

THE FUTURE OF LEADERSHIP

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The good news with regard to this (or any) chapter on the future of leadership is that there is one. There was a time when researchers called for a moratorium on new leadership theory and research (e.g., Miner, 1975) citing the uncertain future of the field. Then for a time there was a popular academic perspective that leadership did not really matter when it came to shaping organizational outcomes (Meindl & Ehrlich, 1987; Meindl, Ehrlich, & Dukerich, 1985; Pfeffer, 1977). That perspective was laid to rest by “realists” in the field (Day & Antonakis, 2012a) by means of empirical re-interpretation of the results used to support the position that leadership does not matter (Lieberson & O'Connor, 1972; Salancik & Pfeffer, 1977). Specifically, Day and Lord (1988) showed that when proper methodological concerns

were addressed (e.g., controlling for industry and company size effects; incorporating appropriate time lags) that the impact of top-level leadership was considerable – explaining as much as 45% of the variance in measures of organizational performance. Despite some recent pessimistic sentiments about the “curiously unformed” state of leadership research and theory (Hackman & Wageman, 2007), others have argued that the field has continued to evolve and is potentially on the threshold of some significant breakthroughs (Day & Antonakis, 2012a).

Leadership scholars have been re-energized by new directions in the field and research efforts have revitalized areas previously abandoned for apparent lack of consistency in findings (e.g., leadership trait theory). Our accumulated knowledge now allows us to explain the nature of leadership including its biological bases and other antecedents, and consequences with some degree of confidence. There are other comprehensive sources that review the extensive theoretical and empirical foundation of leadership (Bass, 2008; Day & Antonakis, 2012b) so that will not be the focus of the present chapter. Instead, we will take a future-oriented perspective in identifying particular areas within the leadership field that we believe offer promising perspectives on the future of leadership.

Nonetheless, it is worthwhile as background to first provide an overview of how we see the leadership field changing over the past decade or so. This short chronicle will set the stage for a keener understanding of where the future contributions are likely to emerge. Overall, across nine major schools of leadership – trait, behavioural, contingency, contextual, relational, sceptics, information processing, New Leadership, biological and evolutionary – researchers have seen a resurgence in interest in one area, a high level of activity in at least four other areas, inactivity in three areas, and one that was modestly active in the previous decade but we think holds strong promise for the future (Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010). We will next provide brief overviews of these nine schools and their respective levels of research activity (see Figure 1).

[Insert Figure 1 here]

The *trait* school of leadership – also referred to as the “Great Man” [sic] approach – is the earliest to have formed, which was around the turn of the 20th century. The school reached a zenith of activity around the beginning of the 1960s, falling off as a result of the rise of behaviorism among other things (see Day & Zaccaro, 2007, for a more complete review of the history of leadership trait theory). But the theory came back with a vengeance in the 1990s and remains highly active today. One reason was due to the introduction of an organizing framework for personality (i.e., the five factor model) and the other was through the development, acceptance, and use of meta-analytic techniques to summarize research findings across studies in a quantitative manner. As will be discussed, meta-analysis and other methodological and analytical advances have revolutionized many scientific disciplines including leadership (Day, in press-a).

The *behavioural* school of leadership is probably exemplified by the Ohio State studies and the leadership factors of consideration and initiating structure. This school has been generally inactive since the 1980-1990s (and these theories have been somewhat integrated in other approaches), although there have been relatively recent attempts to revive the so-called “forgotten ones” of consideration and initiating structure (Judge, Piccolo, & Ilies, 2004).

Contingency theories of leadership such as those developed and tested by Fred Fiedler (Fiedler, 1967) were a follow-up to behavioural theories in attempting to improve prediction by incorporating situational moderators. Unfortunately, these approaches tended to collapse on the weight of their own theory in terms of trying to consider all the various forms of situational contingencies in the analyses. It is estimated that only about 1% of the articles published in *The Leadership Quarterly* in the last decade focused on contingency theories (Gardner et al., 2010). But a related class of approaches – grouped under the *contextual* approach label – are an emerging area of interest and very active in terms of recent research

and theory. The contextual approach relies on the basic philosophy that a better understanding of leadership processes requires a better understanding of the contextual factors in which leadership is embedded. Some of these contextual factors include hierarchical level, national culture, organizational characteristics, as well as issues related to race and gender (i.e., diversity). The latter will be discussed as an emerging pathway later in this chapter.

Relational approaches to leadership are probably exemplified by leader-member exchange (LMX) theory. They focus on the quality of the relationship that develops between a leader and a so-called follower (i.e., associates or dyad members) as well as examining leadership as an inherently relational construct. Relational approaches also include those studies of followership and the contributions followers make to effective leadership processes. Approximately 40 articles or 6% of the total published in the 2000-2009 time-frame in *The Leadership Quarterly* could be classified as relational, making it a generally very active area of study (Gardner et al., 2010).

The *sceptics-of-leadership* school has not fared well. This school reached its heyday of influence on the field in the 1980s with the romance of leadership work of James Meindl and colleagues (Meindl & Ehrlich, 1987; Meindl et al., 1985). Although there has been some attempt to re-package this approach around followers and followership, for the most part the activity level in the area has waned and is now considered to be generally inactive. Most contemporary researchers believe that leadership has very real effects in both the short- and the long-term even though the process itself can seem ephemeral.

The *information processing* school of leadership was based primarily on the work of Robert Lord, especially in terms of the attempts to understand how perceptual processes shape who is seen as a leader. Examples of this work that has integrated leadership perceptions with follower outcomes has focused on the role of individual identity as something that shapes the kinds of leadership processes that emerge (Lord & Brown, 2004; Lord & Hall, 2005). The

leader identity space is one that is attracting a good deal of attention, thus the general approach could be considered to be very active.

The *New Leadership* school, which includes neo-charismatic, transformational, and visionary leadership – and spearheaded by exemplary leadership scholars such as Bernard Bass and Robert House – has been credited with reviving scholarly interest in leadership in the 1980s. Although Gardner et al. (2010) have noted a considerable drop in interest as gauged by the proportion of publications in *The Leadership Quarterly* on relevant topics (from about 34% in the 1990s to 13% in the 2000s) it is still considered to be a very active area of leadership research. Some of the recent approaches have used multilevel modelling techniques to examine the dual-level (individual and team) effects of transformational and charismatic leadership. In addition, the introduction of authentic leadership into the literature has been considered by some to be an extension of the transformational leadership construct (Day, in press-a).

Finally, *biological and evolutionary* perspectives on leadership have been gaining attention. Although research on these topics is at best modest (or moderate) and there is no real history of interest prior to 2000, this nascent school offers potentially a unique set of frames for studying leadership processes and effects. As such, we discuss it as a separate, promising area under the chapter section on emerging pathways for theory and research.

As this brief review suggests, interest in leadership from an academic or scholarly perspective has waxed and waned across the years and across particular schools or topics. Nonetheless, we think that the leadership field is generally quite healthy at present with a rosy outlook for the future. For one thing, the nature of leadership as a construct continues to evolve, much to the ire of some. For good or bad, there will unlikely ever be a universally endorsed operational definition of leadership. Although an accepted construct definition could be considered a hallmark of sound science, it is an unreasonable expectation given that

leadership is dynamic, interpersonal, multifunctional, and multilevel in nature (Day, in press-a).

Another contributing factor to the evolving nature of leadership is that advances in conceptual frameworks and analytical tools have contributed to changes in the ways in which we think about and study leadership.

In addition, challenges requiring leadership have become increasingly complex. Complex challenges are unlikely to be addressed by any one leader successfully; thus, leadership will likely require a more inclusive orientation (Hollander, 2009). Instead of conceptualizing and studying leaders and followers as distinct entities, better understanding the dynamic flows in leadership processes underscores a need for a broadened perspective on the role of a leader. Leadership is a dynamic process – not a person or a position – in that someone who is leading at one point in time through influencing others may take on a follower role perhaps almost immediately by being influenced by someone else on the team. As noted elsewhere (e.g., Day, in press-b; Day, Harrison, & Halpin, 2009), this is not a new perspective but one that has been widely overlooked in the leadership literature. Everyone can be prepared (i.e., developed) to more fully and effectively participate in leadership processes when needed. If nothing else, this change in perspective from leadership as a relatively exclusive process that is suited for only a special few to one that is more inclusive in which everyone holds some responsibility for effective outcomes has changed the nature of leadership and will shape its future in many important ways.

In the next section we will address four areas that we believe will be especially influential in shaping the future of leadership over the coming decade or so. After reviewing these areas that are expected to shape the future of leadership, we will conclude with some observations regarding other possible factors to watch as the future of leadership emerges.

Emerging Pathways for Leadership Theory and Research

In forecasting the future of leadership, we have identified four emerging pathways for leadership theory and research in the coming years. Specifically, we address issues of leadership theory itself, measurement and methodological issues regarding leadership research, as well as the topic areas of socio-biological perspectives on leadership (broadly defined to also include evolutionary perspectives), and the diversity influences of gender and other forms of diversity on leadership processes. Each of these is discussed in separate subsections below.

The Future of Leadership Theory

Construct definitions. The origins of all good research, including leadership research, start with strong theory. There certainly has been no shortage of theory in the leadership discipline but it is debatable how much of the research base is truly theoretically grounded. Researchers in the field seem more preoccupied with measures that can be used quickly and easily than with rigorously testing theory. One can only wonder how popular transformational leadership theory (Bass & Riggio, 2006) would have become without the concomitant publication of the Multifactor Leadership Questionnaire (Bass & Avolio, 2000). There are similar developments as researchers race to stake their respective claims on measures of authentic leadership (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008), servant leadership (Liden, Wayne, Zhao, & Henderson, 2008), and similar other “adjective” leadership models.

Despite this apparent measurement imperative in leadership research, the foundation of theory is constructs not measures (Bacharach, 1989), and clear and accurate terms are the bedrock of strong constructs (Suddaby, 2010). Although constructs are not the same thing as theory, they are necessary but insufficient conditions for a theory to take reasonable form and have merit (Sutton & Staw, 1995). Without getting into what it takes to develop clear theory

(which is beyond the scope of this chapter), one particular area that does cry out for some attention is the role of construct definitions.

Besides clearly defining the underlying construct – something that has plagued the general leadership field for ages (Locke, 2003) – and being able to capture the essence of a construct clearly and coherently, a good definition also avoids tautology or circularity (Suddaby, 2010). Tautology occurs when elements of the term being defined are included in the definition of the construct or that it incorporates hypothesized antecedents and outcomes. For example, Antonakis, Fenley, and Liechti (2011) found that most definitions of charisma are defined by its antecedents, outcomes, or by exemplars, leading to tautologies that ignore the underlying theme — the unifying theoretical denominator — of the phenomenon. Instead, those authors defined charisma as “symbolic leader influence rooted in emotional and ideological foundations” (p. 376). Granted, it is a very difficult exercise to propose concise definitions because the other risk is to define something so narrowly that it compromises the generalizability and relevance of a construct (Suddaby, 2010). But if the leadership field is to continue to evolve then something that must be given much closer attention is how carefully we define our theoretical constructs.

Process models. As the leadership field matures theoretically and empirically, there is increasing interest in establishing mediators and moderators of leadership effects within multilevel frameworks (e.g., Chen, Kirkman, Kanfer, Allen, & Rosen, 2007). This is no doubt at least partly attributable to advances in multilevel modelling techniques (Raudenbush & Bryk, 2002) and other mixed effects programs that can accurately estimate and partition within- and between-levels effects even in complex cases of involving multilevel mediation (Preacher, Zyphur, & Zhang, 2010). There have also been significant advances in our understanding and estimation of moderated mediation and mediated moderation models (Edwards & Lambert, 2007; Preacher, Rucker, & Hayes, 2007).

Much like published measures can attract researchers' attention to a particular leadership approach, when these kinds of sophisticated modelling procedures become more widely available and accepted they attract researchers to use them in testing complex models using "start-of-the-science" analytic techniques. But ultimately, it is the quality of the underlying model and associated data that matters the most in terms of making a contribution to the leadership literature and enhancing our understanding of leadership processes.

Something that tends to get lost among the fancy analytics is that leadership is a process – not a person or a position – and that we should be proposing and testing the most appropriate and insightful process models of leadership possible. By most appropriate and insightful, we mean those process models that include underlying causes that drive other variables in the model. Failing to do so runs the risk of introducing endogeneity (i.e., a predictor correlates with the model's error term), thus undermining any possible causal inferences that might be drawn (Antonakis, Bendahan, Jacquart, & Lalive, 2010; in press). This is a particular risk when estimating and testing non-experimental models, which is typically the case in leadership research. The problems with endogeneity are discussed in more detail in the subsequent section on The Future of Methods.

In sum, process theories are those that propose that deep determinants and leader traits cause observable behaviors that shape emergence and effectiveness outcomes, which can also include moderation in the form of something such as context. Proposing and testing these kinds of process models are the future of leadership because they allow researchers to identify causal effects associated with leader traits given that they are exogenous so long as they have strong heritability influences (also see Lim & Ployhart, 2004, and Zaccaro, Kemp, & Bader, 2004).

Development. There is a century or more history of leadership research and theory that continues to evolve (Day, in press-a). What has been given comparatively less attention is

theoretical perspective on how leaders and leadership develop. A distinction has been drawn between leader development based on the acquisition of individual knowledge, skills, and other characteristics needed to be effective in leadership roles and processes and leadership development that focuses on the networked interrelationships among a broader collective (Day, 2000). Nonetheless, what have generally been missing in the literature are any attempts to develop a theoretical foundation regarding how individual leaders, or more collective leadership processes, develop over time.

This has been a critical omission in that most organizations care relatively little about which particular leadership theory has the most support but they do care a great deal – as indicated by the billions of dollars invested each year – in how to best develop leadership. There seems to be an implicit belief on the part of researchers that finding the “right” leadership theory would lead inevitably to better leaders through training and developmental workshops on the corresponding tenets and principles of the approach (e.g., Dvir, Eden, Avolio, & Shamir, 2002). What this belief fails to recognize is that leadership training is a short-term proposition designed to impart proven solutions to known problems, whereas leader development is something that unfolds over a much longer timer period and is part and parcel to on-going adult development. In other words, development is more about enhancing the potential or capacity of an individual to be effective in situations in which there is no agreed-upon solution and where the challenge itself may be completely novel. There is no proven solution because there is no history of experience with the particular challenge (Day, in press-b).

This “development imperative” has opened the door to the introduction of an integrative theory of leader development that incorporates aspects of expertise and expert performance at the most observable level, self-regulation and identity at the meso level, all of which are supported by adult development processes (Day, et al., 2009). The focus of this

approach is eclectic with no vested interested in any particular leadership theory. Instead, the approach emphasizes various developmental processes that ultimately result in developing an expert leader. The process of taking on a leader identity is posed as a pivotal process in providing the motivation to undertake efforts over a long period of time to develop one's leadership skills and capabilities. Initial support for this and other hypotheses stemming from the theorizing of Day et al. (2009) has been reported with a sample of emerging student leaders engaged in community service action learning projects (Day & Sin, 2011).

There have been other theoretical frameworks of leadership development presented in the literature (e.g., Day & Harrison, 2007; Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Lord & Hall, 2005); however, few have been tested empirically. For this reason, it is encouraging to see a recent special issue devoted to reporting on longitudinal studies of leader development (Riggio & Mumford, 2011). Although most of the featured studies in the special issue were not theoretically grounded (with the exception of Day & Sin, 2011) it is a start in terms of building an empirical database of how and why leaders develop over time.

Looking ahead, we believe that leader and leadership development represent very promising emerging pathways for the future of the field. Organizations are keen to develop leaders and to do so efficiently and effectively. Adopting more theoretically based approaches to testing how this occurs can only help to build a better science and practice of leader development that will also enhance the broader leadership discipline.

The Future of Methods

Integral to better theorizing about leadership is better model testing. Definitions and strong theory must be followed by robust measurement and testing. This is an area where leadership research has not yet fully risen to the occasion. Nonetheless, the future of leadership needs to be focused on stronger testing if it is to continue to advance as a discipline. The biggest methodological challenge facing leadership research is how to deal

with endogeneity and how to correctly estimate multilevel models. These two problems are related, (as explained below), and are poised to become very salient issues in leadership research in the coming years. For example, a review of 110 randomly sample papers published in top-level journals indicated that researchers fail to address up to 90% of design and estimation conditions that make for confounded interpretations (see Antonakis et al., 2010).

The problem of endogeneity. So that policies and practices are correctly informed by leadership research, and that monies are efficiently invested in research activities and practical interventions, it is important to isolate and identify variables that form part of a theory and to know how these variables are causally related. Policy and practice has to turn to research to know whether “ x causes y ,” and the implications of knowing this are critical in terms of making sound investments in selection, training, and organizational design.

The failsafe way to know whether systems of variables are causally related is to manipulate the independent variable/s concerned, as is done in an experiment; however, much of what we study in social sciences and leadership is difficult to manipulate (Antonakis et al., 2010; in press). Thus, researchers have to rely on observational methods to better understand causal relationships in leadership.

A challenge of using observational methods is that observing a correlation between x and y does not mean much because of the potential problem of *endogeneity*. That is, x could indeed cause y but because of endogeneity, y could cause x , or x and y could share a common cause and only be related because they covary as a function of the common cause. Once the effect of the common cause is removed it is possible that there is no relationship between x and y . Thus, it is not clear what the nature is of the relationship between two variables when one observes a correlation in a model that does not have exogenous sources of variance to

identify the true causal effects. That is, if x is endogenous, correlating it with anything will yield specious estimates that cannot help science or practice advance.

To better understand the problem of endogeneity, imagine the following scenario, originally discussed in more detail in Antonakis et al. (in press):

A philosopher is sent out on a field to observe a naturally occurring phenomenon and is required to piece together a theoretical account of what she saw. She observes 50 trials of the phenomenon, which consists of a disk streaking across the sky that almost always shatters soon after a loud “crack” is heard; the disk never shatters when the crack is not heard. She carefully gathers the data, including number of trials, whether the crack was present or not (and how loud it was in decibels), and whether the disc disintegrated or not.

She concludes that it is the sound that shatters the disk and goes on to make several military-related policies (i.e., building jammers/buffers against the noise so as to protect the city walls, changing building materials of structures that could be disintegrated by the noise, etc.). The problem, though, with the philosopher’s theory is that the causal model is incorrect: The sound (x) does not cause the disk to shatter (y); both are caused by a shooter that the philosopher did not observe. Thus, x is said to be endogenous because it correlates with omitted causes of y . When modelling the true structure — that is, predicting y and x by whether the shooter shot or not, shows that the residual correlation between y and x is zero. Thus, observing a correlation in the presence of endogeneity is not helpful.

How many constructs are plagued by the problem of endogeneity? The answer appears to be many (Antonakis, 2012; Antonakis, et al, 2010). As an example, consider the simple case of leader-member exchange (LMX) theory. The quality of LMX is like the “crack” above: It depends on the leader and followers doing certain “things” (House & Aditya, 1997). If these “things” are not modeled correctly, we may observe LMX correlating with apparent

outcomes (e.g., worker absenteeism); however, these correlations confound the effect of other omitted variables (the “things”). Thus, using LMX as an independent variable in a regression or structural equation model is like correlating the “noise” with an outcome. It makes for estimates that are not consistent (i.e., consistent estimates converge to the true value as the sample sizes increases). In advancing future leadership theory and research more work needs to be done to incorporate quasi-experimental approaches, which can be used to identify causal effects in naturalistic settings.

There are different forms of endogeneity that can plague estimates in non-experimental studies. Experimental studies are not shielded completely from problems of endogeneity such as with the case of testing the effect of endogenous mediators on other endogenous variables. In general, endogeneity can be caused by: (a) omitted variables (b) simultaneity (or reverse causality), (c) common-method variance, (d) omitted selection (i.e., comparing entities in different groups where membership to group has not been randomly assigned), and (e) omitted fixed-effects (in multilevel models as explained below).

There are many ways to deal with endogeneity and describing them all is beyond the scope of this chapter. Suffice it to say that there are methods available to researchers so that they can have their cake and eat it, too; this is one future that leadership research cannot miss! There are many ways to exploit exogenous variation to identify causal effects in non-experimental and hence emulate a “natural experiment” of sorts. These include simultaneous equation models, regression discontinuity designs, propensity-score and Heckman selection models (Heckman, 1979), and difference-in-differences models.

Multilevel effects and omitted fixed-effects. This concerns levels-of-analysis issues, which are important for theorizing and testing (Yammarino, Dionne, Uk Chun, & Dansereau, 2005). Given the current popularity of hierarchical linear models (HLM; Raudenbush & Bryk, 2002) we focus briefly on testing such models, which can be hierarchical (e.g., followers

nested under leaders) or longitudinal (i.e., leaders repeatedly measured over time). In both cases, “leaders” are modelled at Level 2 (the higher-order entities under which Level-1 observations are nested) and it is important to include the Level-2 constant (i.e., fixed) effects in a model so as to avoid omitted variable bias.

The only sure way to capture these constant effects is to measure all Level-2 variables that predict y , which may correlate with the model covariates. Of course, measuring everything that matters is in practice very difficult to do. Thus, the safe-bet estimator is to model the fixed-effects explicitly. This can be accomplished very simply by using dummy variables to identify the effects of the Level-2 entities. These dummy variables will thus capture all differences in the dependent variable that are due to Level-2 membership by explicitly modelling the differences in Level-2 entities as intercepts. Whether or not we know what causes these differences is not of issue because the dummy variables will catch them all. If these Level-2 fixed-effects correlate with Level-1 variables (which is why Level-1 variables could be endogenous) the estimates will be adjusted accordingly.

Researchers who wish to understand how variation in Level-2 variables affects Level-1 outcomes would not be able to answer such questions with a fixed-effects estimator. Instead, the researchers would have to estimate a random-effects model (i.e., HLM) by measuring variables at Level 2 instead of modelling fixed-effects. But doing so comes with a risk if important Level-2 variables are omitted. To ensure that there is no endogeneity in the random-effects estimator the researchers have to compare the fixed-effects to the random-effects estimates. If they are not significantly different from each other as determined by a Hausman (1978) test only then can the random effects estimator can be retained. Unfortunately, this test is foreign to most of those outside of economics and most of the HLM models that have been published in the leadership literature have reported potentially dubious estimates (Antonakis et al., 2010).

Constant effects come in many guises and can be very useful to remove variance due to contextual effects and thus determine incremental effects of target covariates (Liden & Antonakis, 2009). Doing so can demonstrate unequivocally if leadership matters beyond the fixed-effects of firms, industries, countries and so forth. Constant effects can be unobserved, such as the effects of higher level entities (e.g., the constant effects of firms on leaders and followers or the constant effects of industries on firms). Constant effects could be observed as well such as variation in specific cultural-level factors (Hofstede, 1997; House, Hanges, Javidan, Dorfman, & Gupta, 2004), legal practices and so forth. There are many other such effects including hierarchical leadership levels, environmental risk, and so forth. The effect of time can also be modelled as in longitudinal panel models where time is controlled for as a fixed effect (Liden & Antonakis, 2009) or used in the context of latent growth curve analysis (Duncan, Duncan, & Strycker, 2006).

To conclude this section, it is very important to estimate models that deal with endogeneity. Although issues with regard to endogeneity issue are not given sufficient attention by leadership researchers we are confident that the future of leadership will involve more robust model testing that will allow researchers, practitioners, and policy makers to have greater faith in the veracity of leadership research findings.

The Future of Leadership from a Biological and Evolutionary Perspective

As mentioned previously, there is increased interest in leadership studies in the biological and evolutionary schools (Antonakis, 2011; Arvey, Wang, Song, & Li, in press). Important to note is that these approaches are currently in the basic research stage. Emerging discoveries can help science in better understanding the leadership processes given the temporal and situational invariance of biological variables. We think that this is one area of research that will make significant breakthroughs in the coming years.

The biological approach exploits variance in measurable individual differences (e.g., brainwaves, endocrinology, genes) to link it to leadership behaviours, decisions, and social interaction processes (e.g., Balthazard, Waldman, Thatcher, & Hannah, *in press*; Lee, Senior, & Butler, *in press*; Waldman, Balthazard, & Peterson, *in press*; Zyphur, Narayanan, Koh, & Koh, 2009). Using such variation can be useful in estimating both main effects and process models. Concerning the former, because much of the variation in biological variables is exogenous (random) it can be used to identify causal effects directly on outcomes (e.g., how heritable leadership is; whether testosterone makes leaders more dominant). Apart from the direct effects of these variables on outcomes, biological individual differences can be used to help purge models from endogeneity bias. That is, they are very useful in estimating process models and in identifying causal effects of potentially endogenous variables on outcomes.

The evolutionary perspective looks at why leadership is necessary and how evolution has selected individuals with certain traits to lead (see Van Vugt, 2010, 2012; Van Vugt, Hogan, & Kaiser, 2008; Van Vugt & Schaller, 2008). Such perspectives can explain, for example, why a leader's appearance is so important to voters (see Antonakis & Dalgas, 2009; Antonakis & Jacquart, *in press*). Knowing why some leaders acquire votes based on their looks can help researchers better explain the leader emergence process and estimate whether and why leadership matters.

As for other examples, we know that estimates of the intelligence of U.S. presidents correlate strongly with ratings of greatness (Simonton, 2002, 2006). Because this correlation is observable suggests that presidents were not selected on intelligence (Antonakis & Dalgas, 2009; Antonakis & Jacquart, *in press*). Emergence and effectiveness should thus be simultaneously modeled in a process model to better explain leadership in the U.S. presidency (and remove endogeneity bias in the intelligence-greatness equation). Such perspectives can

also help explain why there may be a mismatch between factors that lead to emergence and effectiveness (Van Vugt, 2010; 2012).

Evolutionary game-theory has also been used to better understand the leadership process (Van Vugt, 2012). Examples including understanding why leadership matters in “public goods” games (i.e., where efficiency and the common good depend on cooperation). For instance, we still do not understand very well why leadership is necessary in coordinating efforts, how it affects role modeling, and in what way rewarding and punishing matter. These are areas where leadership scholars should use insights from experimental economics and evolutionary psychology to advance leadership research.

The Future of Leadership and Diversity

It has been asserted directly that “Theories of leadership have neglected diversity issues” (Chin, 2010, p. 150). This is an important omission (or some might say exclusion) given that the institutional and societal contexts in which leadership is needed will continue to become increasingly diverse. For this reason there is a pressing need to more fully incorporate diversity into the understanding of leadership. In doing so, there are two overarching questions to consider: (1) What are the relevant aspects of diversity to consider, and (2) what are some possible ways that diversity will shape our future understanding of leadership?

Two areas where there has been attention paid to diversity concerns in leadership are gender (Carli & Eagly, 2012; Eagly & Carli, 2007) and national culture (Ayman & Korabik, 2010; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Other diversity concerns receiving comparatively sparse attention include race (Livers & Caver, 2003; Sanchez-Huelles & Davis, 2010), religion, disability, and sexual and gender orientation (Fassinger, Shullman, & Stevenson, 2010). In particular, there is tremendous potential to contribute to a better understanding of leadership through the lens of religion; however, there has been virtually no attention paid to this important topic in the leadership literature aside from the rather vapid

perspective of spirituality. In arguing for additional research on religion and leadership (which is not the same as religious leadership) it is assumed that there are fundamental differences in the nature of leadership based on a Hindu, Muslim, Christian Confucian, or other religious perspective. The touchstone in proposing such differences would likely be based in the espoused values of the various religions and how they differ – or if they differ!

There are several insights that can be offered from the research that has been conducted on gender and culture, respectively. In terms of gender and leadership, a good deal of research has been conducted on the effects of leader stereotypes. Studying stereotypes is important theoretically and practically, because a consensus perspective across researchers as well as women leaders is that “stereotypes are a potent barrier to women’s advancement to positions of leadership” (Koenig, Eagly, Mitchell, & Ristikari, 2011, p. 616). In a meta-analysis incorporating more than 200 effect sizes and over 70 independent studies, Koenig et al. demonstrated that the leader as male stereotype was supported across three different research paradigms. This is a problem for women because female stereotypes do not match expectations for leaders (Eagly & Karau, 2002). In terms of a good-news / bad-news scenario, the meta-analytic findings of Koenig et al. suggested that the male construal of leadership is decreasing over time, but was more strongly held by male than female research participants. Thus, on the positive side the results suggest that leader stereotypes are changing for the better. On the negative side, if women are expected to convince powerful men of their leadership capabilities, the traditional stereotype of “leader is male” will make that especially difficult.

As noted, national culture is another aspect of diversity that has been widely researched (Den Hartog & Dickson, 2012). In a large-scale study of leadership and national (societal) culture, House and colleagues (2004) assessed among other things the culturally endorsed leadership prototypes in 62 different cultures. This is a very relevant approach that

goes to the heart of trying to understand how differently (or similarly) leadership is construed across a large number of different societies. The results suggested some culturally contingent leader attributes (e.g., ambitious, cautious, enthusiastic) as well as universal positive leader attributes (e.g., trustworthy, honest, dependable, intelligent). We believe this is an important contribution because it highlights that there may not be only diversity contingent aspects of effective leadership and that there might be leader characteristics that transcend diversity in race, religion, disability, or other particular facets of diversity.

In recommending a way forward toward more inclusive leadership theory in terms of diversity, Eagly and Chin (2010) advocated ending the “intellectual segregation” (p. 221) of various considerations of diversity (e.g., gender, race, culture, sexuality) from the mainstream leadership literature. They argue that the leadership literature needs to better address diversity concerns and draw on research and theory from the diversity literature to help address those concerns. But in the spirit of building greater rapprochement, diversity scholars are urged to consider the large, multidisciplinary knowledge base from the leadership literature because of its potential to better understand issues of race, ethnicity, gender, and culture. It is difficult to argue with this recommendation as a way of bringing greater rapprochement to what have tended to be the separate fields of diversity and leadership.

Conclusions

We began this chapter with a brief overview of developments and changes in the leadership field as a function of the publication prevalence in a prominent specialty journal on the topic (*The Leadership Quarterly*; Gardner et al., 2010). What is apparent is that leadership is very much a “living” and evolving discipline. Certain theoretical approaches gain favour and then lose momentum. Others become popular, lose that popularity, and then resurge in interest (e.g., leader trait approaches). Because of the changing dynamics associated with the leadership field, it is difficult to state with certainty that the socio-biological, evolutionary,

and diversity approaches that we have highlighted will continue to gain momentum. Nonetheless, we believe that these are particular areas that have not received sufficient research attention and yet these perspectives offer unique frames by which to conceptualize and study leadership. Regardless of whether or not they “catch on” with researchers, we believe these leadership topics deserve greater future research scrutiny.

The greater part of our review focused on two areas that are elemental to all scientific fields including that of leadership – theory and method. If there is a take-away message from this focus it is that the future of leadership may not reside solely in identifying additional content topic domains. Instead (or perhaps in addition), the field needs to attend to some of the basic concerns of science. Without more clearly defined constructs and tightly focused theories, the future of leadership will be limited. Without more careful consideration of the factors that limit or otherwise undermine the kinds of causal inferences that are the hallmark of good science, the leadership field will be unable to fully inform business and education practices or public policy issues. Leadership can be a potent force in shaping the experiences and effectiveness of individuals, groups, organizations, and societies. But to fully realize this potential leadership needs to be conceptualized and studied in the most rigorous ways possible.

In conclusion, we are sanguine about the future of leadership. The leadership field has demonstrated a remarkable adaptability and tenacity in the face of many who would prefer to marginalize or otherwise neuter it. Despite these attempts, we can say with some scientific assurance that leadership matters, and by embracing better theory, more rigorous methods, and a focus on under-researched topics the future of leadership is unbridled.

References

- Antonakis, J. (2011b). Predictors of leadership: The usual suspects and the suspect traits. In D. Bryman, K. Collinson, B. Grint, B. Jackson & M. Uhl-Bien (Eds.), *The Sage handbook of leadership* (pp. 269-285). London: Sage.
- Antonakis, J. (2012) Transformational and charismatic leadership. In Day, D. V., & J. Antonakis (Eds.). *The nature of leadership* (2nd ed., pp. 256-288). Los Angeles, CA: Sage.
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, 21, 1086-1120.
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (in press). Causality and endogeneity: Problems and solutions. In D. V. Day (Ed.), *The Oxford handbook of leadership and organizations*. New York: Oxford University Press.
- Antonakis, J., & Dalgas, O. (2009). Predicting elections: Child's play! *Science*, 323(5918), 1183.
- Antonakis, J., Fenley, M., & Liechti, S. (2011). Can charisma can be taught? Tests of two interventions. *Academy of Management Learning & Education*, 10, 374-396.
- Antonakis, J., & Jacquart, P. (in press) The far side of leadership. In Bligh, M. C., & Riggio, R. E. *When near is far and far is near: Distance in leader-follower relationships*. Wiley-Blackwell Publications.
- Arvey, R. D., Wang, N., Song, Z., & LI, W. (in press). The biology of leadership. In D. V. Day (Ed.), *The Oxford Handbook of Leadership and Organizations*. New York: Oxford University Press.
- Ayman, R., & Korabik, K. (2010). Leadership: Why gender and culture matter. *American Psychologist*, 65, 157-170.

Bacharach, S. B. (1989). Organizational theories: Some criteria for evaluation. *Academy of Management Review*, 14, 496-515.

Balthazard, P. A., Waldman, D. A., Thatcher, R. W., & Hannah, S. T. (in press).

Differentiating transformational and non-transformational leaders on the basis of neurological imaging. *The Leadership Quarterly*

Bass, B. M. (2008). *The Bass handbook of leadership: Theory, research, and managerial applications* (4th ed.). New York: Free Press.

Bass, B. M., & Avolio, B. J. (2000). *MLQ: Multifactor leadership questionnaire* (2nd ed.). Redwood City, CA: Mind Garden.

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Mahwah, NJ: Erlbaum.

Bollen, K. A., & Brand, J. E. (2010). A general panel model with random and fixed effects: A structural equations approach. *Social Forces*, 89(1), 1-34.

Carli, L. L., & Eagly, A. H. (2012). Leadership and gender. In D. V. Day & J. Antonakis (Eds.), *The nature of leadership* (2nd ed., pp. 437-476). Los Angeles, CA: Sage.

Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. (2007). A multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology*, 92, 331-346.

Chin, J. L. (2010). Introduction to the special issue on diversity and leadership. *American Psychologist*, 65, 150-156.

Day, D. V. (2000). Leadership development: A review in context. *The Leadership Quarterly*, 11, 581-613.

Day, D. V. (in press-a). Leadership. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of organizational psychology*. New York: Oxford University Press.

- Day, D. V. (in press-b). Training and developing leaders: Theory and research. In M. Rumsey (Ed.), *The many sides of leadership: A handbook*. New York: Oxford University Press.
- Day, D. V., & Antonakis, J. (2012a). Leadership: Past, present, and future. In D. V. Day & J. Antonakis (Eds.), *The nature of leadership* (2nd ed., pp. 3-25). Los Angeles, CA: Sage.
- Day, D. V., & Antonakis, J. (Eds.). (2012b). *The nature of leadership* (2nd ed.). Los Angeles, CA: Sage.
- Day, D. V., & Harrison, M. M. (2007). A multilevel, identity-based approach to leadership development. *Human Resource Management Review*, 17, 360-373.
- Day, D. V., Harrison, M. M., & Halpin, S. M. (2009). *An integrative approach to leader development: Connecting adult development, identity, and expertise*. New York: Routledge.
- Day, D. V., & Lord, R. G. (1988). Executive leadership and organizational performance: Suggestions for a new theory and methodology. *Journal of Management*, 14, 453-464.
- Day, D. V., & Sin, H.-P. (2011). Longitudinal tests of an integrative model of leader development: Charting and understanding developmental trajectories. *Leadership Quarterly*, 22, 545-560.
- Day, D. V., & Zaccaro, S. J. (2007). Leadership: A critical historical analysis of the influence of leader traits. In L. L. Koppes (Ed.), *Historical perspectives in industrial and organizational psychology* (pp. 383-405). Mahwah, NJ: Erlbaum.
- Den Hartog, D. N., & Dickson, M. W. (2012). Leadership and culture. In D. V. Day & J. Antonakis (Eds.), *The nature of leadership* (2nd ed., pp. 393-436). Los Angeles, CA: Sage.

- Drath, W. H., McCauley, C. D., Palus, C. J., Van Velsor, E., O'Connor, P. M. G., & McGuire, J. B. (2008). Direction, alignment, commitment: Toward a more integrative ontology of leadership. *Leadership Quarterly*, 19, 635-653.
- Duncan, T. E., Duncan, S. C., & Strycker, L. A. (2006). *An introduction to latent variable growth curve modeling: Concepts, issues, and applications* (2nd ed.). Mahwah, N.J.: Lawrence Erlbaum.
- Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*, 45, 735-744.
- Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders*. Boston, MA: Harvard Business School.
- Eagly, A. H., & Chin, J. L. (2010). Diversity and leadership in a changing world. *American Psychologist*, 65, 216-224.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573-598.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, 12, 1-22.
- Fassinger, R. E., Shullman, S. L., & Stevenson, M. R. (2010). Toward an affirmative lesbian, gay, bisexual, and transgender leadership paradigm. *American Psychologist*, 65, 201-215.
- Fiedler, F. E. (1967). *A theory of leadership effectiveness*. New York: McGraw-Hill.
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). "Can you see the real me?" A self-based model of authentic leader and follower development. *Leadership Quarterly*, 16, 343-372.

- Gardner, W. L., Lowe, K. B., Moss, T. W., Mahoney, K. T., & Cogliser, C. C. (2010). Scholarly leadership of the study of leadership: A review of *The Leadership Quarterly's* second decade, 2000-2009. *Leadership Quarterly*, 21, 922-958.
- Hackman, J. R., & Wageman, R. (2007). Asking the right questions about leadership. *American Psychologist*, 62, 43-47.
- Halaby, C. N. (2004). Panel models in sociological research: Theory into practice. *Annual Review of Sociology*, 30, 507-544.
- Hamilton, B. H., & Nickerson, J. A. (2003). Correcting for endogeneity in strategic management research. *Strategic Organization*, 1, 51-78.
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, 46, 1251-1271.
- Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, 47, 153-161.
- Hofstede, G. H. (1997). *Cultures and organizations: Software of the mind* (rev. ed.). New York: McGraw-Hill.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- House, R. J., & Aditya, R. N. (1997). The social scientific study of leadership: Quo vadis? *Journal of Management*, 23, 409-473.
- Hollander, E. P. (2009). *Inclusive leadership: The essential leader-follower relationship*. New York: Routledge.
- Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology*, 89, 36-51.

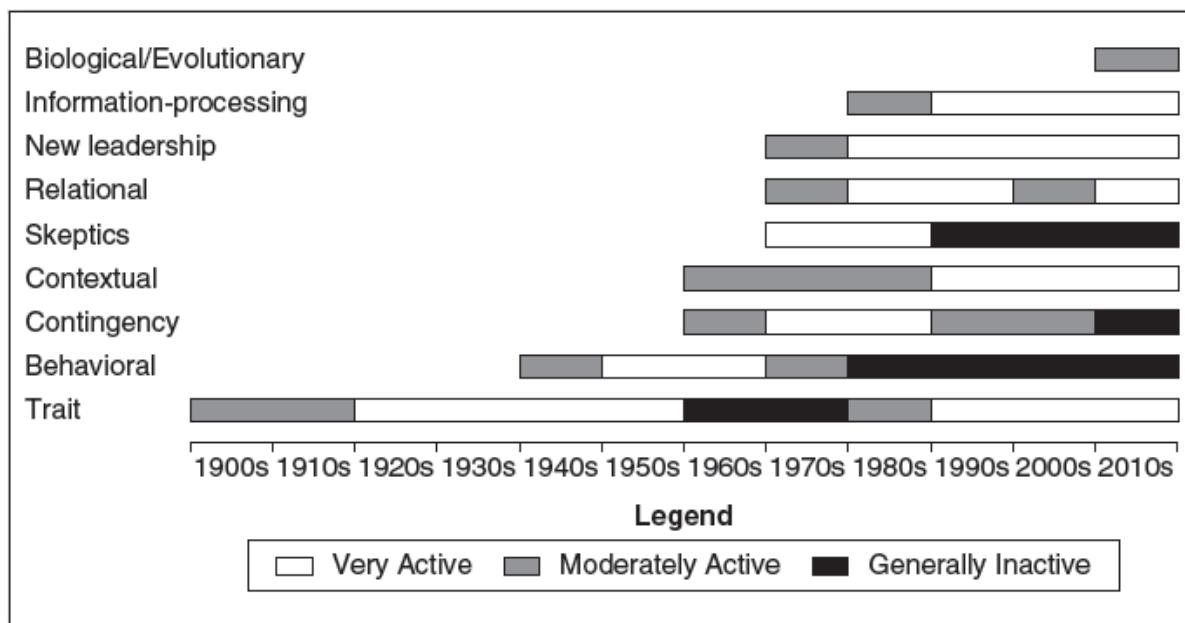
- Koenig, A. M., Eagly, A. H., Mitchell, A. A., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin, 137*, 616-642.
- Lee, N., Senior, C., & Butler, M. (in press). Leadership research and cognitive neuroscience: The state of this union. *The Leadership Quarterly*
- Liden, R. C., & Antonakis, J. (2009). Considering context in psychological leadership research. *Human Relations, 62*, 1587-1605.
- 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.
- Lieberson, S., & O'Connor, J. F. (1972). Leadership and organizational performance: A study of large corporations. *American Sociological Review, 37*, 117-130.
- Lim, B.-C., & Ployhart, R. E. (2004). Transformational leadership: Relations to the five-factor model and team performance in typical and maximum contexts. *Journal of Applied Psychology, 89*, 610-621.
- Livers, A. B., & Caver, K. A. (2003). *Leading in black and white: Working across the racial divide in corporate America*. San Francisco, CA: Jossey-Bass.
- Locke, E. A. (2003). Foundations for a theory of leadership. In S. E. Murphy & R. E. Riggio (Eds.), *The future of leadership development* (pp. 29-46). Mahwah, NJ: Erlbaum.
- Lord, R. G., & Brown, D. J. (2004). *Leadership processes and follower self-identity*. Mahwah, NJ: Erlbaum.
- Lord, R. G., & Hall, R. J. (2005). Identity, deep structure, and the development of leadership skill. *The Leadership Quarterly, 16*, 591-615.
- Meindl, J. R., & Ehrlich, S. B. (1987). The romance of leadership and the evaluation of organizational performance. *Academy of Management Journal, 30*, 90-109.

- Meindl, J. R., Ehrlich, S. B., & Dukerich, J. M. (1985). The romance of leadership. *Administrative Science Quarterly*, 30, 78-102.
- Miner, J. B. (1975). The uncertain future of the leadership concept: An overview. In J. G. Hunt & L. L. Larson (Eds.), *Leadership frontiers* (pp. 197-208). Kent, OH: Kent State University.
- Mundlak, Y. (1978). Pooling of time-series and cross-section data. *Econometrica*, 46, 69-85.
- Pfeffer, J. (1977). The ambiguity of leadership. *Academy of Management Review*, 2, 104-112.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185-227.
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15, 209-233.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Riggio, R. E., & Mumford, M. D. (2011). Introduction to the special issue: Longitudinal studies of leadership development. *The Leadership Quarterly*, 22, 453-456.
- Salancik, G. R., & Pfeffer, J. (1977). Constraints on administrator discretion: The limited influence of mayors on city budgets. *Urban Affairs Quarterly*, 12, 475-498.
- Sanchez-Hucles, J. V., & Davis, D. D. (2010). Women and women of color in leadership: Complexity, identity, and intersectionality. *American Psychologist*, 65, 171-181.
- Simonton, D. K. (2002). Intelligence and presidential greatness: Equation replication using updated IQ estimates. *Advances in Psychology Research*, 13, 163-174.
- Simonton, D. K. (2006). Presidential IQ, openness, intellectual brilliance, and leadership: Estimates and correlations for 42 US chief executives. *Political Psychology*, 27, 511-526.

- Suddaby, R. (2010). Editor's comments: Construct clarity in theories of management and organization. *Academy of Management Review*, 35, 346-357.
- Sutton, R. I., & Staw, B. M. (1995). What theory is *not*. *Administrative Science Quarterly*, 40, 371-384.
- Waldman, D. A., Balthazard, P. A., & Peterson, S. J. (in press). Social cognitive neuroscience and leadership. *The Leadership Quarterly*.
- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34, 89-126.
- Yammarino, F. J., Dionne, S. D., Uk Chun, J., & Dansereau, F. (2005). Leadership and levels of analysis: A state-of-the-science review. *The Leadership Quarterly*, 16, 879-919.
- Van Vugt, M. (2010). *Selected: Why some people lead, why others follows, and why it matters*. London: Profile Books.
- Van Vugt, M. (2012). The nature in leadership: Evolutionary, biological, and social neuroscience perspectives. In D. V. Day & J. Antonakis (Eds.), *The Nature of Leadership* (2nd ed., pp. 141-175). Los Angeles, CA: Sage.
- Van Vugt, M., Hogan, R., & Kaiser, R. B. (2008). Leadership, followership, and evolution – Some lessons from the past. *American Psychologist*, 63, 182-196.
- Van Vugt, M., & Schaller, M. (2008). Evolutionary approaches to group dynamics: An introduction. *Group Dynamics: Theory Research and Practice*, 12, 1-6
- Zaccaro, S. J., Kemp, C., & Bader, P. (2004). Leader traits and attributes. In J. Antonakis, A. T. Cianciolo & R. J. Sternberg (Eds.), *The nature of leadership* (pp. 104-124). Thousand Oaks, CA: Sage.
- Zyphur, M. J., Narayanan, J., Koh, G., & Koh, D. (2009). Testosterone-status mismatch lowers collective efficacy in groups: Evidence from a slope-as-predictor multilevel

structural equation model. *Organizational Behavior and Human Decision Processes*, 110, 70-79.

Fig. 1: A Brief History of Leadership Research and a Look to the Future



Note. From Day and Antonakis (2012a). Permissions pending.

Future-proofing your business is critical to success â€“ in fact, the Institute of Leadership & Management (ILM) discovered that more than nine out of ten UK organisations say that a lack of leadership skills is affecting their ability to achieve their goals.¹ Despite this, the majority of organisations struggle to identify future leaders within their business â€“ when speaking with some of our clients on this, the majority told us this in fact. This struggle is defined by a lack of planning and understanding, particularly when it comes to Developing an active succession planning programme (many businesses do not currently have an established programme in place). Understanding the challenges facing future business leaders. Complexity Leadership offers a new perspective for Leadership research within the framework of Complexity Science. As Uhl-Bien et al. (2007) points out, traditional leadership models are products of bureaucratic paradigms effective in physical production based economies. But these models are not well-suited in a knowledge eraÂ causes result in approximately the same consequences. This Principle justifies. The Future of Leadership: The New Complex Leadersâ€™ Skills 81. prediction in statistical terms. The deterministic laws are replaced by statistical laws Traditional leadership models based on an industrial or knowledge worker era are quickly becoming less relevant or obsolete. The pressing issues facing leaders and organizations today are paradoxical, systemic and interconnected. They are not a set of problems, but a system of economic, technological, societal, ethical and cultural challenges â€“ all conjoined and hence complex.Â It is a global place of conversation where a limited and diverse group of participants will be exploring questions on the future of leadership. Focus will be on not creating an institutional perspective but on creating a global atmosphere for dialogue and inspiration with particular focus on facilitating a learning and exploratory process. If youâ€™ve read the many predictions about the future of AI, youâ€™ve likely found them to be wildly different. They range from AI spelling doom for humanity, to AI ushering in Golden Age of peace, harmony and culture, to AI producing barely a blip on societyâ€™s path toward ever-greater technological achievement. Those three views â€“ dystopian, utopian and organic â€“ present issues we need to consider as we move deeper toward an AI-integrated future. Yet they also contain exaggerations and AI. Digital Double Helix: Why the Fates of 5G and AI are Intertwined. In 2013, George F. Young and colleagues completed a fascinating study into the science behind starling murmurations.