On the unity of behavioural and developmental perspectives in coaching A view from the Constructive Developmental Framework Otto Laske

The Constructive Developmental Framework (CDF) is a psychometric tool for coaching research, coaching practice, and more broadly for managing human capital. CDF assesses clients' present frame of reference (world view) from the double perspective of two strands of adult development: cognitive and socialemotional development. It scrutinizes, in addition, clients' psychological balance at work from within a Freudian framework. By bringing together developmental and behavioural findings, the CDF user obtains empirical evidence needed for defining effective and realistic coaching plans.

CDF is also a solid foundation for educating evidence-based coaches and establishing entire organizational coaching programs. The extension of CDF to corporate uses is straightforward. When aggregated over a larger number of individuals, CDF data can be used to define strategies for developing human resources, in particular recruitment, placement, leadership development coaching, executive development, succession planning, and other purposes.

CDF is based on the constructivist paradigm followed by research in adult development over the life span since Piaget. The paradigm says that coaches and their clients alike construct reality according to their present developmental level. As a consequence, human behaviour appears as an epi-phenomenon of the presently held developmental level. Doing follows being.

Historically considered, CDF synthesizes five different strands of developmental research since the 1950s: (1) research into social-emotional development (Kegan, 1982; 1994; Lahey, 1988; Laske, 1999a, 2006a; Loevinger, 1976), (2) the structure of dialectical thinking (Laske, 1966; Adorno, 1999; Bhaskar, 1993), (3) the development of dialectical thinking and reflective judgment over the lifespan (Basseches, 1984, 1989a-b; King and Kitchener, 1994; Laske 1999a), (4) psychodynamic foundations of work behaviour (Murray, 1938, 1948; Aderman, 1967, 1969), and (5) the cognitive-developmental structure of organizational roles (Jaques, 1994, 1998).

This article details CDF as a system comprising three dimensions referred to as CD (cognitive development), ED (social-emotional development), and NP (Need/Press or psychological balance), respectively. The latter dimension is interpreted based on the two former ones, meaning that the same behaviour has different meanings at different developmental levels.

The article comprises four sections, a summary, and references. Section I describes the theoretical model CDF is based on. Section II details the three dimensions of CDF: cognitive, social-emotional, and behavioural. Sections III discusses evidence-based mentoring, while Section IV focuses on the unity of behavioural and developmental perspectives in coaching research and practice.

Keywords: adult development, developmental coaching, dialectical thinking, frame of reference, process consultation, psychometrics.

Section I: Theoretical model *Central idea*

The central idea of CDF is that the way in which people make meaning and sense of the real world unceasingly and dramatically changes over their life span. An associated notion is that people's behaviour, goal-setting and actions reflect these changes. Individuals' consciousness is conceived as an organized transformational system in which three different dimensions constitute each other:

- a social-emotional dimension;
- a cognitive dimension;
- a clinical-behavioural dimension.

Each of these has a different degree of cohesion and complexity. The art of using CDF lies in providing a synthesis of these dimensions in feedback to individuals and teams. Behaviour is seen through developmental eyes, not acted upon *per se.* Behavioural data are only snapshots, while developmental data are across-time, longitudinal data representing a vertical dimension that intersects with the behavioural horizontal.

In terms of pedagogy, mastering CDF entails acquiring expertise in using three separate assessment tools:

- Lahey et al.'s subject-object interview (1988; refined in Laske, 2006a)
- Laske's professional agenda interview (1999a; modified from Basseches's educational interview, 1984)
- Aderman's 'Need/Press' questionnaire (1967; derived from Murray, 1938, 1948).

The seminal role of J. Piaget

CDF synthesizes important developmental findings of the second half of the 20th century. As inaugurator of its research base, J. Piaget stands out.

A central notion of Piaget's research is that human development manifests in the degree to which an individual can take an 'objective' view of herself and the world, rather than remaining subject to her needs and desires. In studies of children and adolescents, Piaget showed that *ego-centricity* gradually diminishes over the human life span, along with the progressive advancement of formal logical thinking. This process equally unfolds in the social-emotional dimension of human development, where it can be described in terms of 'levels'. Each level is defined by a specific relation between what one is subject to (cannot control) and can reflect upon (and thus make an object of). *The larger one's object, the lower is one's egocentricity, both cognitively and social-emotionally.*

In terms of CDF, loss of ego-centricity manifests in three different but related domains: *cognitive development* (CD), social*emotional development* (ED), and *psychological balance*. The latter is measured in terms of an individual's psycho-genic needs vs. two kinds of pressure, *ideal press* (Super-Ego), and actual press (social world). The behavioural dimension is referred to 'Need/Press' (NP), where 'need' stands for 'psychogenic need' and 'press' for internal and external pressure (Murray, 1938). The three CDF dimensions are associated with three fundamental questions asked by coaching clients:

- 1. CD: What can I know, and what can I do once I know?
- 2. ED: What should I do, and for whom?
- 3. NP: How am I doing?

Findings from CDF assessments give insight into how an individual answers these three questions on a daily basis. Such findings are of great benefit in coaching, psychotherapy, and Human Resources in which these questions are typically raised.

The tripartite nature of CDF assessments

As indicated, CDF addresses three components of human behaviour. Fig. 1, below, shows how they relate to each other.

Ego is in charge of behaviour. It is itself in unceasing transformation based on its roots in the social-emotional and cognitive self. There is no way one could separate the three components from each other in actual life and work except conceptually.

Following H. Murray's psychoanalytic research (1938, 1948), the Ego is defined by its psychogenic needs and the pressures that stand against their fulfilment. Two kinds of pressures exist:

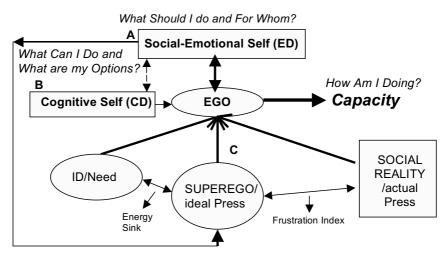


Figure 1: Inter-relationship between CDF components.

- The individual's *aspirations* deriving from the Superego (which may contradict the needs) ideal press.
- The individual's *experiences* of social reality 'actual press'.

The task of the Ego is to establish a modus vivendi between the Need and Press dimensions of an individual. Most likely, gaps will exist in the individual's makeup, not only between needs and aspirations, but also between the two kinds of press (aspirations and social experiences). The first gap [between needs and aspirations] saps energy away from actual work, and, therefore, is referred to as *energy sink*. The second gap [between ideal and actual press] causes frustration, and is measured by a frustration index (Aderman et al., 1967, Aderman, 1969). These two indexes determine the individual's psychological balance at work, that is, the degree to which an individual can actually make optimal use of his or her competences and knowledge, in contrast to just 'having' them.

Since, as shown, Ego is a satellite of the individual's social-emotional and cognitive self (which are themselves constitutive of each other), the way Ego resolves conflict

within itself, its needs, and its needs vs. presses, is dependent upon the level of an individual's social-emotional and cognitive development. If a client is found to have a time management problem, this behavioural symptom has different meanings on different social-emotional levels and in different phases of cognitive development. Interventions also need to be different. We can speak of a *pre-adult legacy* adults carry around with them which, depending on their developmental potential, may be more or less of an obstacle in their life and work. No cognitive-behavioural coaching can talk adults out of that legacy.

More specifically, psychological balance in the workplace is considered optimal in CDF if an individual's NP profile, measured by a Likert scale from 0 to 9, shows no extreme (dysfunctional) needs and consequently a low *Energy Sink* and *Frustration Index*. In scoring the NP questionnaire, this situation is indicated by a high *Effectiveness Index*.

Since in CDF, an individual's need/press profile is interpreted in terms of developmental findings, those consulting to an individual's mental process can give precise answers regarding strength and challenges of the individual's present performance. As developmental thinkers, they can also explain <u>why</u> present performance is what it is, no more and no less, and what the psychological cost to the individual is being stationed at a particular work place.

CDF articulates a theory of work

The cogency of CDF for scrutinizing an individual's work capability lies in the fact that CDF assessments are based on a theory of work introduced by Elliott Jaques since 1955. In his life-long research on the cognitivedevelopmental foundations of organizations, Jaques made two important distinctions central to CDF, those between:

- *applied and potential capability;*
- work capacity and work capability.

The first distinction essentially distinguishes *performance* (applied capability) from *develop-mental potential* (potential capability), whether current or emergent. The second distinction reinforces the difference between behavioural and developmental aspects of work, referred to as *work capacity* (measured through NP) and *work capability* (measured through CD and ED), respectively.

The gist of these distinctions is simple: an individual cannot be reduced to his or her performance since this performance is ultimately grounded in the individual's potential capability (which is developmental). Losing sight of an individual's developmental potential – especially in coaching – ultimately reduces the effectiveness of coaching or other interventions. Another aspect of these distinctions is methodological. One can take a snapshot of behaviour, observing it *in time*, but only looking at behaviour *across-time*, or developmentally, can give a true measure of it for purposes of intervention.

Jaques assigned very clear definitions to both distinctions, above, which are shown in Figure 2. (The functional notation used serves to make Jaques's definitions more compact). First, he defined work as the *exercise of reflective judgment and discretion in the pursuit of goals within a certain time period.* This is a <u>cognitive</u> definition of work which makes levels of work capability commensurate with levels of accountability for work. Second, Jaques showed that there is a difference between what an individual *has* and *is*. The individual is <u>not</u> his or her performance. Rather, the individual is defined by his or her potential capability. While one can always suspend – or decide not to use – what one has, or one's applied capability, one can never suspend or disown what one is, or one's potential capability. (Clearly, this runs counter to behavioural coaching.)

Figure 2, below, should be read with these clarifications in mind.

As shown, levels of cognitive development (CD) are central for gauging as well as assisting an individual's work capability, as done in coaching. This is because cognitive development determines the mental space in which an individual's work happens.

According to Figure 2, applied capability (performance) represents the mere surface of an individual's work capability. In functional terms, it is defined by the intersection of four aspects:

- level of cognitive development [CD];
- 'interest in the work' (motivation) [I];
- skills and knowledge [S/K];
- absence of clinical symptoms (-T; negative aspects of 'temperament).

Behavioural coaching is only concerned with applied capability. It works with mere snapshots of behaviour, and thus misses out on acknowledging, measuring, and boosting potential capability which is developmental.

What, then, is potential capability, and what is required to address it in coaching?

As Jaques puts it (1994, p.21):

There exists substantial confusion on the subject of individual working capability, because of the common failure to separate out three main categories of human capability: <u>current</u> applied capability, <u>current</u> potential capability, and <u>future</u> potential capability ... The difference between applied and potential capability [lies in that the latter is] an innate property of *the person as a whole*,

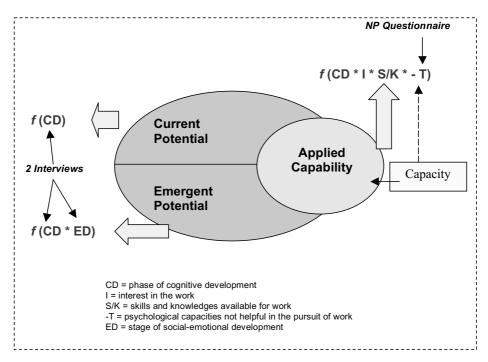


Figure 2: Three aspects of work capability.

whereas a person's values and skilled knowledge are entities that have their own existence in their own right independently of any particular person, and which a person can acquire or shed. An additional aspect should be considered (Jaques, 1994, pp.21-22):

Applied capability will always be lower than potential capability, partly because our values and skilled knowledge are not often just in line with the roles we have the opportunity to occupy at any given time, and partly because the work as assigned by the manager into the role may not provide the opportunity to apply our full potential.

Following Jaques's definition of work and work capability, CDF defines the two aspects of potential capability – current and future [emergent] – as shown in Figure 2:

1. Current potential capability regards what a person *could presently do* if s(he) had achieved the level of cognitive development required for doing the work in question. For this reason, Jaques defines current potential capability by level of cognitive development <u>alone</u> (CPC=CD).

2. Emergent potential capability regards what a person *will be able to do at a particular point in the future.* However, this should not be mistaken to mean that potential capability itself lies 'in the future.' Rather, both current potential and applied capability are manifestations of emergent potential capability. For this reason, CDF defines emergent potential as the functional intersection of both cognitive (CD) and social-emotional development (ED), as shown above.

The second point is of particular relevance for work with CDF. As Jaques says (1998, pp.22–23):

Current potential capability, i.e. the highest level of work a person could currently carry, in work that he or she

valued and for which he or she had the necessary skilled knowledge and experience, is a function of complexity of mental process (CMP) *alone*.

Future potential is the potential capability a person will possess at various times in the future as a result of the maturation of his or her level of complexity of mental processing (potential). There is a fundamental difference between a person's potential capability on the one hand, and values (interest/commitment) and skilled knowledge on the other.

Thus, if we can measure both cognitive (CD) and social-emotional development (ED), we can define a person's *emergent capability*. This aspect of capability, while still emerging, is the root of a client's present applied and current potential capability.

Emergent potential is dependent on the relationship that exists between a client's cognitive and social-emotional development. This relationship is a vital topic in CDF. In most cases, the finding is that the two aspects of adult development are not aligned in a client but show a gap in either direction. Either cognitive development surpasses social-emotional development or vice versa. In my experience with CDF, this is a major cause of issues arising in coaching. This issue is exacerbated if the client's work environment is not requisitely organized, the client having been assigned to a level of work complexity s(he) cannot truly do justice to.

In light of Figure 2, one can usefully distinguish five (non-exclusive) types of coaching:

- 1. coaching for capacity (psychological balance).
- 2. coaching for applied capability (performance).
- 3. coaching for current potential (cognitive level).
- 4. coaching for emergent potential (cognitive and social-emotional levels).
- 5. behavioural-developmental coaching comprising all of these aspects.

The first two types of coaching are behavioural, the remaining three are developmental to different degrees. The fifth type, in particular, is a complete merger of behavioural and developmental coaching, as advocated in this article.

In the same perspective, typical coaching issues may be classified as follows.

A client may present with:

- a lack of psychological balance (capacity) either because s(he) labours under large *energy sinks* (gaps between subconscious needs and professional aspirations) or under a large frustration index (gaps between professional aspirations and experience of organizational culture);
- 2. a gap between her level of cognitive and social-emotional development;
- 3. [as a consequence of nos. 1 and 2] a low *effectiveness index* depressing level of performance;
- 4. a social-emotional *arrest* at a particular level of meaning making;
- 5. a cognitive *arrest* in a particular phase of cognitive development (sense making);
- 6. a social-emotional *delay* in developing self-authoring capability;
- 7. a cognitive *delay* in developing the ability of systemic, dialectical thinking.

With CDF, all of these eventualities can be diagnosed, and interventions for dealing with them can be designed.

Jaques's distinctions between aspects of work capability ought to concern not only organizational coaches. Since 'work'. following Jaques, is any exercise of judgment and discretion, even in 'private' life, his distinctions equally apply to life and business coaching. The only difference between 'life' and 'work' coaching is that much of the former regards the inner work an individual has to do to become a human being, while organizational work primarily regards the outer manifestations of work. How-ever, as every leadership development coach knows, in organizations, too, it is often the inner work that is primarily required, not the enhancement of level of performance.

Intermediate summary

So far, I have outlined how the dimensions taken into account by CDF cohere in terms of Jaques's theory of work and work capability. There is a complementary view one can take, in which CDF is a tool for assessing a client's present *Frame of Reference* (FoR). The FoR conceptualization of CDF emphasizes that human behaviour is an epiphenomenon since it derives from an underlying developmental structure.

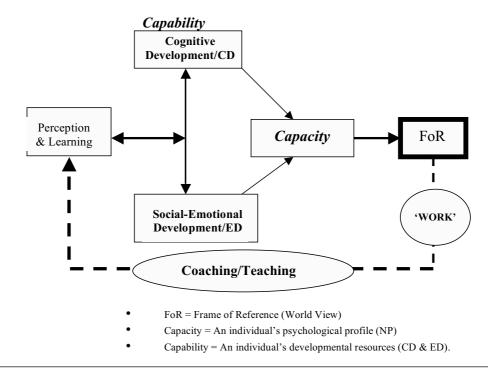
This is diagrammed in Figure 3, below.

The embedding of the feedback loop between Frame of Reference and 'Perception and Learning' in the figure is intentional. What is meant is that:

 Work is based on Frame of Reference, the way the individual constructs her world cognitively and social-emotionally, – thus only *indirectly* on her competences and psychological balance (capacity).

- 2. Perception and learning cannot be equated with adult development but are rather determined by the latter.
- 3. Learning, as distinct from adult development, is open to coaching and teaching interventions to the extent that there exists a *developmental potential* that interventions can tap.
- 4. Learning and <u>change</u> of behaviour may or may not translate into an adult developmental <u>shift</u>; they may equally simply reinforce a present developmental state (including arrest and delay).
- 5. Work capacity acts as a *filter* that determines how far current potential can be known and emergent potential recognized by the individual.
- 6. Lack of psychological balance (capacity) may hinder potential from taking full effect, not only currently, but into the future (as far as emergent potential is concerned).

Figure 3: Origins of a person's Frame of Reference.



7. The identification of an individual's psychological profile with her developmental profile amounts to a reduction of developmental teleology to behavioural dynamics, something CDF is designed to avoid by clearly separating the two.

Pedagogical consequences

At the Interdevelopmental Institute (IDM), the conceptual framework defining CDF is not only used in process consultation, but also grounds instruction in developmental coaching. Teaching CDF is meant to foster a more reflective practice than strictly behavioural training in most cases allows for. Learning to master the assessment of three aspects of human capability becomes the crux of instruction and certification. Such learning requires 10 to 12 months of study. Certification is based on submitting an individual case study in which all three perspectives - the cognitive, social-emotional, and psychological one - are synthesized for the purpose of formulating feedback and designing a coaching plan for a specific individual based on feedback from the Director of Education.

In my experience, practicing CDF after completing a single case study does not stand on very solid ground. For this reason, *Programme 2* requires three additional case studies by which *Programme 1* knowledge can be deepened. *Programme 3* serves the purpose of completing a thesis in the area of coaching research using the CDF methodology.

Section II: Dimensions of the CDF Instrument

Any theoretical model is only as good as its implementation. Ample theory seeds ample practice. In practical terms, CDF comprises two semi-structured interviews, one cognitive and one social-emotional, plus a clinicalbehavioural questionnaire gauging a client's psychological balance at work.

The crucial link between these tools is the user who not only administers the interviews and questionnaire, but is responsible for interpreting CDF findings expertly and ethically, according to standards of interrater reliability. The coach/consultant is using herself as the instrument of qualitative research. S(he) needs to needs to master the art of separating interview *content* from *structure* (social-emotional stage and dialectical thought form, respectively). The extent to which a consultant is up to this task depends on her own developmental level which, far beyond mere skills, shapes her ability to act as an effective instrument of developmental research.

From the client's point of view, engaging with CDF involves signing an agreement of confidentiality and engaging with two onehour long developmental interviews and a 45-minute process of answering a questionnaire. In addition to these three hours, a fourth hour is required for feedback after which coaching proper can begin. In the assessment sequence, the cognitive interview comes first. This is meant to guarantee a neutral starting point as a basis for more intimate conversations as they typically arise in the social-emotional interview.

The difference between the two developmental interviews for the client is one of content, while for the coach it is one of methodology. Each interview requires a peculiar kind of listening. The cognitive interview requires a listening for dialectical thought forms, while the social-emotional interview requires a listening for the client's internal meaning making generator. In expert uses of CDF, and in coaching benefiting from education in CDF, these two modes of listening merge.

The first kind of listening focuses on the presence and absence of dialectical thought forms in specific text passages [see below], while the latter focuses on detecting from what developmental stage the client is speaking from. (As pointed out above, the classical case is two different levels around a centre of gravity, captured by an RCP.)

Three strands of cognitive development

The cognitive interview is a tool for placing a client into one of four orders of mental

complexity (Jaques, 1998, p.23, p.69), with emphasis on the transition from the second to the third one: *Common Sense, Understanding, Reason,* and *Practical Wisdom.*

These orders differ in attained level of systemic thinking, more precisely the degree to which purely logical thinking has become a tool for obtaining a holistic and balanced view of reality, referred to as *dialectical thinking*. Dialectical thinking is a discovery procedure adults use to think 'outside the box' of closed systems, thereby transcending formal logic (see Figure 4, below).

In the perspective of adult development, the last three of these orders emerge in the following way, grounded in a person's development of reflective judgment. Cognitive development comprises the gradual unfolding of three related dimensions of consciousness: epistemic, logical, and dialectical. The progression to higher epistemic positions increasingly strengthens awareness of the limits of knowing and the uncertainty of truth (King & Kitchener, 1994). This progression, in turn, underlies the growth of logical and dialectical thinking. It is linked to social-emotional development, in a way not yet completely understood.

Once logical thinking (second order) begins to develop from about age 10 onward, Common Sense is increasingly overtaken by logical thinking (Understanding) which, according to studies of Piaget and others, fully matures in early adulthood (about age 25). In this way, human beings move from the first to the second Order of Mental Complexity and beyond (see Table 1).

Importantly, in late adolescence (18 years f.) an individual's cognitive development undergoes momentous change (see Figure 4, below). We are witnessing an increasing overlap between the spurt toward fully mature *formal logical* thinking and the beginning of *dialectical* thinking (Commons et al., 1990; Kohlberg, 1990). This overlap accounts for the revolutionary changes of mind and their attendant mental confusion during this period of life.

One can think of the transition from formal logical to dialectical thinking as an *expansion of the conceptual field*, thus of the mental space in which 'thinking' and 'work' occur. This expansion manifests itself not only in the use of more highly abstract concepts, but expanded foresight (time horizon) as well as the use of thought patterns called *thought forms*.

Orders of Mental Complexity		Era of Cognitive Development	Focal Elements
Fourth Order	Universal order	Practical Wisdom	General principles and universals (Phronesis)
Third Order	Conceptual abstract order	Reason	Conceptual abstractions (systemic dialectical thinking)
Second Order	Symbolic verbal order	Understanding	Collections of intangible entities (formal logical thinking)
First Order	Pre-verbal and concrete verbal orders	Common Sense	Here-and-now tangible entities

Table 1: Four Orders of Mental Complexity.

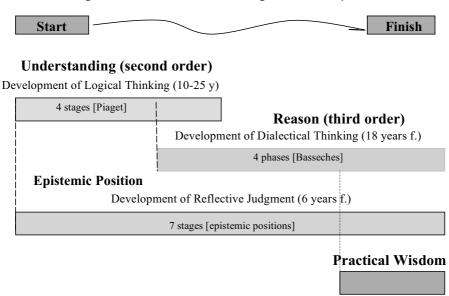


Figure 4: Four dimensions of cognitive development.

Increasing Patterning of Thought

In focus during the cognitive interview is the strength and ampleness of dialectical thinking as required for solving ill-structured problems. The unfolding of dialectical thinking from early to late adulthood is best understood in terms of an increasing coordination of the *Four Quadrants of Dialectic*.

Each quadrant focuses on a particular aspect of things real. As seen, the four quadrants together form a system, in the sense that they presuppose each other. In human thinking, the quadrants are represented as *four classes of thought forms* each of which points to different aspects of what is constructed by the mind as 'real'. In early adult development, the quadrants and their corresponding thought forms are not solidly assembled in the mind. Therefore, the four aspects of dialectic can not yet be co-ordinated with each other as is required for thinking of what is real as a *transformational system* (e.g. a beehive, the human body).

Just as each of the four quadrants are directed to a different aspect of what is constructed as 'real' by the mind, so are the classes of thought forms:

- *Process* thought forms point to emergence from the void and unceasing change as defining aspects of reality.
- *Context* thought forms focus attention on a 'bigger picture' or context of a base concept, and are used to grasp the nature of organized wholes.
- *Relationship* thought forms point to what different persons, events, situations, etc. share as their common ground, thus making them related to each other.
- *Transformational* thought forms are metasystemic. They point to the co-ordination of systems, the relevance of developmental potential for living systems, and the synthesis of multiple dimensions in viewing the world.

An interview passage that would be scored in terms of thought form no. 2 of class Process might read (Laske, 2008):

We are suffering from the problem that the previous solution has become the present problem. We thought we had found a solution to hiring staff of the highest quality, using stringent selection. But then it turned out that the entire reward system had to be revamped,

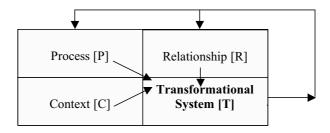


Figure 5: The Four Quadrants of Dialectic.

because the people we hired scoffed at the ranking they received in terms of compensation. So, we had to commit ourselves to new salary levels, because otherwise we would have lost a good deal of the people we hired. This is why we are now reconsidering to hire less qualified people in some positions, not to get into that kind of quandary. And so the cycle goes on, since who knows what kind of issues the job market will confront us with in the future.

Comment

The speaker directly goes to the gist of dialectical transformation by saying that 'the previous solution has become the present problem.' This does not only mean that the previous solution did not work, it implies something about solutions generally: that they tend to stop being solutions and pose a problem not initially foreseen. By putting it this way, the speaker implicitly endorses thought form no. 1 (unceasing change).

Continuing on, the speaker describes the solution adopted in more detail. The solution had an unforeseen consequence, in that "the entire reward system had to be revamped." This is the antithesis of the solution. The way the speaker describes the antithesis, it needs to be embraced to contain employee discontent, and this leads to a somewhat unwanted synthesis where his company has to commit itself to new salary levels. This cycle may continue.

Of the four classes of thought forms, Process and Relationship provide the ground for *critical* thinking, while Context and Relationship are the basis of constructive thinking. When evaluating cognitive interviews, emphasis falls on the balance or imbalance of the four classes of thought forms in a client's thinking, the client's ability to draw all thought form classes together for the sake of systemic thinking, and the discrepancy of critical and constructive thinking in the client. Through these measures, the client's phase of cognitive development – or order of mental complexity – is determined. *The notion is that the more imbalanced the use of the four thought form classes, the less systemic is the client's thinking at work, and, therefore, her actions.*

The interviewer uses her own dialectical thinking (as far as developed) to probe for the occurrence of thought forms, at times using them as mind openers to challenge the client's thinking. This is a technique also used in cognitive coaching to broaden the client's conceptual field.

The Three Houses Structure the Cognitive Interview

Since the purpose of cognitive interviewing is to give clients feedback on their thinking, it is important to provide for them opportunities for talking about what they best: their own work. Therefore, In terms of content, the interview moves through three mental spaces, called *Houses*. Typically, a cognitive interviewer spends about 15 to 18 minutes in each of the Houses shown in Figure 6.

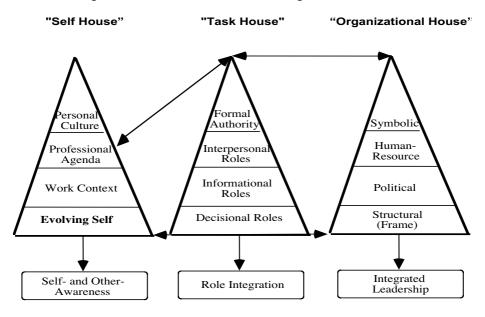


Figure 6: The Three Houses of the Cognitive Interview.

Individually, the Houses are referred to as *Self House, Task House,* and *Organizational House,* respectively. Their structure derives from different, but related, theories – the first from Haber's theory of supervision (1996), the second from Mintzberg's theory of organisational structure (1989), and the third from Bolman and Deal's systemic view of organizations (1991).

In the context of the Houses, the interviewer functions as a neutral observer of the client's 'movements-in-thought' in and between the Houses (Laske, 1999b). Each of the 'floors' of the Houses provides the interviewer with pertinent questions based on which the client's ability to use dialectical thought forms can be gauged. Typically, the interviewer starts in the emotionally neutral Task House - where functions, roles, and tasks are topical - and proceeds to the Organizational House where four different, inter-related, mental frames through which to view organizations, are in focus (Bolman & Deal, 1991). The interview concludes in the Self House where the client's professional agenda, work context, and personal values are central.

There is no privileged alignment between the Houses and the four classes of thought forms.

In the interview, a distinction is made between two kinds of questions:

- Guide questions for each House.
- Probe questions for 'digging deeper' into the client's thinking within each House.

The three guide questions are:

- 1. What is your present function and authority in the organization, and what roles and tasks follow from these?
- 2. How would you describe the way in which your work is embedded in the larger organization?
- 3. What would you say is your own professional agenda, and what motivation let's you do this work?

The 'floors' of the Houses (Figure 6) are primarily of interest to the interviewer who uses them to generate *probe questions* as a function of the flow of the ongoing conversation. Here, as in the social-emotional interview, staying close to the client's *train of thought* is crucially important. Once interviews have been recorded and transcribed, they are evaluated based on the *Dialectical Thought Form Framework* (DTF, Laske in press) initially developed by Basseches (1984) and put into the form of a scoring manual by Bopp (1981).

In accordance with the four quadrants of dialectic, thought forms of each class occurring in client speech are weighted in terms of degree of explicitness, from 'weak' (1) to 'strong' (3), as well as frequency of occurrence. Weightings are summarized at the end of the scoring process, and expressed in terms of percentages of the optimum attainable dialectical fluidity. (Optimum fluidity is defined as using 28 thought forms at level 3 of explicitness, thus 28x3=84=100 per cent).

A cognitive score example, viewed from an organizational perspective

The cognitive score below indicates that the client has made use of dialectical thought forms of Process (P), Context (C), Relationship (R) and Transformational System (T) to different degrees. Optimal use of all thought forms leads to a T-score (Systems Thinking Index of 100 per cent). Here, the client's coordination of thought forms in the four quadrants of dialectic is uneven. Correspondingly, her *Systems Thinking Index* (T) is only 25 per cent.

[P=10, C=33, R=38; T=25 (%)].

The meaning of this outcome for designing a coaching plan needs further illumination.

Essentially, the score places the client on a particular level of cognitive development and the associated level of work complexity and accountability commensurate with the score. The client works from a System Thinking Index of 25 per cent of the optimum associated with a strong imbalance of the four quadrants and especially weak insight into the Process aspect of social reality.

Accordingly, as shown in Table 2 below (Basseches, 1984, 1989a-b; Jaques, 1998, 136; Laske, 1999, 2008), this client is presently positioned in the Second Order of Complexity (row 5) associated with the fifth epistemic position, and can do work on Stratum IV as long as his social-emotional score is at least S-4/3. Any coaching with the client ought to take the client's limit of dealing with cognitive complexity of work into account, independently of the hearsay about the client and his own utterances about himself. The imbalance shown by the cognitive score indicates a need for cognitive coaching.

In the table, levels of work complexity (Strata) are associated with different levels of cognitive and social-emotional development. The higher the level, the higher is the role accountability one can entrust to a particular individual. The more perfectly an individual's cognitive and social-emotional scores are aligned, the more 'requisite' is the organization of the individual's workplace (Jaques, 1998).

Should the client presently work on Stratum III [Unit Manager] rather than IV [General Manager], his talents are being wasted. Should he presently work at Stratrum V [VP], his cognitive capability and foresight are being overtaxed. In the present case, the client can be helped by cognitive coaching to facilitate better thinking.

The Social-Emotional Interview

Having given an example of how clients may answer the question 'What can I do?', below I explore an example of his/her answer to the question 'What should I do?' The socialemotional interview is a procedure for exploring answers to the question based on clients' present Centre of Gravity, by eliciting evidence about their 'feeling and thinking generator' (Lahey et al., 1988). As in the cognitive interview, this is done by scrutinizing speech. Thirty years of research have shown that this generator is subject to discontinuous change over the human lifespan, producing shadings of thought and feeling that can be precisely assessed by scoring semi-structured social-emotional interviews.

Systems Thinking Index (CD)	Associated Epistemic Position	Order of Mental Complexity	Strata* [Levels of Work Complexity and Associated Responsibility]	Social- Emotional Stage (ED)
> 60	7	3	VIII	5
> 50 <= 60	7	3	VII	5/4 – 5(4)
> 40 <= 50	6	3	VI	4(5) – 4/5
> 30 <= 40	6	3	V	4
> 20 <= 30	5	2	IV	4/3 - 4(3)
> 10 <= 20	5	2		3(4) - 3/4
<= 10	4	2	II	3
< 10	4	2		2/3 - 3(2)

Table 2: Alignment of levels of work complexity (Strata) with levels of cognitive and social-emotional development

* Typical organizational job titles are, from top to bottom: Board Member, CEO, EVP, VP, General Manager, Unit Manager, First Line Manager, Operator/Staff.

Importantly, nobody makes meaning from a single stage. Individuals are typically distributed over several stages in various proportions, three of them in the orthodox case. We all live at a central stage or *Centre of Gravity*. This stage is associated with more or less pronounced ways of meaning making at lower and higher stages. *The lower stage(s) signal(s) developmental risk (of regression), the higher ones, developmental potential.*

Interview procedure

One cannot interview social-emotionally until one has internalized the hierarchy of about 15 stages that characterize adults. The shadings between four main stages, S-2 to S-5, must be crystal-clear as to their intermediate levels. The listening required is intense as in cognitive interviews. We are dealing with a projective test in which the interviewee *projects herself* into one of 10 verbal prompts, shown in Table 3.

All prompts are asking the interviewee to visit his or her memory store and use free association, speaking freely about *what comes to mind* when s(he) remembers a certain life or professional situation. Prompts are selected exclusively by the <u>interviewee</u> who at any time can refuse to elaborate and choose another prompt. In most cases, no more than four or five prompts are used in an expertly guided interview. The prompts not only structure the overall course of the interview but the interviewer's finer probing as well. Based on the prompts, the interviewer tests his or her hypothesis as to the level of the client's present stage of meaning making. In this way, the interviewer is able to 'stand in the client's shoes'.

Interview Evaluation

The interview is recorded and transcribed for evaluation. The focus of scoring it is threefold:

- 1. The client's present *Centre of Gravity* ('main stage').
- 2. The *range of stages* the client is distributed over.
- 3. The proportion of developmental risk and potential, indicated by the client's meaning making at stages lower and higher than the Centre of Gravity.

Table 3: Interview prompts in the social-emotional interview(adapted from Lahey et al., 1988, 428).

Success:	Can you think of a time in your recent work where you felt somewhat jubilant, feeling you had achieved something that was difficult for you, or that you had overcome something?
Changed:	If you think of how you have changed over the last year or two, or even months, regarding how you conduct your life, what comes to mind?
Control:	Can you think of a moment where you became highly aware that you were losing control, or felt the opportunity of seizing control, what occurs to you?
Limits:	If you think of where you are aware of limits, either in your life and/or work, something you wish you could do but feel excluded from, what comes up for you?
Outside of:	As you look around in the workplace or the family, where do you see yourself as not fitting in, being an outsider, and how does that make you feel?
Frustration:	If you think of a time where you were in a situation not of your choosing, where you felt totally frustrated, but unable to do something about it, what emerges?
Important to me:	If I were to ask you 'what do you care about most deeply,' 'what matters most,' are there one or two things that come to mind?
Sharing:	If you think about your need of sharing your thoughts and feelings with others, either at work or at home, how, would you say, that plays out?
Strong stand/ conviction:	If you were to think of times where you had to take a stand, and be true to your convictions, what comes to mind?
Taking risks:	When thinking of recent situations where you felt you were taking, or had to take, risks, either to accomplish or fend off something, what comes to mind?

Transition from one main stage to the next is indicated in terms of intermediate levels (Kegan, 1982) notated as x(y), x/y, y/x, and y(x). Figure 7 shows the steps for the case that x=3 and y =4.

A first shy step [3(4)] away from stage 3 leads into a zone of conflict because two developmental structures – L-3 and L-4 – simultaneously determine meaning making. In 3/4, conflicts are resolved toward the lower stage (3), while in 4/3 they are resolved toward the higher stage. The real break-through to stage 4 happens at 4/3. The next step leads to an espousal stage [4(3)] where the individual 'espouses' the higher level without having reached it. Only then the final move to stage 4 happens where pretensions of self authoring become unnecessary. Typically, an interviewee is distributed over three adjacent stages, here indicated as L, L-1 or -2, and L+1 or +2. By selecting appropriate, i.e., structurally relevant, interview passages these oscillations around a centre can be precisely assessed, and a sum of instantiations of each stage occupied can be computed (Lahey et al., 1988; Laske, 1999a, 2006). The result is a stage score associated with a *Risk-Clarity-Potential Index* (RCP) that captures not only the Centre of Gravity but the oscillations around it in terms of numerical proportions.

For example, the social-emotional score L-4(3) {R=4 C=7 P=2} shows a client distributed over 3 stages, in different proportions:

• Four interview passages at the lower stage, L-4/3, indicating developmental risk.

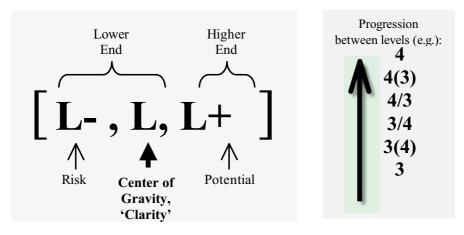


Figure 7: The Risk-Clarity-Potential Index (RCP).

- Seven interview passages at the Centre of Gravity, L-4(3).
- Two interview passages at the higher stage, L-4, indicating developmental potential.

In this example, 13 (4+7+2) interview passages have been scored as structurally

relevant. Since the client is operating from a lower stage (L-4/3) twice as often as from a higher stage (L-4), one says that the client's developmental Potential is smaller than her present developmental Risk (P<R).

The score just discussed compactly describes the interviewee as follows:

The client's present meaning making is focused around the espousal of being a self-authoring person, which is both a pretence and a way for the client 'to talk herself into' being the author of her life. As her RCP shows, she is rather strongly ensconced in her present centre of gravity $\{7\}$. Given that her developmental profile is more highly weighted toward risk than potential $\{4>2\}$, coaching should be focused on diminishing her developmental risk rather than boosting her potential (which is likely to get realized once risk diminishes, at least in the case of a sufficiently commensurate cognitive score.).

In the sense of Table 2, above:

Systems Thinking Index (CD)	Associated Epistemic Position	Order of Mental Complexity	Strata* [Levels of Work Complexity and Associated Responsibility]	Social-Emotional Stage (ED)
> 20 <= 30	5	2	IV	4/3 - 4(3)

a commensurate cognitive score for this client is a Systems Thinking Index between 20 and 30. Discussing a mentoring example will further clarify what was said about cognitive and social-emotional assessment above.

Section III: Mentoring Behavioural Coaches using CDF

There are two main uses of CDF outside of instruction and capability management consultation, namely, *mentoring* and *coaching*. *Mentoring* entails teaching behavioural coaches to think developmentally in a handson fashion, outside of classes of instruction. *Coaching* entails using assessments to support clients' self positioning, and occurs in three steps:

- Making a behavioural-developmental assessment.
- Giving feedback in preparation of a coaching plan.
- Engaging in coaching proper (which therefore is evidence-based).

Below, I discuss a mentoring experience involving a behavioural coach as client and a developmental coach (myself). The mentoring relies not only on developmental assessment, but also makes use of findings from the behavioural Need-Press Questionnaire, introduced below.

The Need-Press Questionnaire

While the two developmental interviews discussed above lay bare a client's potential capability, her applied capability (performance) is still shrouded in darkness. The missing information is exactly what M. Aderman's Need/Press Questionnaire (1967) provides.

Culled from Murray's research (1938, 1948) by M. Aderman (1967, 1969), the questionnaire informs about a client's psychological balance in the workplace. As shown in Figure 1, above, the balance is specified in terms of three clusters of variables:

- Need (Id);
- Ideal Press (Super-Ego aspirations);
- Actual Press (social world/organizational pressures).

Gaps between the first two are *energy sinks*, gaps between the second and third cause *frustration*. Below, I discuss the example of a business coach called Sarah.

A Mentoring Example

Presenting Problem:

Sarah is a business coach with a thriving practice in which she focuses on higher-level executives of the banking industry. She has a strong background in Organizational Development as well as strong spiritual interests. Sarah asked to be mentored in order to become more effective with two particularly 'difficult' clients. One of them had conveyed to her that he felt she was, at times, 'pretty opinionated,' while Sarah perceived herself only as having strong personal convictions. The second client commented about her to peers that because of her idiosyncratic interpretations of what he brought to sessions he often did not feel 'understood' by her. Since Sarah has high opinions of her coaching expertise, and high standards of professional excellence, she was scandalized and shaken by her clients' reactions. She wondered whether there was something about herself that she did not entirely understand, some bottlenecks that it would be important for her to find out about.

Sarah wanted to be mentored by a developmental coach, beginning with her own assessment and proceeding to obtaining an assessment of one of her clients so that she could learn to give developmental feedback. I first assessed Sarah and then, after feedback to her, her client. In a shared session, we gave feedback to the client. Sarah felt that her own assessment experience had paved the way for her being able to better stand in her clients' shoes, even though she had not yet undergone IDM training. Here, I restrict myself to findings about Sarah herself. In order to simplify the discussion, I restrict it to the Need (Id) aspect of Sarah's questionnaire. Need/Press values derive from a Likertscale from 0 to 9 for altogether 18 variables. The variables are grouped in three groups of six, articulating three interrelated clusters:

- self conduct;
- approach to tasks;
- interpersonal perspective (emotional intelligence).

Table 4 below shows Sarah's Need-profile whose numerical findings have been verbalized. Nine of her 18 Need variables have been singled out since they show extreme values.

Short analysis of Sarah's profile

A developmental coach looks at these findings as *behavioural symptoms* requiring developmental explanation on one hand, and a developmentally sourced intervention, on the other. What do these findings mean *for a person with Sarah's developmental profile*? In the Need/Press domain as well as the developmental one, balance is of the essence. Wherever extreme needs appear as in Sarah's profile, they jeopardize her behavioural balance.

It is evident in Sarah's case that her need to self-protect (no. 6) and her limited understanding of her own motivation and impact on others (no. 7) will make many of her challenges invisible to her. Seeing her challenges with clarity is not helped either by her blurring of leadership skills and ego-needs (no. 2), and her need to win every battle and avoid negatives experiences (no. 3). All of these challenges are easily buried underneath an exaggerated need to help others which, in psycho-genic terms, is essentially a loud cry for help. Because Sarah models her clients according to her own developmental level (as all coaches by necessity do), she, the ruthless change agent (no. 1), has as little empathy for them as she has for herself. She therefore often comes across as aloof and undemonstrative, with a tendency to question others' motive much like her own (no. 9).

NP Variables	Behavioural Imbalances (Needs)	
Self Conduct		
1. Flexibility	Ruthless change agent	
2. Need for power	Blurring of leadership skills and ego-needs	
Task Approach		
3. Resourcefulness*	Need to win every battle; avoids negative experiences, impulsivity	
4. Endurance	Weak engagement with tasks not of her own making	
5. Quality of Planning	v of Planning Poor use of cognitive skills, priorities emerging from own interests	
6. Need to self-protect	Strong need to justify, be right, rationalize	
Emotional intelligence		
7. Empathy	Limited ability to empathize; limited understanding of own motivation and impact on others	
8. Helpfulness	Exaggerated need to 'help' (a hidden cry for help)	
9. Bias	Highly discriminative as to whom to relate to; questioning others' motives.	

Table 4: Sarah's psychogenic needs at work.

* Literally 'counter-action', or need to counter-act experienced pressures.

The above sketch of Sarah's (partial) applied-capability profile can best be understood and acted upon *professionally* if her developmental profile is equally taken into account. This profile defines who she 'is', her potential capability, not just what she 'has', a certain work capacity.

Sarah's challenges explained developmentally

Sarah's findings are all the more salient as she is a coach herself and in the business of assisting others. As seen in Table 5, below, her coaching work plays out in a socialemotional constellation laden with developmental risk and a cognitive profile characterized by a low Systems Thinking Index (STI=11 per cent). Her present ability to act as the author of her life (L-4) is compromised by great risk of regression to lower levels {9} and considerable espousal {4}.

When we rewrite her stage score to the stage <u>below</u> her present Centre of Gravity, namely L-4(3) [to take a different perspective at her profile] her risk predictably diminishes and her potential shoots up because we are now calibrating her profile equivalently from the <u>lower</u> level. In either case, Sarah finds herself in a developmental pickle not of her own making.

In the uncomfortable developmental position she is presently subject to, Sarah's psychogenic need constellation gets charged by additional conflict and frustration from the developmental side, especially since she is bent on being in control of herself as well as others (her 'helpfulness' notwithstanding) to assert her self-authoring. It is, therefore, understandable that she would be scandalized by insinuations that she is 'opinionated' regarding coaching clients, and to learn that she often comes across to them as distant and hard to follow. However, she has a strong potential for moving to a fully selfauthoring position within one to three years (or so), and also, that in her thinking, she is well equilibrated in focusing attention on Process, Context, and Relationship with nearly equal strength (Table 5, column 2).

What may hold Sarah back is her low cognitive ability to take a systemic view of things, including her own situation (STI=11 per cent). While she is capable of bringing to light what is conflicted, incomplete or 'absent' from actual situations (Process quadrant), and can also generally see the big picture of a situation (C quadrant) and what holds its component together (R quadrant), she cannot yet tie these different perspectives together, nor can she think abstractly beyond specific contexts.

As King and Kitchener would comment from an epistemic perspective (1994):

(Her) beliefs are justified within a particular context by means of the rules of inquiry for that context and by context-specific interpretations of evidence.

Social-emotional Score (ED) [most generic]	Cognitive Score (CD) [more highly individuated]	Capacity (NP) [unique to Sarah]
L-4 {9:7:4}	[34, 25, 30; 11 (%)];	Energy sink: moderate (30) Frustration: low (15)
Alternative notation: 4(3) {3:6:11}	Epistemic position=5 [Phase 2 of	Overall efficiency: close to low (38)
	dialectical thinking]	<i>Attunement:</i> good understanding of
		organizational functioning (29)
		<i>Distortion</i> of org. experiences: moderate (25)

Table 5: Sarah's behavioural-developmental profile.

Specific beliefs are ... balanced against other interpretations, which complicates (and sometimes delays) conclusions.

In short, Sarah's developmental profile shows a cognitive delay that has her procrastinate social-emotionally. This is further borne out when we look at her profile in terms of organizational Strata, as shown in Table 6.

By scrutinizing both social-emotional and cognitive scores and comparing them, we find that Sarah has largely remained an orthodox logical thinker in the second Order of Mental Complexity (Stratum IV) while having acquired the social-emotional status of a person at Stratum V corresponding to the third Order of Mental Complexity. She is more mature socialemotionally than cognitively, and this is the core of her mentoring issue. Under these circumstances, mentoring Sarah would best focus on her present thinking ability, in particular the way in which she makes sense of her work as selfauthoring without living up to the requirements of Stage 4.

Section IV: Contributions of CDF to Coaching Research and Practice The Developmental Stratification of the Social World

The three assessment perspectives I have outlined above are no mere technical expedients. They say something about the human condition as far as social science understands it today. The human condition is the same for coaches and their clients, and in both cases, the three perspectives cannot be separated. For the coach, the pragmatic question arises: *What does it mean to intervene in all three dimensions equally, with full knowledge of each,* to arrive at comprehensive insight into the client?

I propose to look at this matter in light of Bhaskar's discussion of the stratification of the social world which I interpret here in terms of constructive-developmental research (1993, p.267).

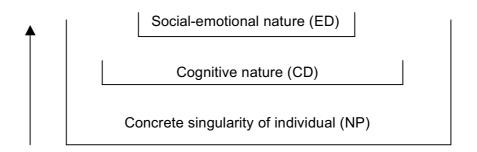
The diagram says that to do justice to the notion of 'human being', all three dimensions have to be addressed. As seen, the lowest one depicted is the behavioural one

Systems Thinking Index (CD)	Associated Epistemic Position	Order of Mental Complexity	Strata* [Levels of Work Complexity and Associated Responsibility]	Social- Emotional Stage (ED)
> 30 <= 40	6	3	V	4
> 20 <= 30	5	2	IV	4/3 - 4(3)
> 10 <= 20	5	2	III	3(4) - 3/4

Table 6: Sarah's CDF profile viewed in the context of organizational Strata.

* Epistemic position [5] corresponds to phase 2 of dialectical thinking where a thinker fails to co-ordinate thought forms, thus hindered from achieving a STI above 30.

Figure 8: The Concrete Singularity of the Human Agent.



(NP), while the upper two (ED and CD) are developmental and define the essential *humanity* of social beings. One cannot reduce 'human being' to the behavioural level without cutting it loose from its essential grounding, of being a transformational system unfolding over time.

In this regard, the stratification of the CDF findings is illuminating:

- The social-emotional score is the most generic one, since one and the same 'stage' can be shared by millions of people.
- The cognitive profile, although it can be shared with a few other individuals, more clearly addresses a specific individual.
- Most specific to a particular client or coach is the third (or Need/Press) score since it describes a singular individual.

The essential insight of CDF is that the three dimensions the scores describe are *constitutive of each other*. This means in practice that all three dimensions assessed by CDF together form the appropriate basis of interventions since a person's "concrete singularity" makes no sense at all without the developmental dimensions. In this sense, CDF is critical of the reductionism of social science, including coaching research.

The black hole of coaching

There is an additional factor that cuts down on the adequacy of contemporary coaching research and practice. I refer to this factor with O'Connor (2007) as *the black hole of coaching*. The black hole derives from two conflicting assumptions pervasively made by members of the 'coaching community':

- 1. Coach and client speak *the same language* since they are both defined by their shared human condition and culture. This is an assertion at the socialemotional level of other-dependence (Kegan's level 3).
- 2. As *professionals*, coaches are by definition acting from their own values and principles. This is an assertion of the social-emotional level of self-authoring (Kegan's level 4).

In the first assertion, it is omitted that the social world is stratified and the presumption of 'the same language' does not hold. In the second assertion, it is omitted that according to empirical research only about 25 per cent of adults reach the self-authoring level but certainly no more than 40 per cent of coaches do. In social emotional terms, therefore, the coaching community is in conflict at a level between 3 and 4, either L-3/4 or L-4/3. The result is espousal, borne out by the coaching literature (see also Kegan, 1994).

Limitations of present 'Coaching Research'

The black hole of coaching and the misconception of the concrete singularity of individuals together form a methodological syndrome that, in the perspective of CDF, hinders coaching research and practice from achieving real depth. In coaching research, this is shown by the absence of the following topics:

- The precise influence of social-emotional level of the coach on:
- 1. model (conception) of client;
- 2. quality of active listening;
- 3. quality of empathy;
- 4. ability of detachment from story of client.
- The precise influence of phase of cognitive development of the coach on:
- 1. coaching strategy;
- 2. ability to challenge client's thinking;
- use of thought forms in broadening client's conceptual field;
- 4. ability to reframe client perceptions, conceptions, and goals in harmony with client's level of cognitive development.
- The number of coaches in a group of 100 coaches that are acting from socialemotional level 4 rather than 3 in the sense of Kegan.
- The effectiveness of coaches in working with social-emotionally and/or cognitively more highly developed clients.
- The minimal social-emotional and cognitive preconditions of a coaching relationship.
- The highest possible social-emotional and cognitive level of development at which the activity of 'coaching' loses its raison d'etre for the coach.
- The way ethical dilemmas are handled by coaches at different social-emotional and cognitive levels of adult development.
- The precise influence of social-emotional and cognitive level of development of the coach as mentor of other coaches.
- Etc.

Summary

I have outlined a psychometric tool that methodologically asserts the unity of behavioural and developmental perspectives in coaching research and practice. Specifically, I have demonstrated in what way the three developmental dimensions CDF assesses define the human condition of both coaches and clients. I have discussed the theoretical underpinnings and practical applications of CDF, and have given examples of how the instrument is used, the mastery it requires of the coach, and the kinds of insight into the client it enables a consultant, mentor or coach to acquire.

My emphasis has been on the fact that CDF is a dialectical tool that implements scientific insights into the human condition. The dialectical notion of this condition is that the concrete singularity of individuals cannot be made sense on its own terms because that singularity is embedded in developmental transformations over the life span. If not acted upon in this light, individuals' potential capability is reduced to mere performance. This reduction represents a pact with the capitalistic social world in which it happens on a daily basis.

Correspondence

Otto Laske is the Founder and Director of the Interdevelopmental Institute (IDM) where he teaches and consults on the basis of CDF (www.interdevelopmentals.org). He is a clinical-developmental psychologist with roots in the Frankfurt School of Critical Theory as well as the Kohlberg School of research in adult development. Otto is also a composer and lyric poet, and has a legacy of writings in cognitive musicology, a discipline he founded in the 1970s. In the last 15 years, Otto has focused his insights on creating a theory of work and of process consultation based on developmental theory and dialectics.

He can be reached at: otto@interdevelopmentals.org.

References

- Aderman, M. & Hershneson, D.B (1967). Industrial Personnel Inventory. Chicago: Illinois Institute of Technology.
- Aderman, Morris (1969). Company Climate Inventory, Ideal Company Climate Inventory, and Industrial Personnel Inventory (revised). Chicago: Illinois Institute of Technology.
- Adorno, Th.W. (1999). *Negative dialectic*. New York: Continuum.
- Bhaskar, R. (1993). *Dialectic: The pulse of freedom.* London: Verso.
- Basseches, M. (1984). *Dialectical thinking and adult development*. Norwood, NJ: Ablex.
- Basseches, M. (1989a). The development of dialectical thinking. In E.P. Maimon, B.F. Nodine & F.W. O'Connor (Eds.), *Thinking, reasoning, and writing*. Westport, CT: Greenwood Publishing.
- Basseches, M. (1989b). Dialectical thinking as an organized whole: Comments on Irwin & Kramer. In M. Commons, C. Armon, L. Kohlberg, F.A. Richards, R.A. Grotzer & J.D. Sinnott (Eds.), *Adult Development, Vol. 1* (pp.161–178). New York: Praeger.
- Bolman, L.G. & T.E. Deal (1991). Reframing organizations. San Francisco: Jossey-Bass.
- Bopp, M. (1981). A coding manual for the dialectical schemata framework. Doctoral Dissertation, Cornell University.
- Berg, C.A. & R. J. Sternberg (2003). Multiple perspectives on the development of adult intelligence. In J. Demick & C. Andreoletti, *Handbook of adult development*. New York: Kluwer Academic/Plenum Publishers.
- Cavanaugh, J.C. & S.K. Whitbourne (2003). Research methods in adult development. In J. Demick and C. Andreoletti, *Handbook of adult development*. New York: Kluwer Academic/Plenum Publishers.
- Commons, M. et al. (1990). Adult development: Models and methods in the study of adolescent and adult thought (Vol. 2). New York: Praeger.
- Dawson, A. (2007). Yes, I can hear you now. IDM Newsletter, May.
- Gerson, M. (1969). Need-Press interaction as related to relevant industrial criteria. Doctoral dissertation. Chicago: Illinois Institute of Technology.
- Haber, R. (1996). Dimensions of psychotherapy supervision. New York: W.W. Norton.
- Hawkins, R. (1970). Need-Press interaction as related to managerial styles among executives. Doctoral dissertation. Chicago: Illinois Institute of Technology.
- Jaques, E. & K. Cason (1994). *Human capability*. Falls Church, VA: Cason Hall Publishers.
- Jaques (1998). *Requisite organization*. Falls Church, VA: Cason Hall Publishers.
- Kegan, R. (1982). *The evolving self.* Cambridge, MA: Harvard University Press.

- Kegan, R. (1994). In over our heads. Cambridge, MA: Harvard University Press.
- King, P.M. & K.S. Kitchener (1994). Developing reflective judgment. San Francisco: Jossey-Bass.
- Kohlberg, L. (1990). Which postformal levels are stages? In M. Commons et al., Adult development (Vol. 2): Models and methods in the study of adolescent and adult thought. New York: Praeger.
- Lahey, L. et al. (1988). A guide to the subject-object interview: Its administration and interpretation. Cambridge, MA.: Harvard University Graduate School of Education.
- Laske, O. (1966). Über die Dialektik Platos und des frühen Hegel. Dr. Phil. dissertation, Goethe University, Frankfurt-on-the-Main, Germany. Munich: Mikrokopie GmbH.
- Laske, O. (1999a). Transformative effects of coaching on executives' professional agenda. Doctoral dissertation (2 vols.), Massachusetts School of Professional Psychology, Boston, MA (Bell & Howell).
- Laske, O. (1999b). An integrated model of developmental coaching. Consulting Psychology Journal, 51(3), 139–159; reprinted in R. Kilburg & R. Diedrich (Eds.) (2007), The Wisdom of Coaching (Chapter 21), Washington, DC: APA Press.
- Laske, O. (2006a). Measuring hidden dimensions (Vol. 1). Medford, MA: IDM Press. www.interdevelopmentals.org/ publications-idm-press.php
- Laske, O. (2006b). From coach training to coach education. International. Journal of Coaching ご Mentoring, 4(1), 45–57.
- Laske, O. (2007). Contributions of evidence-based developmental coaching to coaching psychology and practice. *International Coaching Psychology Review*, 2(2), 91–101. London: Association for Coaching.
- Laske, O. (in press). Measuring hidden dimensions: The art and science of good thinking. Vol. 2. Medford, MA: IDM Press.
- Loevinger, J. (1976). Ego development: Conceptions and theories. San Francisco: Jossey-Bass.
- O'Connor, J. (2007). A tale of two books. IDM Newsletter, May.
- Mintzberg, H. (1989). *Mintzberg on management*. New York: The Free Press.
- Murray, H. (1938). *Explorations in personality*. New York: Oxford University Press.
- Murray, H. (1948). OSS Assessment of men: Selection of personnel for the Office of Strategic Service. New York: Rinehart.
- Stober, D. R. & Grant, A.M. (2006). Evidence-based coaching handbook. Hoboken, NJ: John Wiley & Sons.