History of Reliability, Validity, and Impact Testing of the Global Leadership Profile and of the New 'GLP–Artificial Intelligence Scorer' for Scoring GLPs and MyWorldView®

Authors:
William R. Torbert,
Professor Emeritus, Boston College ©2024
Founding Board, Global Leadership Associates
with Elaine Herdman Barker and Jonathan Frank of GLA,
as well as Professors Reut Livne Tarandach, Manhattan College
and Kirill Veselkov, Intelligify Ltd UK

GLOBAL
LEADERSHIP
ASSOCIATES
PRESS

*History of Reliability,
Validity, and Impact
Testing of the Global
Leadership Profile and
of the New 'GLP–
Artificial Intelligence
Scorer' for Scoring GLPs
and MyWorldView®*

History of Reliability, Validity, and Impact Testing of the Global Leadership Profile and of the New 'GLP–Artificial Intelligence Scorer' for Scoring GLPs and MyWorldView®

Any person or organization interested in assessing their own or their members' leadership qualities and potentials should ask for and carefully examine the published research underlying the claims of reliability, validity, and real-world impacts on behalf of that leadership measure. This paper reviews fifty years of research on the **Global Leadership Profile** (GLP) psychometric measures (see pp3-4). The findings apply to the new **MyWorldView®** (MWV) profile as well, since it uses the same assessment tool. We also introduce the reliability statistics for the new **GLP-Artificial Intelligence Scorer** (pp5-6), constructed to permit us to offer both the GLP and MWV on a much wider scale, supporting our mission to democratize adult development.

This paper also very briefly introduces adult developmental theory (below) — the underlying theory that the GLP measures — and the **Collaborative Developmental Action Inquiry** (CDAI) paradigm of social science and social action (pp8-12) — the frame that underscores our work at Global Leadership Associates. The CDAI approach explains the high reliability attained in the human scoring of the GLP; the extraordinarily high percentage of the variance accounted for in our field findings, testifying to the pragmatic validity of CDAI; and, most recently, the very high reliability we have found between our human scoring and that of our **GLP-Artificial Intelligence Scorer** (GLP-AI) (pp4-5). The GLP-AI and MWV-AI all permit us to offer both the GLP and MyWorldView on a much wider scale. This will more strongly support our mission to democratize adult development.

Adult Development Theory

Adult development theory provides a lifelong perspective on how to engage in increasingly deep and timely action inquiry that, with each progressive action-logic transformation, makes fewer basic assumptions that can blind a leader, an organization, or a scientific method (Binder, 2023; Cook-Greuter, 1999; Erikson, 1959, 1969; Kegan, 1982, 1994; Loevinger, 1976; Loevinger & Wessler, 1970; Torbert, 1976, 1987, 1991, 2004, 2013, 2017; Wilber, 2000). Torbert's developmental theory, in particular, posits that, beginning in childhood, we can potentially develop through eight action-logics over a lifetime, although only some 11% of leaders and consultants adventure beyond the Redefining action-logic. (The GLP validly scores only up to the Early-Alchemical action-logic, so we do not include the eighth, 'Ironic' action-logic in most of our discussions [see Postscript of Torbert, 1987, pp216-224, for an exception.)

According to Torbert's version of developmental theory, organizations and scientific methodologies can also, analogously, develop to more complex action-logics (see Table 1). (It is important to note that the false assumptions of earlier action-logics can also apply to one's initial understanding and use of developmental theory itself [Herdman Barker and Wallis, 2016].)

One fundamental claim of CDAI is that the currently-rare, later-action-logic leaders, organizations, and forms of social science (see Table 1) will exercise more moment-to-moment and day-to-day action inquiry, more mutual power, more double- and triple-loop feedback, and more timely action than earlier action-logics produce, thus engendering more personal and organizational transformation in turbulent environments and greater efficacy and sustainability in the long term. These developmental transformations are what have recently become known as 'vertical' development in corporate leadership development programs. Whereas conventional 'horizontal' leadership development programs are *intended to increase leaders' competence and efficiency within one's current action-logic*, 'vertical' development programs are intended

to expand and support transformation of the individuals' and organizations' capacities and competence.

What is equally pertinent from the GLP feedback, the self-observations of participant leaders and our observations of their actions, and our own is that we humans are imperfect (Herdman Barker and Wallis, 2016, McCallum, 2008; Livesay, 2022). We are all sensitive to contextual influences and display fluidity in our approach to problem resolution (Torbert & Herdman-Barker 2022). This does not undermine the validity of adult development theory, it simply recognizes the natural ebb and flow of human attention, a discussion we provoke in GLP commentaries and debriefs (both face-to face & digital).

Table 1

Leadership, Organizational, and Scientific Developmental Action-logics. As Mapped by Collaborative Developmental Action Inquiry (CDAI) (Categories described in Torbert, 2004, 2013, 2021)

Leadership	Organization	Scientific
1. Opportunist	Investments	Behaviorism
2. Diplomat	Incorporation	Gestalt Psychology & Sociology
3. Expert	Experiments	Empirical Positivism
4. Achiever	Systematic Productivity	Multi-method Eclecticism
5. Redefining	Social Network	Postmodern Interpretivism
6. Transforming	Collaborative Inquiry	Participatory Action Research
7. Alchemical	Foundational Community	Cooperative Ecological Inquiry
8. Ironic	Liberating Disciplines	Collaborative Dev. Action Inq. (CDAI)

Developing Reliability in Scoring the GLP

The **Global Leadership Profile (GLP)** measures a person's current developmental action-logic. Starting in 1980, with Torbert as lead researcher and Cook-Greuter as high-reliability-trained scorer of the Loevinger Washington University Sentence Completion Test (WUSCT) (Loevinger, 1976; Loevinger & Wessler, 1970), Torbert and Cook-Greuter gradually transformed the WUSCT into the Leadership Development Profile (LDP) between 1980 and 2004. Cook-Greuter earned her doctorate for theoretical and empirical work on the scoring of late action-logics (Cook-Greuter, 1999; Torbert, 1987, 1991; Torbert, Cook-Greuter & Associates, 2004). Then, Elaine Herdman-Barker, another trained scorer, and Torbert developed the GLP. (Training new scorers to achieve 85% and higher reliability on the scoring of the WUSCT and the GLP requires over a year's work and does not always succeed.)

The GLP (Herdman-Barker & Torbert, 2012) is grounded originally in Loevinger's Washington University Sentence Completion Test (WUSCT) (Binder,, 2023; Loevinger, 1976; Loevinger & Wessler 1970), and four-fifths of the GLP sentence stems are also WUSCT sentence stems.

Unlike many other psychometrics, like the "Big Five" personality test, which ask for easily-fake-able self-descriptions on quantitative scales (Morgeson et al., 2007), the "sentence completion" methodology asks for action decisions about what to write in response to the stimulus of each of 30 stems. These are not only closer analogies to other everyday actions, but have also proved very difficult to fake (Redmore, 1976).

Loevinger's measure displayed high reliability and internal validity for assessing the four early action-logics (Opportunist, Diplomat, Expert, and Achiever, but less theoretical coherence or external validity in the field for the later action-logics. (See review of WUSCT reliability and validity testing in Appendix of Torbert & Associates, 2004; Westenberg et al, 1998).) The Loevinger measure also has low face validity for use in feedback to, or action research and leadership development with, practitioners, because there are no leadership stems and because its language tends to sound evaluative.

By 2012, Herdman-Barker and Torbert had further revised the scoring manuals for the GLP and had developed and reliability tested several new sentence stems and manuals that probed significant business dimensions previously missing (e.g. power and time). The two reliable

GLP scorers have continued to have their reliability tested over the years, by a different method than traditionally used, with some of the results published in a peer-reviewed journal (Livne-Tarandach and Torbert, 2009; Torbert, 2013) and some in a GLA White Paper (Torbert, 2019). The new type of reliability test emerged from the desire to give clients and action research participants the most accurate possible data (their quantitative, current-action-logic score), as well as the most useful and artistic interpretations of a GLP-trained commentator. To do this, Torbert and Herdman-Barker decided to review every score and every commentary. The aim was to highlight the differences between the two scorers (or commentators), then review them together, explore the disagreement in terms of each person's rationale (referring to the scoring manuals), and agree on a final score (or commentary), resulting in a more accurate score in the few cases where the initial scores differed, as well as increasing convergence between initial scores in the long run.

Several years later, we realized that we could use our accumulated data as a new kind of reliability test. This kind of reliability test has been conducted twice in recent years on the GLP scorers. In a review of 805 measures (Livne-Tarandach & Torbert, 2009), each of which could have been scored at 13 different levels (e.g. Early Diplomat, Diplomat, Late Diplomat, etc., the results showed perfect agreement between the two scorers in 72% of the cases, with a 1/3 action-logic (e.g. Diplomat to late Diplomat) disagreement in 22% of the cases, with only one case of a disagreement larger than one full action-logic, resulting in a .96 Pearson correlation between the two scorers.

In early 2016, a stratified sample of the 78 most recent GLP sentence completion forms from 2015 (10 Expert, 20 Achiever, 20 Redefining, 20 Transforming, and 8 Early Alchemical) were reviewed for reliability between the same two scorers, in terms of total protocol scores. This study found perfect agreement on the protocol score in 94% of the cases and only a 1/3 action-logic disagreement in the other 6%. When one compares these results to the ones seven years previously by the same two GLP scorers (see previous paragraph), one sees a 22% increase in perfect agreement. This increase in agreement presumably occurs at least in part because of the continuing, measure by measure comparisons of scores between the scorers throughout the years.

In late 2016, two new GLP scorers completed their training with Elaine Herdman-Barker. A test of reliability between the new scorers' ratings of each of the 30 sentence stem responses on 30 protocols (n=900) and Herdman-Barker's scores (of which the new scorers were unaware) show the levels of precise agreement at 87.1% and 87.4%, with a disagreement of two levels occurring in less than 1% of the cases. In 2018, a new GLP scorer followed the same reliability-testing procedure, achieving 89.9% precise agreement on individual stem response scores.

Developing Reliability Between Human Scoring and GLP–AI–Scorer

In 2021, GLA contracted with technologist Jonathan Frank and cognitive scientist Kirill Veselkov, to construct a GLP-AI-Scorer. The training data consisted of 3,480 double-scored GLPs, for a total of 104,400 stems. A new machine learning-based method called Pre-trained Language Models (PLMs) has been used and has demonstrated an ability to accurately learn the connections between sentence-completions and the developmental leadership perspectives. It scores both individual sentence-completions and whole protocols. The researchers fine-tuned and optimized its parameters using a 5-fold, 5-recite cross-validation method. This method involved dividing the data into 5 equal parts, training the model on 4 of those parts and using the remaining part as the test data. GLA repeated the process 5 times, each time using a different part as the test data. Additionally, the training data was split into 70% for training and 30% for validation.

The 951 Total Protocol Rating scores for the reliability test ranged from Expert through Transforming, with 'Early' and 'Late' sub-steps in between. In other words, the categories follow the sequence 'Early Achiever... Achiever... Late Achiever... Early Redefining... etc.' The GLP-AI-Scorer accurately predicted the human scoring within one sub-step 91.4% of the time. Dividing the data by full action-logics, the GLP-AI-Scorer accurately predicted the human scoring 99.5% of the time. These outcomes give us confidence that the system can be used in an occasionally-supervised manner with human supervision for the GLP and occasionally supervised MyWorldView®. Various new safeguards are now in place, such as human scorer review of all outliers for MWV (outliers are TPRs at Opportunist/Diplomat or Transforming/Alchemical). Given how reliable this system is, the recent development of ChatGPT and the so-called 'large language models' (LLMs) do not threaten it with obsolescence.

The GLA team recently decided to change our way of aggregating scores on MyWorldView® — from distinguishing two steps (Early and Late) between action-logics to distinguishing a single 'Transitioning/Bridging' score between full action-logics. We did this for two reasons: 1) the exact agreement % between human and AI scorers increases; and 2) the Transitioning/Bridging score may have greater face validity for participants, highlighting the fact that at any given time many people are in a fluid, dynamic transition process, rather than at a stable, well-defined point in their development. Indeed, the latest reliability figures show that 52% of all scores are Transitioning scores.

In the two years since the n=951 reliability test described above, the most recent (February 29, 2024) reliability figures on 2,072 new profiles, scored both by a high-reliability human

GLOBAL
LEADERSHIP
ASSOCIATES
PRESS

*History of Reliability,
Validity, and Impact
Testing of the Global
Leadership Profile and
of the New 'GLP-
Artificial Intelligence
Scorer' for Scoring GLPs
and MyWorldView®*

scorer and the GLP-AI Scorer, show that 77% of AI item scores are in perfect agreement with the human score, and an additional 22% are within 1/2 action-logic of perfect agreement. When analyzed in terms of action-logic differences across Total Protocol Ratings, 98% of scores are in perfect agreement.

Also, consistent with expectations of greater complexity at the later, Post-Conventional action-logics, the lowest machine/human reliability occurs in scoring the Transforming action-logic, where the AI Score is 2/3 of an action-logic over the human score in nearly 5% of the cases. Here, the importance of reviewing all outliers shows itself. In cases of human/AI differences in Total Protocol Rating, the human score is given precedence.

As the above paragraphs suggest, we are alert to the limits of AI scoring and have adapted the MWV and GLP processes to guard against fear that the GLP-AI-Scorer is a beast unleashed. Human scorers work alongside AI to offer high reliability, partnering with technology. Secondly, our debrief processes acknowledge that movement between action logics (GLP) or worldviews (MWV) is anything but linear. It involves working with a turbulence within oneself and across the external world. Thirdly, there will continue to be a going back and forth with human scorers in order to collect data for retraining the model as we progress.

A Construct Validity Test

A key claim of the CDAI paradigm is that, while all action-logic changes are double-loop transformations, accompanied by significant behavioral changes, the most difficult and consequential change occurs between the Achiever and the Redefining action-logics – between the so-called Conventional action-logics and the Post-Conventional action-logics. The Conventional action-logics are broadly supported and constrained by existing social norms, institutions, and assumptions. In the

transforming movement toward the Redefining and later action-logics, one becomes increasingly aware that people (including ourselves) hold such broad assumptions and that one can question these assumptions, institutions, norms, and that different times, places, and cultures generate paradoxes that invite creative engagement and inquiry in the moment. Construct validity would be demonstrated if a cluster analysis of how a sample of Conventional persons' respond to the 30 sentence stems differs in a qualitatively obvious way from how a sample of Post-Conventionals cluster.

We analyzed the underlying pattern of two separate samples- 830 protocols rated overall as 'Conventional' (Achiever action-logic and earlier), and 61 'Post-conventional' protocols (Redefining or later). We found a striking difference between the patterns derived from these two sub-samples, illustrating the qualitative difference between Conventional and Post-conventional action-logics (Livne-Tarandach & Torbert, 2009).

For the Conventional action-logics, stems load on eight distinct factors, indicating that in each case some stems tend to present a similar pattern of answers and scores. Below we provide a graphic illustration of the cluster analysis for this set of protocols, eight clear groupings of different stems. Each node in the graph represents an aggregated score of stems built on our Conventional action-logic sub-sample. The closer the nodes are the more similar they are in scoring. The further the nodes are the less similar in scoring. The lines in this graph represent the association among stems. Figure 1 shows eight distinct clusters of stems that indicate a level of similarities within clusters and dissimilarities across clusters. For example, stems 3, 17, 20, 22, 24 that make up cluster 6 reflect the high correlation in scores assigned to this set of stems. Overall, this cluster analysis of the factors, or overarching themes, that emerge when analyzing Conventional protocols is itself quite conventional statistically, in that distinct clusters or factors show up, with different

Figure 1: Cluster analysis of scores on stems of Conventional profiles
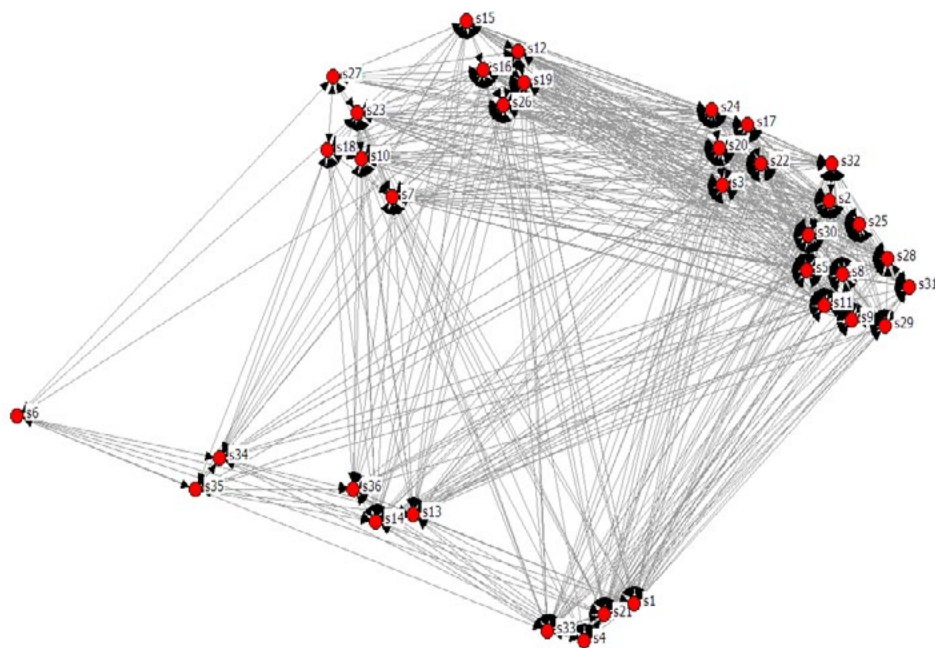
GLOBAL
LEADERSHIP
ASSOCIATES
PRESS

*History of Reliability,
Validity, and Impact
Testing of the Global
Leadership Profile and
of the New 'GLP-
Artificial Intelligence
Scorer' for Scoring GLPs
and MyWorldView®*

sentence stems associated with a single factor.

In contrast, we found a strikingly different pattern emerging from Post-conventional profiles (see Figure 2). For the Post-conventional action-logics (Redefining and later), stems loaded on 11 factors, but loadings were not confined to one factor per stem. More than half (52%) of the stems loaded on two factors or more (9 stems loaded on 2 factors, 7 loaded on 3 factors, and 3 loaded on 4 factors). The cluster analysis of this set of protocols suggests a complex grouping of stems. This "spaghetti and meatballs" graph illustrates that in contrast to the neat and well-differentiated factors emerging in Conventional profiles, Post-conventional action-logics tend to exhibit a more complex, mutually-causal-and-inter-related-dynamic mental map.

These results illustrate a fundamental difference between the Conventional and Post-conventional action-logics, echoing the adult developmental theoretical foundation on which the GLP is built. The stably-focused Conventional loadings represent a relatively simple mental map, with Aristotelian-ly distinct, independent categories ("nothing can be both A and not-A"), as one would theoretically expect of Conventional action-logics. In contrast, the complexity of the Post-conventional sets of loadings suggest that Post-conventionals hold a systems-oriented, inter-independent, 'living' mental map.

Plato's two distinctive images for the nature of thought – as either 'marks on the wax tablet' of the mind or 'birds flying about in the aviary' of the mind – seem remarkably apt as metaphorical summaries of the difference between Conventional and Post-conventional thought.

Figure 2: Cluster analysis of scores on stems of Post-conventional profiles
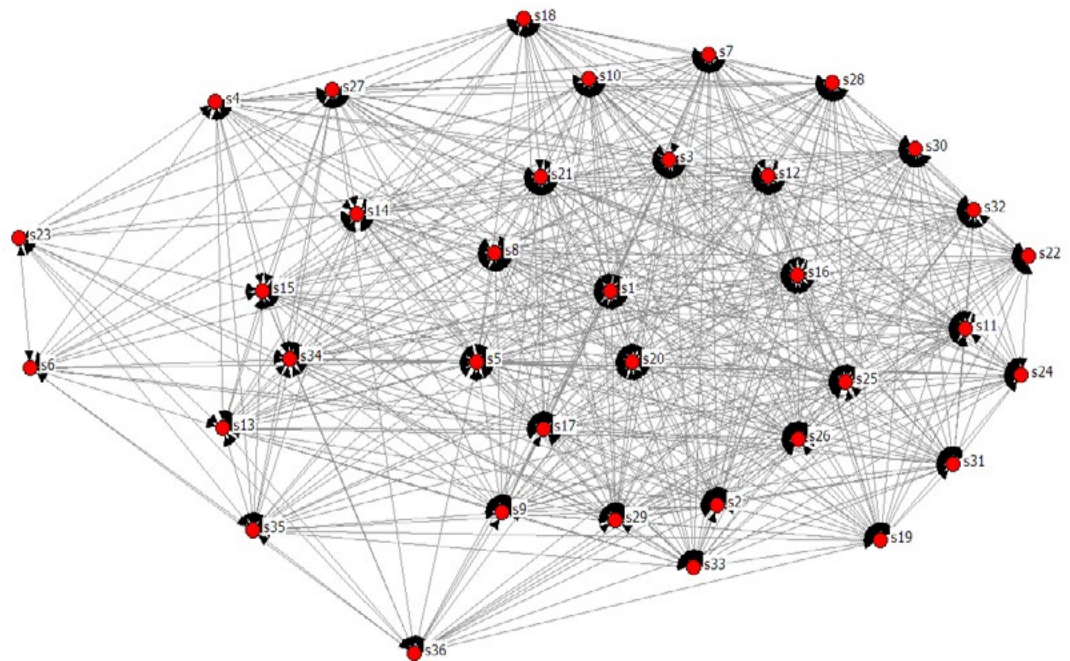
Validity Tests of the GLP's Capacity to Predict Pragmatic Organizational Effects

Action inquiry is a lifelong practice for intentionally interweaving action and inquiry, in order to achieve more frequent and more far reaching timely and transforming action that supports adult, organizational, and scientific development. Action inquiry generates single-, double-, and triple-loop feedback (Steckler & Torbert, 2008; Torbert, 2000b) and cultivates mutual power (see Table 2, p.8). In the absence of action inquiry practice, developmental theory and measurement devolves into an elitist social ranking process.

Torbert (2004) offers the most comprehensive illustrations of first-, second-, and third-person action inquiry practice disciplines:

1) for increasing one's inner, first-person awareness and choice in the midst of one's work and leisure;

2) for increasing one's second-person, interpersonal capacity to build trust, to co-resolve dilemmas, to test hypotheses in the midst of current action, and to take committed collaborative action in teams; and

3) for increasing one's third-person, organizational capacity to design, lead, and research the long-term efficacy and transformational capacity of wider organizational systems.

The theory and practice of Collaborative Developmental Action Inquiry (CDAI) will likely be of interest to both practitioners and researchers, because it is the only developmental approach to have psychometrically measured and statistically validated its impact on leaders' and

GLOBAL
LEADERSHIP
ASSOCIATES
PRESS

*History of Reliability,
Validity, and Impact
Testing of the Global
Leadership Profile and
of the New 'GLP-
Artificial Intelligence
Scorer' for Scoring GLPs
and MyWorldView®*

organizations' transformation to later developmental action-logics and greater real-world success (McCauley et al, 2006). In addition, CDAI is the only 'vertical,' developmental, transformational approach that attends simultaneously to developing leaders (Torbert, 1972, 1991; Torbert & Fisher, 1992), to developing organizations (Torbert, 1976, 1987, 2013); to developing scientific methods (Chandler & Torbert, 2003; Sherman & Torbert, 2000, Torbert, 2000a, 2013); and to richly documenting the action inquiry process that generates such transformations (Torbert 1976, 1991, 2004).

Action–Logic and Feedback–Seeking

Developmental theory predicts that at each later action-logic, people will be more likely to seek out and seriously consider feedback on the current situation, the wider temporal environment, and their own performance. In one study (Torbert, 1994), two hundred and eighty-three members of an organization took the measure. They were also given the opportunity to sign up for feedback on their personal results (the sign-up was at a different time and place, in order to require a separate intentional action on their part). To confirm the theoretical prediction, the results should show that, in general, a larger proportion at each later action-logic asked for feedback.

The actual findings showed that none of those measured at the Diplomat action-logic signed up later for feedback. Ten percent of those measured at Expert signed up (and most of them strongly disputed the validity of the measure, without inquiry, during their individual debriefings). Forty-six per cent of the Achievers asked for feedback (and were mildly confirming of the results as valid descriptions of them). Finally, everyone measured at the Redefining and Transforming action-logics asked for feedback; and they all also asked for a second debriefing session. Thus, the correlation between measured action-logic and proportion asking for feedback accounted for 100% of the variance; and, as just described, there was significant confirming qualitative data as well. The developmental theory and measure proved to be very powerful predictors of who seeks out feedback on their own performance voluntarily, presumably a significant variable in successful leadership.

Action–Logic and Position to Which Promoted in Organization

In another example (Torbert, 1991), six different studies (with a total of 497 participants), undertaken by five different researchers in different sectors (e.g. industry, health care, education) measured employees at different job levels from least to most autonomy/discretion. The job levels ranged from first-line supervisor, to nurse, to junior management, to senior corporate management, to entrepreneurial CEOs). CDAI theory predicts that, on average, one would find leaders with more autonomy, discretion, and authority at later action-logics because they become more capable of managing wider time horizons, more uncertainty, and more complexity. In this set of empirical studies, the average action-logic rose, as predicted, level by level across the studies as autonomy/discretion increased, thus again accounting for 100% of the variance. Once again, the findings show the predictive power of both the developmental theory and the measure with regard to leadership capacity as determined in many different organizations. (It may also be noted that these aggregated studies found fewer than 2% of those below senior management measuring at the later Redefining or Transforming action-logics and only a little more than 15% even among those in senior management!)

The Significance of Transforming Action–Logic CEOs for Successful Organizational Transformation

A field study unfolding over four years (Torbert, 2013) focused on four lead consultants, measuring at the Transforming or Alchemical action-logics, who worked with ten different CEOs and organizations in six different industries. Five of the ten CEOs measured at the Transforming action-logic and five measured at earlier, conventional action-logics. The study found that there was a correlation, significant beyond the .01 level and accounting for 59% of the variance, between the sum of the CEO's and the lead consultant's action-logic and their organization successfully transforming (and improving on conventional indices of performance as well). In all five cases with a Transforming CEO, the organization transformed more than twice on average. In the other five cases, one organization regressed, two remained at the same action-logic, one transformed once, and the other twice.

Accounting for 59% of the variance means that the quality of the CEO's and lead consultant's action-logics, combined, made more of the difference between those organizations that successfully transformed and those that did not than all the other possible influences combined. The vast majority of third-person, empirical social science independent variables, including the "Big Five," horizontal, personality tests often used by companies (Morgeson et al., 2007), typically account for only between 5-20% of variance in the dependent variables.

The Significance of an Organization Operating at the Liberating Disciplines Action–Logic for Leadership Development

If it's that important to successful organizational transformation to develop CEOs and other senior managers who are not just industry-savvy

but also operate at the Transforming action-logic, then the additional question arises: What must an organization's action-logic be to not only improve productivity and market performance, but also and simultaneously to make leadership development an integral part of the organization's everyday work activities (in other words, in Kegan's terms (Kegan et al, 2016), to create a "deliberately developmental organization"? The theoretical answer to this question, according to CDAI, is that the organization must: 1) have developed into the late action-logics itself (most effective will be an organization operating at the Liberating Disciplines action-logic); and 2) be guided by a CEO or leadership team operating at the Transforming action-logic or later.

In our general field research, we have found no organizations fully operating at the Liberating Disciplines action-logic. But we have done both quantitative and qualitative, first-, second-, and third-person research in two organizations, parts of which were organized at the Liberating Disciplines action-logic (Torbert, 1991). These organizational divisions could be compared to the other, earlier action-logic parts of each organization. In both cases, the results showed that the Liberating Disciplines parts of the organizations were more successful in many ways. In the case where the psychometric measure was used, it showed that, over a three year period, 91% of the members engaged in the Liberating Disciplines division transformed to a later leadership action-logic, whereas only 2% of those in the earlier action-logic divisions did so, a finding that once again accounted for an unusually high 81% of the variance (Torbert & Fisher, 1992).

The strength of the statistical findings in favor of CDAI theory, in these two before-and-after studies of the circumstances in which individuals or organizations are more or less likely to transform, is at first hard to understand and certainly invites further research. But, consider that the successful change leaders in all these cases were themselves operating at the late leadership action-logics. This means that they were practicing, and encouraging their members/ clients to practice, first- and second-person action inquiry throughout the multi-year interventions on a daily and weekly basis, with single-, double-, and triple-loop feedback; as well as conducting third-person research and feeding it back at longer-term intervals. And they were doing all this much more regularly than leaders or organizational structures and cultures operating at earlier action-logics (see Chandler & Torbert, 2003, and Appendix of Torbert & Associates, 2004, for more detail).

Ethical, 'Political,' and Other Pragmatic Issues When Coaches, Consultants, or Leaders Introduce Action Inquiry Practices To an Organization

According to CDAI theory, both leaders and organizations gain access to more types of power as they develop – first to additional types of unilateral power; and then at later action-logics to different types of mutual power. Unilateral power can make people conform (or rebel). Only the exercise of mutual power can catalyze people to transform and become more free.

Table 2

Additional Type of Power Exercised at Each Later Leadership Action-logic (Categories described in Erfan & Torbert, 2015, Bradbury & Torbert, 2016)

Leadership Action-Logics	Types of Unilateral Power
1. Opportunist	Coercive power
2. Diplomat	Charming power
3. Expert	Logistical power
4. Achiever	Productive power
	Types of Mutual Power
5. Redefining	Visioning power
6. Transforming	Praxis power
7. Alchemical	Mutually-transforming power
8. Ironic	Power of Liberating Disciplines

Because leaders and organizations increasingly exercise free choice and mutual power as they evolve to later action-logics, any organization members who may initially feel pressured into participating in action inquiry should soon find either increasing reasons to participate voluntarily or increasing opportunities to discontinue participating. This sense of voluntariness applies to taking the GLP, to participating in a 'vertical' leadership development program, or to practicing action inquiry as part of an organizational team or division adopting action inquiry methods for their everyday work.

The GLP is used by Certified GLP Coaches (of whom there are over 200 worldwide (see www.gla.global) to support the individual's leadership development, typically with no organizational record of the person's scores. If, however, the GLP is being used as one among a number of third-person measures in talent-hiring, talent-developing, or talent-promoting, it should never be used as a stand-alone hiring or promotion tool because, in each particular case, a candidate's familiarity or unfamiliarity with the institutional context, as well as other variables, can play critical roles in his or her ultimate efficacy in the job. (After all, the finding that CEOs at the Transforming action-logic more reliably generate organizational transformation is based on CEOs who were hired without any explicit knowledge of developmental theory or the GLP.) Finally, if the GLP is being used with a whole team, the individual results should remain confidential, unless and until given individuals wish to share their results.

Another important issue to consider in organizational uses of the GLP is to whom the late action-logic 'talent' will report. One of the highest tension developmental conundrums occurs in an organization when later action-logic subordinates report to earlier action-logic superiors. The former may well find their latitude of discretion and action-taking infuriatingly reduced and will find it difficult not to become cynical about the superiors. The latter, in turn, will likely find their simplest directives annoyingly questioned and their authority in general undermined.

An even more generally unpropitious developmental situation frequently occurs when senior teams operating at early action-logics, individually and collectively, attempt to develop and implement by fiat a major new strategic direction, organizational transformation, or culture change. Without the senior team engaging, individually and collectively, in its own developmental transformation, the rest of the organization is likely to feel ill-led, to gain neither inspiration nor example from senior team actions, and to respond with low-risk, self-protective actions which lead to failure of the entire effort.

On the other hand, as some of our field studies cited above have shown, leaders at the Transforming action-logic or beyond on the executive team can develop a late action-logic organization over several years, where the majority of participants will experience at least one action-logic transformation and act more like transformational leaders. Transforming leaders lead toward collective leadership. Recognizing that every action one takes has transforming potential can help one identify the general path toward increasingly transformative leadership (Montuori & Donnelly, 2017). In addition, awareness of differences among developmental action-logics and enactment of action inquiry practices can support leaders and organizations to travel this path.

References

Binder, T. 2023. *Ego Development for Effective Coaching and Consulting*. Vandenhoek & Ruprecht: Gottingen, Germany.

Bradbury, H. & Torbert, W. (2016). *Eros/Power: Love in the Spirit of Inquiry*. Integral Publishers, Tucson AZ.

Chandler, D. & Torbert, W. (2003). Transforming inquiry and action: 27 flavors of action research. *Action Inquiry.* 1(2), 133-152.

Cook-Greuter, S. (1999). *Postautonomous ego development*: *A study of its nature and measurement*, Unpublished Harvard University doctoral dissertation, Cambridge MA.

Erikson, E. (1959). *Identity and the life cycle.* NY, International University Press.

Erikson, E. (1969). *Gandhi's truth*. NY: Norton.

Fisher, D. & Torbert, W. (1992). Autobiographical awareness as a catalyst for managerial and organizational development. *Management Education and Development Journal* (23) 3, 184-198.

Herdman-Barker, E. & Torbert, W. (2012). *The Global Leadership Profile Repor*t. Accessible via www.gla.global

Herdman-Barker, E. and Wallis, N. (2016). Imperfect leadership: Hierarchy and fluidity in leadership development. *Challenging Organisations and Society Journal*, 5(1) 866-885.

Kegan, R. (1982). *The Evolving Self*. Cambridge MA: Harvard University Press.

Kegan, R. (1994). *In Over Our Heads*. Cambridge MA: Harvard University Press.

Kegan, R. (2016). *An Everyone Culture*. Cambridge MA: Harvard Business School Press.

Livne-Tarandach, R. & Torbert, W. (2009). Reliability and validity tests of the Harthill Leadership Development Profile in the context of Developmental Action Inquiry theory, practice and method. *Integral Review*. 5 (2) 133-151. 2009.

Loevinger, J. & Wessler, R. (1970). *Measuring ego development*. San Francisco: Jossey-Bass.

Loevinger, (1976). *Ego development: Conceptions and theories*. San Francisco CA: Jossey-Bass.

McCauley, C. Drath, W., Palus, C., O'Connor, P. & Baker, B. (2006). The use of constructive-developmental theory to advance the understanding of leadership. *The Leadership Quarterly*, 17, 634-653.

McGuire, J., Palus, C. & Torbert, W. (2008). Toward interdependent organizing and researching. In A. Shani et al. (Eds.), *Handbook of collaborative management research*, Sage, Thousand Oaks CA. 123-142.

Montuori, A. & Donnelly, G. (2017). Transformative leadership. In J. Neal, *Handbook of Personal and Organizational Transformation*. Springer International Publishing. 1-33.

Morgeson, F., Campion, P., Dipboye, R., Hollnbeck, J., Murphy, K., Schmitt, N. (2007). Reconsidering the use of personality tests in personnel selection contexts. *Personnel Psychology*. 60(3), 683-729.

Redmore, C. (1976). Susceptibility to faking of a sentence completion test of ego development. *Journal of Personality Assessment*, 40(6), 607-616.

Sherman, F. & Torbert, W. (Ed.s). (2000). *Transforming social inquiry, transforming social action: New paradigms for crossing the theory/practice divide*. Norwell MA: Kluwer Academic Publishers.

Steckler, E., & Torbert, W. (2010). Developing the 'Developmental Action Inquiry' approach to teaching and action researching: Through integral first-, second-, and third-person methods in education. In S. Esbjorn-Hargens et al (Ed.s) *Integral Education*. Albany NY: SUNY Press. 105-126.

Torbert, W. (1972). *Learning from experience: Toward consciousness.* Columbia University Press, NY.

Torbert, W. (1976). *Creating a community of inquiry: Conflict, collaboration, transformation*. Wiley, London.

Torbert, W. (1987). *Managing the corporate dream: Restructuring for long-term success*. Dow Jones-Irwin, Homewood, ll.

Torbert, W. (1991). *The power of balance: Transforming self, society, and scientific inquiry*, Sage, Newbury Park, CA.

Torbert, W. (1994). Cultivating post-formal development: higher stages and contrasting interventions. In M. Miller, et al. (Ed.s) *Transcendence and mature thought in adulthood*. Lanham MD: Rowman & Littlefield. 181-204.

Torbert, W. (2000a). A developmental approach to social science: Integrating first-, second-, and third-person research/practice through single-, double-, and triple-loop feedback. *Journal of Adult Development*. 7 (4) 255-268.

Torbert, W. (2000b). The challenge of creating a community of inquiry among scholar-consultants critiquing one another's theories-in-practice. In Sherman, F. & Torbert, W. (Ed.s). *Transforming social inquiry, transforming social action: New paradigms for crossing the theory/practice divide*. Norwell MA: Kluwer Academic Publishers. 161-188.

Torbert, W. (2013). Listening into the dark: An essay testing the validity and efficacy of Collaborative Developmental Action Inquiry for describing and encouraging the transformation of self, society, and scientific inquiry. *Integral Review*. 2013, 9(2), 264-299.

Torbert, W. (2017). The pragmatic impact win leaders and organizations of interventions based on the Collaborative Developmental Action Inquiry approach. *Integral Leadership Review*. November.

Torbert, W. (2019). Brief comparison of five developmental measures: the GLP, the LDP, the MAP, the SOI, and the WUSCT. White paper, available via www.gla.global

Torbert, W. and Fisher, D. (1992). Autobiography as a catalyst for managerial and organizational development, *Management Education and Development Journal,* 23, 184-198.

Torbert, B., Cook-Greuter & Associates. (2004). *Action inquiry: The secret of timely and transformational leadership*. Berrett-Koehler: San Francisco.

Torbert, W. & Herdman-Barker, E. (2022). *A response to Dave Snowden's Critique of 'Vertical' Adult Development Theory*. London: Global Leadership Associates Press.

Westenberg, M., Blasi, A. & Cohn, L. (1998). *Personality development: Theoretical, empirical and clinical investigations of Loevingeer's conception of ego development.* Mahwah NJ: Erlbaum.

Wallis, N. (2014). Insights from intersections: Using the Leadership Development. Framework to explore emergent knowledge domains shared by individual and collective leader development. In Scala, K., Grossman, R., Lenglachner, M., and Mayer, K. (Eds.), *Leadership learning for the future - A volume in Research in Management Education and Development*. Information Age. Publishing, New York. 185-201.

Wilber, K. (2000). *Integral psychology*. Shambhala: Boston.

Authors:

William R. Torbert, Professor Emeritus, Boston College ©2024 Founding Board, Global Leadership Associates with Elaine Herdman Barker and Jonathan Frank of GLA, as well as Professors Reut Livne Tarandach, Manhattan College and Kirill Veselkov, Intelligify Ltd UK

©2024