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**PART III:
MEASURING AUTHENTIC
LEADERSHIP**

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AUTHENTIC LEADERSHIP MEASUREMENT AND DEVELOPMENT: CHALLENGES AND SUGGESTIONS

13 Adrian Chan

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ABSTRACT

19 *How does one measure and develop authentic leadership? Such a question*
21 *presumes a general consensus on what authentic leadership is and what*
23 *aspects of authentic leadership should be developed. It would be prema-*
25 *ture to recommend specific ways of measuring authentic leadership with-*
27 *out first making a contribution to helping the field achieve consensus on*
the preceding two issues at hand. This chapter identifies four theoretical
lenses adopted by various authentic leadership scholars and their impli-
cations for measurement. Next, four working assumptions concerning the
development of authentic leadership are made. Finally, suggestions are
made in four areas for future authentic leadership measurement.

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INTRODUCTION

33 This chapter is a collection of ideas arising from conversations within the
Gallup Leadership Institute (GLI), as well as between GLI and leadership

35 _____
37 **Authentic Leadership Theory and Practice: Origins, Effects and Development**
Monographs in Leadership and Management, Volume 3, 227–250
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1 scholars interested in advancing authentic leadership theory. This chapter
 3 does not aim to replicate efforts elsewhere in describing the ontology and
 5 epistemology of authentic leadership. Rather, it outlines several implications
 7 for measurement arising from the different theoretical lenses adopted by
 9 various authentic leadership scholars. Next, several working assumptions
 11 regarding the nature of authentic leadership development interventions are
 13 advanced. Finally, this chapter concludes with several suggestions for future
 15 efforts in measuring authentic leadership.

9 To begin, it is pragmatic to first ask oneself exactly which aspect of authentic
 11 leadership is amenable to development. This is because ontologically,
 13 authentic leadership theory has a strong emphasis on development (Avolio,
 15 Gardner, Walumbwa, Luthans, & May, 2004; Luthans & Avolio, 2003).
 17 Also, from a practical standpoint, measures that focus on aspects of authentic
 19 leadership that cannot be developed offer little benefit for the utility of the
 21 measures in evaluating the efficacy of authentic leadership interventions.

17 Part of the answer to identifying which aspects of authentic leadership are
 19 developable lies in understanding the theoretical lenses that authentic lead-
 21 ership scholars have adopted. This is because depending on the type of
 23 lenses adopted, different aspects of authentic leadership have been identified
 25 for development. Also, the different theoretical lenses may lead to variation
 27 in the ontological descriptions of authentic leadership.

23 Instead of reiterating the nuances in such variations already described by
 25 various authentic leadership scholars (Avolio & Gardner, in press; Eagley, in
 27 press; Gardner, Avolio, Luthans, May, & Walumbwa, in press; Illies, Mo-
 29 rgeson, & Nahrgang, in press; Michie & Gooty, in press; Shamir & Eilam, in
 31 press; Sparrowe, in press), or repeating suggestions made by these scholars for
 33 operationalizing authentic leadership, I will instead examine the implications
 35 of these various theoretical lenses for authentic leadership measurement.

31 **FOUR THEORETICAL LENSES TO AUTHENTIC** 33 **LEADERSHIP**

33 There are at least four theoretical lenses adopted by scholars engaged in the
 35 ongoing ontological conversations regarding authentic leadership, ranging
 37 from the intrapersonal, developmental, interpersonal to the pragmatic. The
 39 *intrapersonal lens* is adopted by scholars who focus on any form of within-
 person processes (e.g., meta-cognitive, self-regulatory and self-concept
 developmental processes) that are key to the functioning, emergence and
 behavioral manifestation of the authentic leader (Chan, Hannah, &

1 Gardner, 2005; Shamir & Eilam, in press). This lens also encompasses af-
fective and self-reflective components of authentic leadership, such as the
3 role played by positive emotions and self-transcendent values, as well as life-
story narratives on authentic leadership emergence and development (Mic-
5 hie & Gooty, in press; Shamir & Eilam, in press).

The emergence of authentic leadership, particularly over long spans of
7 time, is a key focus of scholars who adopt a *developmental lens* (e.g., Michie
& Gooty, in press; Shamir & Eilam, in press; Sparrowe, in press). These
9 scholars view the acquisition of positive values, the development of one's
authenticity, and the narration of life stories as central to authentic lead-
11 ership emergence. Both the intrapersonal and developmental lenses share
the burden of explaining how authentic leadership emerges, but the differ-
13 ences between them lie in the level of analysis and the metric of time used
(Klein & Koslowski, 2000; Singer & Willett, 2003). Both of these issues will
15 be elaborated upon in the chapter.

Leadership is about influencing and influences in relationships (Brower,
17 Schoorman, & Tan, 2000). This necessitates an *interpersonal lens*, which
includes all conceptualizations of authentic leadership as a dyadic, group or
19 collective phenomena (e.g., Eagley, in press; Gardner et al., in press; Illies et
al., in press; Luthans & Avolio, 2003). For example, Eagley's (in press)
21 theory of relational authenticity focused purely on the interpersonal aspects
of authentic leadership as she examines the impact of gender and members
23 of outsider groups on their accessibility to leadership roles and legitimacy.
Illies et al. (in press) explored how within-person factors of self-awareness
25 and unbiased processing arising out of authenticity is related to eudaemonic
and hedonistic well-being.

27 The last lens is the *pragmatic* worldview. The best explanation of a prag-
matic worldview, and the one adopted by this chapter, is provided by Will-
29 iam James, who is considered by many as the father of American
Pragmatism. According to James, the pragmatist first allows for the con-
31 cession that a given idea or belief is true. However, the real issue for the
pragmatist is the impact that this concession makes in the lives of those who
33 believe, as opposed to those who do not (James, 1906).

In other words, the truthfulness of a concept lies in its truth-value in real,
35 experiential terms. For the pragmatist deciding on the value of a theory
such as authentic leadership theory, its truth-value impact probably occu-
37 pies a higher priority than its existential reality. Good theories are proven by
their usefulness (Lewin, 1945); bad theories, on the other hand, are those
39 that corrupt good practices, regardless of how 'good' they are in their
conceptualizations (Ghoshal, 2005). Such a lens can be seen in Bill George's

1 promotion of his brand of authentic leadership as the panacea for the ills of
today's corporate woes (George, 2003).

3 Table 1 summarizes the various lenses discussed so far, and their impact.
Collectively, these lenses lend richness and depth to the present discussion of
5 authentic leadership. However, the different worldviews inherent in these
lenses also present measurement challenges due to potential differences in
7 metrics, methodologies and recommended measurement tools. The next
section will elaborate on four measurement issues in particular.

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ISSUES IN AUTHENTIC LEADERSHIP 13 CONCEPTUALIZATION AND MEASUREMENT

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Issue 1: Variation in Level of Analysis

17 The level at which a leadership theory should be analyzed is dependent on
the level at which it is conceptualized and operationalized (Dansereau,
19 Yammarino, & Markham, 1995; Klein, Dansereau, & Hall, 1994; Klein,
Tosi, & Cannella, 1999). Most leadership research have been conducted at
21 either the individual, dyadic or group level of analysis (Yukl, 2002). In the
last decade, efforts to capture leadership across multiple levels have become
23 increasingly prevalent (Avolio & Bass, 1995; Hall & Lord, 1995; Sosik,
Godshalk, & Yammarino, 2004; Waldman & Yammarino, 1999; Yamma-
25 rino, 1990). Authentic leadership and authentic leadership development
theories can be conceptualized and operationalized at different levels.
27 Nonetheless, similar difficulties face the researcher of both authentic lead-
ership and authentic leadership development.

29 First, conceptualizing and operationalizing leadership and leadership de-
velopment at multiple levels can still be difficult to achieve. Improper
31 matching of theory to measures or analyses across these levels can result in a
host of errors, biases and ecological artifacts that are collectively known as
33 "level of analysis" problems (Freeman, 1980; Robinson, 1950; Thorndike,
1939). On the other hand, the cost of not conceptualizing leadership or
35 leadership development from a multilevel perspective is to over-simplify
leadership by downplaying both the *embedded* nature of leadership and its
37 development within the organizational hierarchy it is part of, as well as the
emergent effects of leader and follower cognitions on the leadership and its
39 development process (for a more in-depth discussion of construct emergence
and embeddedness, please see Klein & Koslowski, 2000). Leadership and

Table 1. Types of Theoretical Perspectives and its Impact.

Perspective	Key Elements	Examples of Articles	Focal Constructs for Development	Level of Analysis	Metric of Time	Nature of Measure	Nature of Sample
Intrapersonal	Authentic leadership as a system of internal processes	Chan, Hannah, and Gardner (in press); Michie and Gooty (in press)	Self-awareness, self-regulation, meta-cognition, values	Individual	Typically very short	Both normative and ipsative	Broad range
Interpersonal	Authentic leadership as a positive relational force	Eagley (in press); Illies, Morgeson and Nahrgang (in press) ^a	Relational transparency, behavioral consistency, relational orientation	Dyad and above	Varies	Typically normative	Broad range
Developmental	Authentic leadership as a personal journey of growth	Sparrowe (in press); Shamir and Eilam (in press) ^a	Narratives, life-stories, insight, themes, self-reflection	Individual	Typically very long	Typically ipsative	Small, selected sample
Pragmatic	Authentic leadership as a means for veritable outcomes	Luthans and Avolio (2003) ^a ; Gardner, Avolio, Luthans, May and Walumbwa (in press) ^a	Performance beyond expectations, veritable growth	Dyad and above	Varies	Typically normative	Broad range

^aNote: Some articles have a mix of perspectives and may fit into more than one category. In such instances, their membership into a particular category is determined on which perspective is more predominant.

1 leadership development is, after all, a multiple level, multi-dimensional
phenomenon (Yammarino, Dansereau Jr., & Kennedy, 2001).

3 Authentic leadership scholars have subscribed to this more complete view
of leadership by conceptualizing the theory as a multilevel construct from the
5 onset (Avolio & Gardner, in press; Avolio et al., 2004; Luthans & Avolio,
2003). Specifically, Avolio and colleagues maintain that authentic leadership
7 is by nature a complex phenomenon, and therefore should be explored as a
multilevel phenomenon across multiple levels of analysis. This inherent com-
9 plexity has raised calls for a clearer construct definition with a well-specified
(and simpler) levels of analysis (e.g., Cooper, Scandura, & Schriesheim, in
11 press). In addition, multilevel research requires a change in research mindset,
especially for “organizational scholars trained, for the most part, to ‘think
13 micro’ or ‘think macro’ but not to ‘think micro and macro’ “(Klein & Ko-
slowski, 2000, p. 11). A multilevel theory of authentic leadership has the
15 potential to contribute to the growing impetus in the leadership field to move
toward a multilevel conceptualization and operationalization, which one may
17 argue is more true (authentic) to the real nature of leadership.

19

Issue 2: Variation in Metrics of Time

21

Another area where authentic leadership scholars claim the theory can be
23 distinguished from other theories is through an emphasis on development. A
direct consequence of this claim is that it creates temporal variance (All-
25 mendinger, 2002). This manifests itself in greater variation with regard to
the length of the actual leadership interventions needed, as well as the time
27 needed for effects to emerge. Contributing to this temporal variance is an-
other claim that authentic leadership is multi-dimensional. Multi-dimen-
29 sionality could produce a consequence of different dimensions of authentic
leadership being grounded in different time metrics.

31 For example, the highly developed self-concept and rich life narratives
that characterize authentic leadership takes time to emerge (Shamir & Ei-
33 lam, in press). Conversely, acts of relational authenticity may occur within a
much shorter time span (Eagley, in press). Also, perceptions of authenticity
35 may be instantaneous, while the development and execution of actual au-
thentic leadership behaviors may be painstakingly long, especially for high-
37 er-order aspects of authentic leadership dealing with ethical standards,
moral conduct and transparency.

39 Framing leadership as a multi-dimensional phenomenon lends complexity
to its measurement (Yammarino et al., 2001). Its existence is more likely

1 indicated when there is evidence in at least more than one dimension. In the
2 same way, a multi-dimensional framework of authentic leadership requires
3 measurement efforts to similarly demonstrate evidence in more than one
4 dimension. Therefore, triangulation, not only across methods but across
5 time may be required to attain some degree of confidence that authentic
6 leadership manipulations have been successfully achieved (Berson, 1999). By
7 measuring the effect of the manipulation using different methods and at
8 different times, focusing on different aspects of authentic leadership being
9 manipulated, consistent confirmation across these methods gives the re-
10 searcher a high degree of confidence that the manipulation was successful –
11 this confirmation across different sources is known as triangulation.

13

14 *Issue 3: Variation in Nature of Measurement and Design*

15

16 If the development of authentic leaders entails a focus on the development
17 of their self-concepts as proposed by Shamir and Eilam (in press), one would
18 need to take a closer look at the individual developmental profiles of these
19 leaders over time. An implication arising from this is that authentic lead-
20 ership researchers will need to add more *ipsative* approaches to the more
21 traditional normative approaches for measuring authentic leadership.

22 Ipsative approaches adopt the view that it is more meaningful to compare
23 within-person change using the person as the yardstick, rather than pit the
24 change against a set of established norms (Saville & Wilson, 1991). In
25 mathematical terms, these individuals will have different starting points and
26 different growth rates, or growth factors, as they are typically termed in
27 latent growth modeling literature (Muthen, 1991). In addition, as they de-
28 velop over time, the variance in the growth factors between individuals
29 increases as well, resulting in a *fan spread* (Kline, 1998). The wider the fan
30 spread, the greater is the variation between individuals in terms of their
31 development. With greater variation, ipsative comparisons become more
32 meaningful than normative comparisons.

33 The types of growth profiles described above can be handled by a whole
34 host of longitudinal data analysis techniques (Hanges & Day, 2002). Some
35 of these techniques (e.g., Latent Growth Modeling) are able to not only
36 explore *alpha* change or quantitative change in the level of a construct, but
37 also explore proposed *gamma* change or qualitative change in the concep-
38 tualization of the construct of interest, independent of the unit of theory
39 specified (Chan, 2003). Exploring gamma change is particularly of interest
to authentic leadership researchers who adopt a developmental lens.

1 According to the typology of change offered by Golembiewski and
2 colleagues (e.g., Golembiewski, Billingsley, & Yeager, 1976), gamma
3 change refers to change in the meaning or conceptualization of a con-
4 struct. Statistically, this translates into changes in the number of factors,
5 factor pattern, or factor inter-correlations over time or across groups
(Chan, 1998).

7 Implied in the developmental lens adopted by researchers is the notion
8 that authentic leadership and some of its key components will undergo
9 gamma change over time. For example, the level of moral development, a
10 key construct in the nomological network of authentic leadership, is the-
11 orized to undergo change in stages, and is therefore qualitatively different in
12 children versus those of emerging adults and mature adults (Kohlberg, 1969,
13 1976, 1984). Similarly, the level of cognitive complexity and meta-cognitive
14 ability, another construct central to authentic leadership, is also hypothe-
15 sized to develop in stages (Flavell, 1987; Kegan, 1994). Likewise, some
16 leadership scholars who adapt the ideas of Kohlberg and Kegan to trans-
17 formational and transactional leadership development also envision lead-
18 ership to be conceptually different across different leadership levels
19 (Kuhnert & Lewis, 1987).

20 Hence, given the manner in which some of the constructs central to au-
21 thentic leadership mentioned above develop, it is logical to infer that over
22 time, authentic leadership may be qualitatively different in its conceptual-
23 ization and consequently its measurement. As such, longitudinal approaches
24 to measuring authentic leadership may be useful to capture the hypothesized
25 quantitative and qualitative changes that authentic leaders go through, as
26 well as the changes authentic leadership have on its associated outcomes.
27 Longitudinal data analysis methods can cast light on individual variation in
28 growth as they are still dependent on normative constraints. For example,
29 many of longitudinal data analysis techniques specify that the measures used
30 should display invariance across groups and across time (Chan, 2002). Also,
31 individual growth factors are compared against some group means (Ploy-
32 hart, Holtz, & Bliese, 2002).

33 Shamir and Eilam (in press) suggested that authentic leadership devel-
34 opment research needs to move away from measuring normative behaviors
35 to measuring unique identities and their development. Ipsative measures and
36 research designs with strong ideographic emphasis (e.g., single case studies,
37 repeated measures design) can make comparison between samples difficult
38 (Popper, 1997). However, they are useful for providing respondents with a
39 frame of reference that is uniquely their own, thereby making feedback for
development extremely personalized. This makes the research true to

1 the original intent of putting development in the foreground. Research
with strong idiographic emphasis can contribute to the understanding and
3 fine-tuning of nomothetic principles, especially when such principles are not
clear in the first place, or when the requisite samples are difficult to obtain.
5 In sum, it would appear that validating authentic leadership theory will
require a substantial use of ipsative measures, longitudinal approaches to
7 data analysis, and research designs that are more idiographic in nature.

9

Issue 4: Variation in Nature of Sample

11

The multi-dimensional and developmental nature of authentic leadership,
13 together with the gamma change it demonstrates over time, necessitates that
special consideration need to be given with regards to the proper use of
15 research sample. For example, the intrapersonal approach to authentic
leadership outlined above proposes that a key process found in authentic
17 leaders is the development of one's self-concept through life narratives
(Sparrowe, in press). One implication of this recognition is that students are
19 less likely than mature adults to have higher developed self-concepts, as they
have less elaborated life-narratives simply by virtue of having lived less time.
21 This implies further that using student samples will result in a lower chance
of detecting the presence of authentic leadership if the richness of life-nar-
23 ratives were used as a primary measure of the level of development of one's
authentic leadership.

25 In a meta-analysis conducted by the GLI (see Reichard & Avolio, 2005 in
this volume), 64.5% of the leadership intervention studies were conducted in
27 educational settings, using predominantly student samples. If this trend of
preponderance for student samples is carried over into authentic leadership
29 research, this could result in only a narrow spectrum of research focus on
what constitutes authentic leadership.

31 On the other hand, it is important to distinguish between antecedents to
authentic leadership versus the actual construct itself. For example, the self-
33 reinforcing mechanisms to be elaborated on in the next section contribute to
the development of authentic leadership, but are not part of the actual
35 construct. Hence, the use of student samples may still be appropriate for the
manipulation and measurement of some of these antecedents to authentic
37 leadership. As is often the case when conducting research, the type of sample
chosen is an important consideration. In the case of authentic leadership
39 research, this consideration takes on greater significance, given the potential
for gamma change in the construct.

1 **WORKING ASSUMPTIONS REGARDING AUTHENTIC** 3 **LEADERSHIP INTERVENTIONS**

5 Having identified these four measurement implications, the second part of
 7 this chapter will propose four working assumptions regarding the nature of
 9 authentic leadership interventions based on the varied theoretical lenses
 11 previously described. At this early stage in the development of authentic
 13 leadership theory, Cooper et al. (in press) have offered a preliminary critique
 15 of the theory in which they caution against putting the development cart
 17 before the ontological horse. Researchers in this area would be wise to heed
 19 their advice. Similarly, Avolio and Gardner (in press) also argue against
 21 simple training and development strategies for authentic leadership develop-
 23 opment. Yet, because authentic leadership theory has a strong develop-
 25 mental focus, identifying working assumptions to help clarify the nature of
 27 authentic leadership interventions is important. Speculating about the nature
 29 of the development cart will help reinforce what is needed for the
 31 ontological horse, the nature of authentic leadership.

21 *Assumption 1: Targeted, Customized Interventions*

23 Because of the complexity of the authentic leadership construct, interven-
 25 tions that target the entire spectrum of developable dimensions in short,
 27 one-shot training sessions are unlikely to be effective. Given these con-
 29 straints, targeted training focusing on those aspects of authentic leadership
 31 that are most essential to the leadership system and most amenable to de-
 33 velopment with available resources, are likely to gain favor. In other words,
 35 there is no default one-size-fits-all authentic leadership training system that
 37 will work well with a similar one-size-fits-all measurement regime.

31 Rather, approaches to developing authentic leadership will most probably
 33 need to be modeled after transformational leadership development regimes
 35 to provide individualized consideration of persons, groups and all levels of
 37 context (Avolio & Bass, 1995; Bass, 1987; Bass & Avolio, 1990). Such in-
 39 individually considerate approaches are targeted to the specific needs of in-
 41 dividuals and requirements of the organizational contexts/cultures in which
 43 those individuals are embedded (Gnyawali, 2001; Granovetter, 1985; Os-
 45 born & Ashforth, 1990; Yukl & Howell, 1999).

39 These types of interventions should experience the greatest buy-in (reac-
 41 tions), learning, transfer and also generate the greatest improvement in real

QA :1

QA :2

1 results (Kirkpatrick, 1994). These two factors will in turn determine whether
2 real change occurs at the personal and organizational level, thereby vali-
3 dating the authentic leadership training to be truly authentic. Making the
4 development real is important, because the authenticity of developmental
5 interventions is a key overriding factor in moving the field of leadership
6 development forward in examining and validating ‘genuine’ interventions
7 that actually do develop leadership.

9

Assumption 2: High Frequency, Micro Interventions

11

12 From a developmental perspective, one way to model what authentic leaders
13 go through in real life is to simulate their learning episodes with high fre-
14 quency, micro interventions. Such interventions may shorten the time need-
15 ed to develop authentic leadership. This is an important consideration if one
16 is to achieve success in causing authentic leadership to emerge quickly
17 enough to be useful.

18 Another reason for such interventions lies in the need to achieve autom-
19 atization for selected controlled processes (Schneider, 2003). One can re-
20 conceptualize the interplay between the cognitive and social processes that
21 goes on in authentic leadership and its development as a dynamic mix of
22 controlled and automatic processes (Shriffrin & Schneider, 1977). Authentic
23 leaders have acquired expertise in their leadership skill set. This expertise
24 can be viewed as a form of automated mental scripts customized to expend
25 the most economical cognitive resources on complex tasks (Hersey, Walsh,
26 Read, & Chulef, 1990; Murphy, Blyth, & Fiedler, 1992).

27 For the novice trainee, what appears automatic to the expert leader is
28 exceedingly difficult to master given limited cognitive processing capabilities
29 and requires constant controlled processing, leaving no room for attending
30 to higher level processes (Schneider & Chein, 2003). Hence, one would as-
31 sume that a major goal of authentic leadership development interventions
32 would be to selectively automatize some cognitive processes, while con-
33 sciously controlling others.

34 As an illustrative example, authentic leadership development may entail
35 the reduction of errors introduced by the correspondence bias in an effort to
36 achieve balanced processing. The correspondence bias is the tendency for
37 one to over-attribute to dispositional factors while underestimating the ef-
38 fect of situational factors in explaining social behavior (Gilbert & Malone,
39 1995). The correspondence bias can be an impediment to balanced process-
ing of person perception (Fiske & Taylor, 1991). Biased processing of person

1 perception can lead to a host of leader-member related issues such as im-
2 proper activation of stereotypes, misjudgment of behavior and triggering of
3 wrong behavior as a response (Devine, 1989; Kawakami, Young, & Do-
4 vidio, 2002; Kunda & Spencer, 2003).

5 The correspondence bias can be reduced. Once considered to be a uni-
6 versal bias, there is increasing evidence that the correspondence bias is more
7 prevalent in individualist than collectivist cultures (Miller, 1984; Triandis,
8 1995). One body of evidence suggests that this could be due to the cultural
9 preference for collectivist cultures to engage in holistic thinking, whereby
10 such cultures take situational factors and context into greater account
11 (Chiu, 1972; Choi, Nisbett, & Norenzayan, 1999; Lloyd, 1990). Other evi-
12 dence suggests that this preference for holistic thinking is a socialized
13 process (Choi et al., 1999; Miller, 1987), and correction of correspondence
14 bias can be made automatic so that more cognitive resources can be made
15 available for higher order tasks (Knowles, Morris, Chiu, & Hong, 2001).

16 Hence, a goal of authentic leadership development may entail selectively
17 automatizing the effects of the correspondence bias to create more cognitive
18 resources to attend to the complexity of leadership across different contexts.
19 It allows the novice leader to consciously attend to the cognitive processes
20 designated for conscious control, such as those pertaining to meta-cognition
21 (Flavell, 1979, 1987), self-development and the near and far transfer of the
22 learning (Cormier & Hagman, 1987). Automatization has been shown to
23 clearly distinguish between novice and expert leaders. In one study, working
24 memory for higher tasks was shown to increase by as much as 90% (Sch-
25neider, 2003).

26 Automatization of cognitive processes entails over-learning and habit
27 formation, which can be hastened with high frequency of practice. To
28 achieve mastery of complex controlled processing, these processes will need
29 to be broken down into simpler steps. Cooper et al. (in press) suggested the
30 use of chaining from reinforcement theory (Skinner, 1969). Chaining entails
31 reinforcing simpler behaviors that collectively make up the overall complex
32 repertoire. Hence, it is plausible that similarly chaining micro-interventions
33 together will achieve the overall desired impact of authentic leadership de-
34 velopment interventions.

35

37 *Assumption 3: Self-Reinforcing Interventions (Over Time)*

38 The developmental lens adopted by researchers mentioned previously im-
39 plies that authentic leadership interventions ought to be self-reinforcing in

1 some way so as to sustain development over time. Several self-reinforcing
3 mechanisms are relevant to authentic leadership that is amenable to inter-
5 vention. One pathway is through the efficacy derived from enactive mastery
(Bandura, 1997), which leads to more engagement in the particular leader-
7 ship development activity, thereby creating a continuing cycle of self-
9 development.

11 Another pathway is through self-verification (Swann, 1983, 1990). This
13 mechanism has been outlined in another chapter in this book and will not be
15 elaborated here (see Chan et al., 2005, this volume). Essentially, the au-
17 thentic leader receives positive input from followers regarding his/her au-
19 thenticity, thereby bolstering his/her self-concept as a leader, and motivating
21 the leader to further engage in more acts of authenticity. Through this
23 process of self-verification, the authentic leaders are motivated to continue
25 to engage in future acts of authenticity, and to develop themselves to be-
27 come more authentic.

17 A third pathway for development entails raising the motivation for leader
19 self-reflection regarding past leadership episodes. Self-reflection raises self-
21 awareness and reinforces the leader's implicit leadership theory held in long
23 term memory (Eden & Leviatan, 1975; Offerman, Kennedy, & Wirtz, 1994).
25 This enriched implicit leadership theory offers higher concept accessibility of
27 one's idea of authentic leadership (Higgins, King, & Mavin, 1982). An en-
riched implicit leadership theory in turn makes more information available
for priming and activation in the leader's working self-concept (Lord &
Brown, 2004; Lord & Emrich, 2001). With a primed working self-concept
that is self-schematic on authentic leadership, the leader will display a higher
frequency of authentic leadership behaviors, thereby enriching his/her leader-
ship episodes for future self-reflection.

29 Self-reinforcing mechanisms such as those outlined above require time to
31 emerge. Yet, of 200 leadership interventions evaluated in a recent meta-
33 analysis, only 9% exceeded 7 days or more (see Reichard & Avolio, 2005,
35 this volume). To achieve a better understanding of how these self-reinforc-
37 ing mechanisms can improve authentic leadership interventions, there is a
39 need to engage in more longitudinal studies, a call not dissimilar to those
made for leadership research in general (Day, 2000). Rich databases from
existing longitudinal studies such as the LSAY (Longitudinal Study of
American Youths) are readily available for exploratory analysis. Such data
sets are important for explanation and prediction. In addition, they can
potentially reveal what types of constructs are important for inclusion into
the nomological network of authentic leadership over time, as well as pro-
vide baselines for predicting the emergence of authentic leaders.

1 *Assumption 4: Multilevel, Nested Interventions*

3 The final assumption has been alluded to in the discussion so far. Authentic
5 leadership development interventions, like other leadership interventions in
7 general, will need to incorporate the context and take levels of analysis
9 issues into account (London, 2002). Exactly how this can be achieved will
11 vary. However, there are common measurement issues to be considered, and
13 these will be elaborated on in the next section.

11 **SUGGESTIONS FOR MEASURING AUTHENTIC**
13 **LEADERSHIP**

15 *Suggestion 1: Clarifying the Role of Context*

17 Although authentic leaders are embedded and operate within their context,
19 they are also agentic (Bandura, 1997; Chan et al., 2005). This means that
21 authentic leaders are not completely at the mercy of situational forces, or
23 blind to the power of the situation (Ichheiser, 1943). At the same time,
25 leaders who are authentic do not practice self-deception in their perception
27 of the situation, so that they neither intentionally underestimate its power
(Gilbert & Malone, 1995), nor overestimate its importance (Trope, 1986).
The agentic view of authentic leadership does call into question the precise
nature of the impact that context has on authentic leadership behavior and
processes. Hence, there needs to be a better understanding of the interplay
between authentic leadership and its context.

29 One approach to addressing this issue is to conceptualize leadership as
31 being embedded in its context. The central idea behind embeddedness is the
33 issue of social ties and obligations (Mitchell, Holtom, Lee, Sablynski, &
35 Erez, 2001). The premise is that human beings are social creatures, and
human behavior is influenced by social realities (Granovetter, 1985). Given
that leadership is a social construction, it makes sense for leadership to be
examined in terms of its associated social ties.

37 The idea of leadership embeddedness is implicit in the measurement of
39 social relationships, or sociometry and social network analysis (Brass, 1985;
Granovetter, 1973). Leadership embeddedness is a key rationale underlying
the use of social network analysis to examine leader–member exchange
(Sparrowe & Liden, 1997), transformational leadership (Bono & Anderson,
in press) and charismatic leadership (Pastor, Meindl, & Mayo, 2002). Hence,

1 sociometric approaches likewise possess great potential for measuring authentic leadership.

3 In terms of interventions, the idea of embeddedness is also relevant to
understanding how learning can occur in authentic leadership development.
5 For example, situated learning theories (McLellan, 1995) rely on the fact
that knowledge and learning need to occur in their authentic context to
7 provide the necessary affordances (Gibson, 1977). The closer the learning
context is to the actual performance environment, the more salient are the
9 social and cognitive cues available to facilitate learning. Motivationally,
authentic collaborators and fellow learners are necessary to provide the
11 socialization impetus and interaction for social learning (Bandura, 1977;
Vygotksy, 1978).

13

15 *Suggestion 2: Clarifying the Role that Behaviors Play*

17 Shamir and Eilam's (in press) suggestion to move away from developing and
measuring skills and leadership styles that display authentic leadership in
19 favor of measuring leader self-development and the development of leader
self-concept need not be seen as a call to abandon the use of behavioral
21 indicators altogether. Rather, what is needed is a re-tuning of existing meth-
ods to identify and measure behaviors not as a terminal objective, but as an
23 intermediate objective with the ultimate aim of interpreting the extent that
these behaviors reflect changes in one's self-concept and identity. Part of the
25 solution may entail developing separate authentic leadership measures for
learning versus performance in recognition of the fact that authentic leaders
27 are able to fulfill performance goals and still pursue their own development
(Locke, Frederick, Lee, & Bobko, 1984; Locke & Latham, 1990). In support
29 of this approach, authentic leadership scholars may also need to identify
when and how authentic leaders balance between learning and performance
31 goal-setting processes, especially given the often conflicting nature of short
versus long-term goals (Koestner, Lekes, Powers, & Chicoine, 2002).

33

35 *Suggestion 3: Clarifying the Roles of Controlled and Automatic Processes*

37 Recent conceptualizations of authentic leadership assert that balanced
processing is a key component of authentic self-regulation (Avolio &
39 Gardner, in press; Gardner et al., in press; Illies et al., in press). This
assertion opens up a broad area for research to flesh out the mechanisms by

1 which balanced processing occurs. One possibility may be that it arises from
 2 the appropriate use of anchors in the decision making of authentic leaders
 3 (Tversky & Kahneman, 1974). Another possible reason could lie in the
 4 possibility that authentic leaders are less affected by biases in person per-
 5 ception, such as the correspondence effect (Gilbert & Malone, 1995).

6 Yet another possible reason why authentic leaders achieve balanced
 7 processing may be revealed by their social networks. Leaders who are au-
 8 thentic may surround themselves with followers who are, or develop fol-
 9 lowers to become equally consistent in their behavior. Such networks
 10 manifest themselves as higher levels of meta-accuracy in meta-perceptions –
 11 i.e., one’s social perceptions of oneself and of others are consistent with
 12 others’ perceptions of themselves and the relationship (Kenny, 1994).

13 For the mechanisms described above, the underlying automatic and controlled
 14 processes need to be identified. The perceptual, cognitive and social
 15 processes involved in causing authentic leaders to employ anchoring ap-
 16 propriately may significantly distinguish authentic leadership. Measuring
 17 the anchors used by authentic leaders in initial impression formation, and
 18 their overall social perceptions may provide a way to qualitatively distin-
 19 guish the balanced processing achieved by authentic leaders from biased
 20 information processing by less authentic leaders.

21 An alternative avenue to explore is to examine the implicit theories that
 22 authentic leaders and followers hold. Implicit theories initially were applied
 23 by Dweck and colleagues (e.g., Dweck, 1996; Dweck, Chiu, & Hong, 1995;
 24 Dweck, Hong, & Chiu, 1993) to describe perceptions of traits such as per-
 25 sonality and morality. For example, implicit personality theories are the
 26 beliefs that people hold about the relationship between the traits of people
 27 (Grant & Holmes, 1981). These beliefs may be formed spontaneously, for
 28 example, as is the case for spontaneous trait inferences (Moscowitz & Ule-
 29 man, 1987). It may be informative to examine the role that self-regulation
 30 plays in the formation of these implicit theories within the context of au-
 31 thentic leader–follower relationships.

33

Suggestion 4: Clarifying the Role that Leadership Events Plays

35

36 How does one interpret the role of leadership events or episodes? Like the
 37 discussion concerning the role of context, leadership episodes are both
 38 the end product of authentic leadership as well as the “raw material” for
 39 further authentic leadership development. Yet, at the same time, the epi-
 40 sodes themselves are non-indicative of development. Authentic leadership

1 development entails more than encountering a multitude of leadership ep-
3 isodes; rather, it is the meaning attributed to these episodes by those in-
5 volved in the authentic leadership process that make these episodes real
7 “moments that matter” (Avolio et al., 2004). The occurrence of such lead-
9 ership episodes may be unintentional, but the responses to these episodes
11 can be indicative of authentic leadership in action. Jolts, shocks or crises are
12 important learning episodes for the development of authentic leadership
(Fiol & Lyles, 1985). Hence, breaking down these critical events and anal-
13 yzing the meanings leaders associate with them may be another way to
14 measure authentic leadership and its development.

11

13 **CONCLUDING REMARKS: THE ROLE OF CULTURE**

15 This chapter began with four observations regarding the four theoretical
17 lenses that have emerged from ongoing conversations about authentic lead-
19 ership. From these lenses, four issues pertaining to measurement were
21 raised. Next, four working assumptions were made concerning the nature of
23 authentic leadership interventions. Finally, suggestions were made in four
25 areas that may help advance authentic leadership measurement methods.

21 In concluding, I would like to highlight another issue that may present a
23 huge challenge towards the scholarship of authentic leadership – the influ-
25 ence of culture. The discussion on the gamma change in authentic leadership
27 across time and groups, and the illustrative example provided on selective
28 automatization of person perception processes as part of authentic leader-
29 ship development highlights the influence that culture can have on how
30 authentic leadership is defined and developed.

29 At its core, authentic leadership is the relational extension of the authentic
31 person embedded in a network of social relationships (Avolio & Gardner, in
33 press). While relationships are universally important, the meanings attached
35 to relationships are different across different cultures (Rothbaum, Pott,
37 Azuma, Miyake, & Weisz, 2000). In *independent* cultures, the emphasis is on
39 the unique individual who is complete on his own, free to enter and leave
relationships, and who is even required to be on the guard to protect one’s
identity from influence by others (Markus & Kitayama, 1994). The authen-
tic leader then, is one who first achieves authenticity as a person, and is able
to remain true to oneself over and above, or in spite of, the leadership roles
he or she is called to perform. In doing so, he/she distinguishes himself or
herself with desirable individual attributes that define authentic leadership,
such as transparency and moral worthiness. The authentic leadership

1 relationship is therefore one of transparency, openness, trust and emphasis
 3 on mutual development between the leader and his/her associates (Gardner
 et al., in press).

5 On the other hand, in interdependent cultures, the emphasis is on the
 individual who understands his/her place within the collective, and accepts
 7 that being embedded within relationships bring roles and responsibilities
 that he/she must fulfill (Lebra, 1976; Tu, 1994). To be authentic as a person
 is to be first and foremost true to these roles and responsibilities. To be
 9 valued in society, one must be able to subordinate individual needs and
 goals for the good of interpersonal harmony (Zahn-Wexler, Friedman,
 11 Cole, Mizuta, & Hiruma, 1996). In other words, the relationships that a
 person is embedded within sets the stage for how he/she can develop au-
 13 thentically as a person. Authenticity in interdependent cultures is not
 meaningful unless one also considers the social networks of individuals.

15 This cultural difference presents issues of gamma change across groups on
 at least four fronts: (1) the level of conceptualization of what constitutes
 17 authenticity is different; (2) the interdependent authentic leader is more
 greatly influenced by the relational context; (3) the interdependent authentic
 19 leader is not going to possess as much of the *invulnerable* or *core* self, and is
 going to possess more of the *relational* self, than his/her counterparts from
 21 independent cultures; and (4) the conceptualization of authentic leadership is
 less dispositional, and more situational in interdependent cultures. Ultimate-
 23 ly, to better understand the exact nature of these gamma changes, it may be
 necessary for authentic leadership scholars to embark on a worldwide project
 25 along the lines of the Global Leadership and Organizational Behavior Ef-
 fectiveness (GLOBE) Research Project, a multi-phase, multi-method end-
 27 eavor involving investigators from all over the world examining the inter-
 relationships between societal culture, organizational culture, and organiza-
 29 tional leadership (House, Hanges, Javidan, Dorfman, & Gupta, 2004).

In concluding, it is important to note that authentic leadership is, to adopt
 31 the pragmatic lens, possessive of truth-value far too great to ignore. The
 measurement challenges posed in this chapter should not be seen as stum-
 33 bling blocks to our understanding of authentic leadership and its develop-
 ment. Rather, it is my hope that they serve as guiding posts in our quest to
 35 develop authentic leaders across all cultures.

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