications*, (3rd ed.). New York: Free Press.
- Bauer, T. A., & Green, S. G. (1996). Development of a leader–member exchange: A longitudinal test. *Academy of Management Journal*, 39, 1538–1567.
- Berger, P., & Luckmann, T. (1966). *The social construction of reality*. Garden City, NY: Doubleday.
- Bernerth, J. B., Armenakis, A. A., Feild, H. S., Giles, W. F., & Walker, H. J. (2008). The influence of personality differences between supervisors and subordinates on perceptions of LMX: An empirical investigation. *Group and Organization Management*, 33, 216–240.
- Bligh, M. C., & Hess, G. D. (2007). The power of leading subtly: Alan Greenspan, rhetorical leadership, and monetary policy. *The Leadership Quarterly*, 18, 87–104.
- Blount, S., & Janicik, G. (2002). Getting and staying in pace: The 'in-synch' preference and its implications for work groups. *Research on Managing Groups and Teams*, 4, 235–266.
- Bluedorn, A. C. (1998). An interview with anthropologist Edward T. Hall. *Journal of Management Inquiry*, 7, 109–115.
- Bluedorn, A. C. (2002). *The human organization of time: Temporal realities and experience*. Stanford, CA: Stanford University Press.
- Bluedorn, A. C. (2007). Polychronicity, individuals, and organizations. *Research in the Sociology of Work*, 17, 179–222.
- Bluedorn, A. C., & Denhardt, R. B. (1988). Time and organizations. *Journal of Management*, 14, 299–320.
- Bluedorn, A. C., & Ferris, S. P. (2004). Temporal depth, age, and organizational performance. In C. F. Epstein & A. L. Kalleberg (Eds.), *Fighting for time: Shifting boundaries of work and social life* (pp. 113–149). New York: Russell Sage Foundation.
- Bluedorn, A. C., & Jaussi, K. S. (2007a). Organizationally relevant dimensions of time across levels of analysis. *Research in Multi-Level Issues*, 6, 187–223.
- Bluedorn, A. C., & Jaussi, K. S. (2007b). Time and the challenge of temporal concepts. *Research in Multi-Level Issues*, 6, 249–255.
- Bluedorn, A. C., & Martin, G. (2008). The time frames of entrepreneurs. *Journal of Business Venturing*, 23, 1–20.
- Bluedorn, A. C., & Standifer, R. L. (2006). Time and the temporal imagination. *Academy of Management Learning and Education*, 5, 196–206.
- Bluedorn, A. C., & Waller, M. J. (2006). The stewardship of the temporal commons. *Research in Organizational Behavior*, 27, 355–396.
- Boal, K. B. (2004). Strategic leadership. In G. R. Gothals, G. J. Sorenson, & J. M. Burns (Eds.), *Encyclopedia of leadership* (pp. 1497–1504). Thousand Oaks, CA: Sage.
- Boal, K. B., & Bullis, R. C. (1991). Models of CEO succession: A change score analysis. *Paper presented at the meeting of the Academy of Management, San Francisco, CA*.
- Boal, K. B., & Hooijberg, R. (2000). Strategic leadership research: Moving on. *The Leadership Quarterly*, 11, 515–549.

- Boal, K. B., & Schultz, P. L. (2007). Storytelling, time and evolution: The role of strategic leadership in complex adaptive systems. *The Leadership Quarterly*, 18, 411–428.
- Boyd, N. G., & Taylor, R. R. (1998). A developmental approach to the examination of friendship in leader follower relationships. *The Leadership Quarterly*, 9, 1–25.
- Broberg, J. C., Bailey, A. D., & Hunt, J. G. (2007). A system dynamics perspective on timescapes in organizations. *Research in Multi-Level Issues*, 6, 317–330.
- Burke, C. S., Sims, D., Lazzara, E. H., & Salas, E. (2007). Trust in leadership: A multi-level review and integration. *The Leadership Quarterly*, 18, 606–632.
- Casimir, G. (2001). Combinative aspects of leadership style: The order and spacing of leadership behaviors. *The Leadership Quarterly*, 12, 245–278.
- Cha, S. E., & Edmonston, A. C. (2006). When values backfire: Leadership, attribution, and disenchantment in a values-driven organization. *The Leadership Quarterly*, 17, 57–78.
- Chen, Y. R., Blount, S., & Sanchez-Burks, J. (2004). The role of status differentials in group synchronization. *Research on Managing Groups and Teams*, 6, 111–133.
- Clark, P. (1978). Temporal inventories and time structuring in large organizations. In J. T. Fraser, N. Lawrence, & D. Park (Eds.), *The Study of Time III* (pp. 391–416). New York: Springer-Verlag.
- Clark, P. (1985). A review of the theories of time and structure for organizational sociology. *Research in the Sociology of Organizations*, 4, 35–80.
- Conte, J. M., & Gintoft, J. N. (2005). Polychronicity, big five personality dimensions, and sales performance. *Human Performance*, 18, 427–444.
- Costa, P. T., & McCrae, R. R. (1994). Set like plaster? Evidence for the stability of adult personality. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 21–40). Washington: American Psychological Association Books.
- Cotte, J., & Ratneswar, S. (1999). Juggling and hopping: What does it mean to work polychronically? *Journal of Managerial Psychology*, 14, 184–204.
- Cronshaw, S. F., & Lord, R. G. (1987). Effects of categorization, attribution, and encoding processes on leadership perceptions. *Journal of Applied Psychology*, 72, 97–106.
- Crossan, M., Cunha, M. P., Vera, D., & Cunha, J. (2005). Time and organizational improvisation. *Academy of Management Review*, 30, 129–145.
- Dansereau, F., Jr., Yammarino, F. J., Markham, S. E., Allutto, J. A., Newman, J., Dumas, M., Nachman, S. A., Naughton, T. J., Kim, K., Al-Kelabi, S. A., Lee, S., & Keller, T. (1995). Individualized Leadership: A new multiple-level approach. *The Leadership Quarterly*, 6, 413–450.
- Das, T. K. (1987). Strategic planning and individual temporal orientation. *Strategic Management Journal*, 8, 203–209.
- Davies, P. (1995). *About time: Einstein's unfinished revolution*. New York: Simon & Shuster.
- Dienesch, R. M., & Liden, R. C. (1986). Leader–member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11, 618–634.
- Dragoni, L. (2005). Understanding the emergence of state goal orientation in organizational work groups: The role of leadership and multilevel climate perceptions. *Journal of Applied Psychology*, 90, 1084–1095.
- Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32, 543–576.
- El Sawy, O. A. (1983). Temporal perspective and managerial attention: A study of chief executive strategic behavior. *Dissertation Abstracts International*, 44(05A), 1556–1557.
- Epitropaki, O., & Martin, R. (2004). Implicit leadership theories in applied settings: Factor structure, generalizability, and stability over time. *Journal of Applied Psychology*, 89, 293–310.
- Erdogan, B., Sparrowe, R. T., Liden, R. C., & Dunegan, K. J. (2004). Implications of organizational exchanges for accountability theory. *Human Resource Management Review*, 14, 19–45.
- Finkelstein, S. (2006). Why smart executives fail: Four case histories of how people learn the wrong lessons from history. *Business History*, 48, 153–170.
- Finkelstein, S., & Hambrick, D. (1996). *Strategic Leadership: Top executives and their effects on organizations*. Minneapolis/St. Paul, MN: West.
- Foti, R. J., Kneee, R. E., Jr., & Backert, R. S. G. (2008). Multiple level implications of frame leadership perceptions as a dynamic process. *The Leadership Quarterly*, 19, 178–194.
- Gersick, C. J. G. (1988). Time and transition in work teams: Toward a new model of group development. *Academy of Management Journal*, 31, 9–41.
- Gersick, C. J. G. (1989). Marking time: Predictable transitions in task groups. *Academy of Management Journal*, 32, 274–309.
- Gersick, C. J. G. (1994). Pacing strategic change: The case of a new venture. *Academy of Management Journal*, 37, 9–45.
- Giambastista, R. C. (2004). Jumping through hoops: A longitudinal study of leader life cycles in the NBA. *The Leadership Quarterly*, 16, 607–624.
- Graen, G., & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Research in Organizational Behavior*, 9, 175–208.
- Graen, G., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader–member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, 6, 219–247.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16, 250–279.
- Halbesleben, J. R. B., Novicevic, M. M., Harvey, M. G., & Buckley, M. R. (2003). Awareness of temporal complexity in leadership of creativity and innovation. *The Leadership Quarterly*, 14, 433–454.
- Hall, E. T. (1981). *The silent language*. New York: Anchor books (Original work published in 1959).
- Hall, E. T. (1983). *The dance of life: The other dimension of time*. Garden City, NY: Anchor Press.
- Hambrick, D., & Fukutomi, G. D. S. (1991). The season's of a CEO's tenure. *Academy of Management Review*, 16, 719–742.
- Haselwood, D. M., Joyner, A. B., Burke, K. L., Geyerman, C. B., Czech, D. R., Munkasy, B. A., & Zwald, A. D. (2005). Female athletes' perceptions of head coaches' communication competence. *Journal of Sport Behavior*, 28, 216–230.
- Herold, D. M., Foder, D. B., Caldwell, S., & Liu, Y. (2008). The effects of transformational and change leadership on employees' commitment to a change: A multilevel study. *Journal of Applied Psychology*, 93, 346–357.
- Houser, M. L. (2005). Are we violating their expectations? Instructor communication expectations of traditional and nontraditional students. *Communication Quarterly*, 53, 213–228.
- Hunt, J. G., & Ropo, A. (1996). Multi-level leadership: Grounded theory and mainstream theory applied to the case of General Motors. *The Leadership Quarterly*, 6, 379–412.
- Jaques, E., & Clement, S. D. (1991). *Executive leadership: A practical guide to managing complexity*. Arlington, VA: Cason Hall and Co.
- Judge, W. Q., & Spitzfaden, M. (1995). The management of strategic time horizons within biotechnology firms: The impact of cognitive complexity on time horizon diversity. *Journal of Management Inquiry*, 4, 179–196.
- Kaiser, R., Hogan, R., & Craig, S. B. (2008). Leadership and the fate of organizations. *American Psychologist*, 63, 96–110.
- Lauer, Robert H. (1981). *Temporal man: The meaning and uses of social time*. New York: Praeger.
- Leavy, B. (1996). On studying leadership in the strategy field. *The Leadership Quarterly*, 7, 435–454.
- Levine, R. (1997). *A geography of time: The temporal misadventures of a social psychologist, or how every culture keeps time just a little bit differently*. New York: Basic Books.
- Levine, R. V., West, L. J., & Reis, H. T. (1980). Perceptions of time and punctuality in the United States and Brazil. *Journal of Personality and Social Psychology*, 38, 541–550.
- Lewis, J. D., & Weigart, A. (1985). Trust as a social reality. *Social Forces*, 63, 967–985.
- Liden, R. C., Wayne, S. J., Zhao, H., & Henderson, D. (2008). Servant leadership: Development of a multidimensional measure and multi-level assessment. *The Leadership Quarterly*, 19, 161–177.
- Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance. *Psychological Bulletin*, 90, 125–152.
- Lord, R. G., Brown, D. J., Harvey, J. L., & Hall, R. J. (2001). Contextual constraints on prototype generation and their multi-level consequences for leadership processing. *The Leadership Quarterly*, 12, 311–338.
- Lord, R. G., Foti, R., & DeVader, C. (1984). A test of leadership categorization theory: Internal structure, information processing, and leadership perceptions. *Organizational Behavior and Human Performance*, 34, 343–378.
- McEvoy, S. P., Stevenson, M. R., McCartt, A. T., Woodward, M., Haworth, C., Palamara, P., & Cernarelli, R. (2005). Role of mobile phones in motor vehicle crashes resulting in hospital attendance: A case-crossover study. *BMJ (British Medical Journal)*. doi:10.1136/bmj.38537.3975512.55 (published 12 July 2005).
- McGrath, J. E., & Rotchford, N. L. (1983). Time and behavior in organizations. *Research in Organizational Behavior*, 5, 57–101.

- Martinko, M. J., Harvey, P., & Douglas, S. C. (2007). The role, function, and contribution of attribution theory to leadership: A review. *The Leadership Quarterly*, 18, 561–585.
- Mills, P. K., & Ungson, G. R. (2003). Reassessing the limits of structural empowerment: Organizational constitution and trust as controls. *Academy of Management Review*, 28, 143–153.
- Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row.
- Morgeson, F. P., & DeRue, S. (2006). Event criticality, urgency, and duration: Understanding how events disrupt teams and influence team leader intervention. *The Leadership Quarterly*, 17, 271–287.
- Mumford, M. D., Friedrich, T. L., Caughron, J. J., & Byrne, C. L. (2007). Leader cognition in real world settings: How do leaders think about crises? *The Leadership Quarterly*, 18, 515–543.
- Mumford, M. D., & Van Doorn, J. R. (2001). The leadership of pragmatism. Reconsidering Franklin in the age of charisma. *The Leadership Quarterly*, 12, 279–309.
- O'Mahony, S., & Ferraro, F. (2007). The emergence of governance in an open source community. *Academy of Management Journal*, 50, 1079–1106.
- Orlikowski, W. J., & Yates, J. (2002). It's about time: Temporal structuring in organizations. *Organization Science*, 13, 684–700.
- Perrow, C. (1984). *Normal accidents: Living with high-risk technologies*. New York: Basic Books.
- Persing, D. L. (1992). The effect of effort allocation information on perceptions of intellectual workers and evaluations of their products. *Dissertation Abstracts International*, 52(09A), 3340–3351.
- Punyanunt-Carter, N. M., & Wagner, T. R. (2005). Communication based emotional support difference between professors and teaching assistants. *Education*, 125, 569–574.
- Redelmeier, D. A., & Tibshirani, R. J. (1997). Association between cellular-telephone calls and motor vehicle collisions. *New England Journal of Medicine*, 336, 453–458.
- Reeves-Ellington, R. (2007). Timescapes: A multi-level approach for understanding time use in complex organizations. *Research in Multi-Level Issues*, 6, 259–316.
- Ritter, B. A., & Lord, R. G. (2007). The impact of previous leaders on the evolution of new leader: An alternative to prototype matching. *Journal of Applied Psychology*, 92, 1683–1695.
- Sahlins, M. (1972). *Stone age economics*. New York: Aldine De Gruyter.
- Scandura, T. A., Graen, G. B., & Novak, M. A. (1986). When managers decide not to decide autocratically: An investigation of leader–member exchange and decision influence. *Journal of Applied Psychology*, 71, 579–584.
- Scandura, T. A. (1999). Rethinking leader–member exchange: An organizational perspective. *The Leadership Quarterly*, 10, 25–40.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40, 437–453.
- Schriesheim, C. A., Castro, S. L., & Cogliser, C. C. (1999). Leader–member exchange (LMX) research: A comprehensive review of theory, measurement, and data-analytic practices. *The Leadership Quarterly*, 10, 63–113.
- Slocombe, T. E., & Bluedorn, A. C. (1999). Organizational behavior implications of the congruence between preferred polychronicity and experienced work-unit polychronicity. *Journal of Organizational Behavior*, 20, 75–99.
- Soldz, S., & Vaillant, G. E. (1999). The Big Five personality traits and the life course: A 45-year longitudinal study. *Journal of Research in Personality*, 33, 208–232.
- Sparrowe, R. T., & Liden, R. C. (1997). Process and structure in leader–member exchange. *Academy of Management Review*, 22, 522–552.
- Standifer, R., & Bluedorn, A. (2006). Alliance management teams and entrainment: Sharing temporal mental models. *Human Relations*, 59, 903–927.
- Strogatz, S. H., & Stewart, I. (1993). Coupled oscillators and biological synchronization. *Scientific American*, 269(6), 102–109.
- Uhl-bien, M., & Maslyn, J. (2000). Examining the exchange in leader member exchange (LMX): Identification of dyadic relational styles and their association with key attitudes and behavior. *Academy of Management Proceedings*, OB, K1–K6.
- Vecchio, R. P., & Boatwright, K. J. (2002). Preferences for idealized styles of supervision. *The Leadership Quarterly*, 13, 327–342.
- Waller, M. J. (2007). Preferences, behaviors, and strategies in multiple-task performance. *Research in Multi-Level Issues*, 6, 239–247.
- Weber, M. (1947). *The theory of social and economic organization* (A.M. Henderson and T. Parsons, Trans). New York: Oxford University Press (original work published in 1924).
- Wicks, A. C., Berman, S. L., & Jones, T. M. (1999). The structure of optimal trust: Moral and strategic implications. *Academy of Management Review*, 24, 99–116.
- Zaccaro, S. J., & Klimoski, R. J. (2001). The nature of organizational leadership: An introduction. In S. J. Zaccaro & R. J. Klimoski (Eds.), *The nature of organizational leadership* (pp. 3–41). San Francisco: Jossey Bass.