

Running Head: Applying Bhaskar's Four Moments of Dialectic

**Applying Bhaskar's *Four Moments of Dialectic*
to Reshaping Cognitive Development as a Social Practice
using Laske's *Dialectical Thought Form Framework* (DTF)**

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Applying Bhaskar's Four Moments of Dialectic

Abstract

I am introducing into Dialectical Critical Realism a developmental, dialogical, and dialectical epistemology for enhancing adults' cognitive development toward dialectical thinking, a discipline presently absent from integral practice. I do so for the sake of solving real-world problems in a holistic and transformational manner with a high likelihood of success, as well as to support integral initiatives for absorbing Roy Bhaskar's legacy. Emphasis lies on dialectical thinking as a social practice learned by way of a validated dialogue method called the Case Study Cohort (CSC) method taught at the Interdevelopmental Institute (IDM, www.interdevelopmentals.org) since 2000. CSC combines adult-developmental with dialectical thinking and listening in real world situations. Through this pedagogical framework, students engage organizational clients as midwives of their own learning and development through coaching, psychotherapy, consulting, and facilitation of collaborative intelligence in teams. Specifically, the chapter's topic is how to develop a reflective dialectical practice in the sense of DTF, the Dialectical Thought Form Framework, by way of interview-based case studies accomplished as a member of an IDM study cohort. It is shown in what way collaboration in such a cohort lays the groundwork for becoming a critical facilitator either in an academic or organizational environment.

For Roy Bhaskar

1. Short definition of the Dialectical Thought Form Framework (DTF).

DTF delivers the framework for practicing a dialogical epistemology, both for establishing meta-theories and for solving practical problems. It provides links between *Dialectical Critical Realism* (DCR) and the language-suffused social world by way of conjointly supporting developmental and dialectical thinking. As a research instrument, DTF helps witness and discern how, and to what extent, the world's ontological structure (seen as grounded in Bhaskar's MELD) unfolds in an individual's mind and speech during a 1-hour semi-structured *cognitive* interview. The epistemology is based on the developmental assumption that human consciousness progresses toward dialectical thinking through four eras of cognitive development Bhaskar calls *Common Sense, Understanding, Reason, and Practical Wisdom*. Below, I show in detail how during the transition from Understanding to Reason consciousness encounters its own dialectic.

Insert Fig. 1 here

In terms of present scientific knowledge, the capability of entering into dialectic is rooted in the mind's bi-hemispheric constitution that delivers two very different, if not opposed, 'takes' on what for humans is 'real' in the world, an *experiential* and *re-presentational* one. The second mimics the first in categorical, abstract ways at the constant risk of getting stuck in a hall of mirrors we in our app-centered world are well acquainted with. Crossing over from Understanding to Reason poses the challenge not to mistake what is essentially an abstraction for the experience of the real world itself that the abstraction tries to replicate. Historically, this crossing--which occurs naturally, without warning--was first documented in the transition from Kant to Hegel in the quarter-century between 1781 to 1807, first in Kant's *Critique of Pure Reason*. According to developmental research done at the Harvard Kohlberg School from 1975 to 1995, the unfolding of the mind into dialectic begins ontogenetically in late adolescence and ends only with the end of individual life.

As an instrument of complex thought, DTF is a tool made for DCR to flourish. Pragmatically, it provides a bridge for human agency making an impact on the language-suffused social world through expert user's deep listening practice.

Insert Fig. 2 here

Pedagogically, DTF is employed by the instructor of study cohorts whose members interview others (clients) for the sake of scrutinizing the logical and dialectical thought-form structure of recorded dialogue. The interview is geared to focusing on clients' real-time thinking about

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organizational functions, professional agendas, role assignments, and team membership but could be focused on any topic whatsoever, including meta-theory. Administering and recording a semi-structured cognitive interview makes it possible to lay bare the dialectical structure of an interviewee's real-time utterances in interchange with a DTF-schooled interviewer.

DTF cognitive interviews are dialogues, not assessments. They follow the assumption that speech flow does not simply issue in describing but *creating* individuals' 'reality', and that it is straightforward to determine empirically differing degrees of clarity in which MELD manifests epistemologically in an individual mind's utterances. Although such an interview is co-created by both interviewer and interviewee (e.g., an executive), the resulting *cognitive profile* is considered as being that of the latter, something made possible by CSC interview evaluation.

In order to determine the degree of clarity of dialectical thinking in a client's speech empirically, a DTF expert collaborates with members of a study cohort whose task it is to scrutinize traces of MELD in spoken language based on text selections from recorded interviews. The entire cohort (including the instructor) evaluates ("scores") interview transcripts, aware of the transposition of a real-time into an ideal-time domain. Collaboration assures inter-rater reliability based on one can give valid feedback to clients over and above purposes of cognitive developmental research itself, either for purposes of psychotherapy, coaching, or consulting.

Specifically, in the DTF framework, evaluating cognitive interviews happens in terms of *four classes of thought forms*, referred to as CPRT (C=context; P=process; R=relationship; T=transformation). As shown below in greater detail, these classes instantiate and unfold Bhaskar's MELD (Laske, 2008). The evaluation yields empirical data useful in scaffolding the dialectic-thinking capabilities of an individual or team.

The above outline of DTF positions epistemology within ontology. It sees the thinker as part of the real world, not as a purveyor of it as in integral thinking. As shown below, dialectical thought forms as tools of epistemology are therefore not simply perspectives in the sense of logical thinking. Rather, they are *mind openers* that open gates to right-hemisphere vigilance surpassing left-hemisphere focused attention and stare (McGilchrist). Use of DTF is cogent only when referencing a real world 'pervaded by absences', that is, as being in constant transformation, as intimated by Bhaskar's UDR movement and Hegel's *Aufhebung*.

Following Piaget, in designing DTF I made the assumption that in speaking, humans reveal not only the *contents*, but the (dialectical) *structure*, of their movements-in-thought, in a way that refers to the MELD-structure of the real world. In this paper, I am detailing how specifically ontological MELD-structures show up in DTF-schooled listening to human speech. As shown in Fig. 2, below, a DTF listener-thinker builds rainbow bridges between complex thinking and the

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actual world to arrive at what is *real* in the sense of Bhaskar's design of dialectical critical realism. Below, I detail in what way M. Basseches' work, published in "Dialectical Thinking and Adult Development" 35 years ago, permitted me building a bridge between Bhaskar's ontology and dialectical epistemology in the sense of Hegel and Bhaskar himself.

In so doing, my emphasis will fall on my teaching practice with cohorts whose members, by scrutinizing a specific client's speech, "wake themselves up" to their own mind's dialectic (that heretofore they were unable to grasp). I will reflect on how and why such a cohort functions as a pedagogical context for developing within DCR a dialectical social practice of real-world interventions that are open to truth claims, not just problem solutions. I view a DTF case study as a template for in-depth work in the social sciences, practically as the beginning of integral collaborations poised to solve real-world problems.

In this way, I am linking what Cook-Greuter has called *construct awareness* to collaborative action but will use this term in a more strongly cognitive, rather than exclusively social-emotional way, as she does. I envision dialectical thinking as becoming the central practice of the integral community, to the extent that this community can actually shift from reductive logical thinking to the recognition of the mind as an integral component of the real world rather than as its quadrant- and lines-empowered surveyor.

2. Operationalizing Bhaskar's MELD based on Basseches' Dialectical Schema Framework.

Insert Fig. 2 here

As suggested by Fig. 2, the DTF builds bridges between DCR and the language-suffused world of society's organizations and their constitutive cohorts (teams). For this purpose, it comprises a social-emotional component following Kegan, a cognitive component following Basseches and Bhaskar, and a psychological component following Henry Murray. Its methodology is part of an inter-participatory framework by which to further adult mental growth at work and in life through dialog-based scaffolding rather than arm-chair philosophy.

Although the systemic connectedness of CDF's three components is the focus of IDM teaching and consulting, here I will restrict myself to the cognitive component of CDF, namely DTF. DTF was developed in 1999 in a thesis on developmental coaching that for the first time linked Bhaskar's MELD to Basseches' dialectical schemata framework.

Using DTF professionally requires mature dialectical thinking and the interview-schooled ability of developmental listening in real time. Its dialogue-propelled functioning derives from Basseches' work that focuses on interview dialogue. Basseches presents his findings in a way summarized by Fig. 3, below:

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Insert Fig. 3 here

For the purposes of his qualitative research, Basseches created a semi-structured interview as a protocol for dialoguing with staff and students of a US college about issues of education. His purpose was to answer the genuinely pioneering question “how does dialectical thinking develop over an individual’s life span?” Basseches asked this question based on the hypothesis that cognitively more highly developed individuals, represented by teaching staff, would show higher levels of dialectical thinking than students. He measured the developmental difference between faculty and students by way of a *fluidity index* indicating fluidity in the use of four classes of thought forms. He did not realize that Bhaskar would conceptualize these classes as building stones of DCR in 1993, thus that they constitute the epistemological shadow of Bhaskar’s *four moments of dialectic* as I showed in Laske 2008.

By evaluating recorded interviews Basseches found that one can speak of four *phases* (rather than stages) of dialectical-thinking development, where each phase is defined by a maximal fluidity index (phase 1 = <10, phase 2 = >10<30, phase 3 = >30<50, phase 4 = >50). Simplifying Basseches’ findings considerably, one can say that each phase of thinking-development toward dialectic is characterized by the emergence of one of Bhaskar’s four moments of dialectic, in the order of 1M, 2E, 3L, and 4D. The multitude of possible paths toward dialectic has never been ascertained empirically, but see first steps made toward that research goal in De Visch & Laske 2020, Section 7.

In DTF, MELD is epistemologically represented by four classes of dialectical thought forms called *schemata* by Basseches. The most advanced dialectical thought forms, called *transformational*, entail an understanding of negativity (Bhaskar’s ‘absence’) that fully emerges only in phase 4 of cognitive development. *Negativity* has to do with Bhaskar’s UDR movement and Hegel’s *Aufhebung* (lifting-up) both of which far transcend Wilber’s logicized “transcend and include” metaphor.

When viewing epistemology as embedded in ontology as done in DTF, one is set free to explore how MELD maps into spoken thought via concepts in real time in social dialogue but also written text. In actual usage, each MELD component, represented by a thought form class, serves as a tool to lay bare a speaker’s or writer’s category errors (such as, e.g., de-stratification when elaborating contexts or embeddedness when exploring processes). The assumption is that by highlighting and giving feedback on such errors to a client or team, s(he) can be helped to move from Bhaskar’s *actual* to the *real* world by strengthening internal dialogue with self.

When we put Basseches’ findings in a context familiar to readers of Bhaskar, we see that the four phases of dialectical-thinking development referred to in Fig. 3 differentiate the transition from Understanding to Reason. Pragmatically, they give rise to different forms of illuminative

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and remediatary commentary, whether exercised during real-time dialog (interviews) or in hermeneutic text analysis.

Insert Fig. 4 here (transforms)

Both the I- and R-transform utilizes Basseches' four classes of dialectical thought forms, referred to in DTF as C, P, R, and T, -- a representation of Bhaskar's MELD geared to exploring the dialectical structure of real-time dialog or written text (Context = M1; Process = 2E; Relationship = 3L; and Transformation = 4D).

Insert Fig. 5 here (moments of dialectic)

As Fig. 5 indicates, *transformational* thought forms (class T) reside on a meta-level relative to CPR thought forms. They are tools for remediation, not illumination, and thus complete the UDR movement by making the loop back from left- to right-hemisphere thinking ($Rh \rightarrow Lh \rightarrow Rh$). Their relationship to CPR thought forms is intrinsically dialectical in that transformational thought forms not only ground CPR but are also enabled by them. This is indicated in Fig. 5. In this figure, two sets of arrows are used to indicate the intrinsically dialectical relationship between CPR and T thought forms as much as possible in two dimensions.

While the external arrows indicate the grounding of CPR thought forms in transformational thought forms ($T > CPR$), the internal arrows indicate that transformational thought forms depend for their full realization on the coordination of CPR thought forms ($T < CPR$). We can speak of a snake biting its own tail. Transformational thought forms that are not strongly rooted in the coordination of CPR thought forms are considered as *hollow*, i.e., only *espoused*, as for instance when lip-serviced by purely logical thinking that tries to mimic Bhaskar's UDR movement without making Hegel's effort of the concept.

It is the task of DTF experts to discern, and then showcase, what thought forms are used by an interviewee (or speaker generally) in real time, or in the text of a writer. DTF experts do so by pointing to specific category errors, retroducting them where they occur. In each of the four classes of thought forms, a *specific* category error is paramount: de-stratification in C (1M), denial of negativity in P (2E), de-totalization in R (3L), and de-agentification in T (4D).

The Dialectical Thought Form Framework

Insert Fig. 6 here (Table of TFs)

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Fig. 6 shows a two-dimensional table of 28 DTF thought forms. Following Basseches' 1984 precedent, the number of thought forms in DTF is limited to a manageable size. Each of Bhaskar's moments of dialectic is associated with exactly 7 thought forms. All thought forms have integer names that signal the class of thought forms with which they are associated (P=#1-7; C=#8-14; R=#15-21; T=#22-28). DTF thought forms differ from Basseches' *schemata* only in appearance but not essence. In the listing shown, each thought form is accompanied by *contrasts*. Contrasts are alternative thought forms one needs to consider before assigning to an utterance or text a definitive score and weight. They thus point to alternative interpretations of a speaker's speech flow or written expression.

The underlying idea in DTF is that MELD components are expressed in speech or text in various forms and to different degrees of clarity of articulation. For this reason, their use is *weighted* from weak (1) to strong (3). Thought form weightings are summed over an *entire* interview (not locally), 3.0 being the maximal weight any of the DTF thought forms can assume across an interview. The weighting of individuals' thought form use in interviews is both an art and a science.

When we move from an argument- to a dialog-based epistemology as in DTF, the uses thought forms can be put to multiply. The five most important uses of DTF thought forms are the following:

1. Dialectical listening tools
2. Dialectical text analysis tools
3. Cognitive (interview) prompting tools
4. Mind opening (retroduction) tools
5. Mind-Truth expanding tools.

By using DTF thought forms as listening and assessment tools, an adult's *movements-in-thought*, articulated in an interview or written text, can be empirically assessed, both in terms of the DTF Fluidity Index and other cognitive indexes deriving from it (Frischherz, 2014a), as illustrated in Fig. 7, below.

Insert Fig. 7 here

In the *Cognitive Behavior Graph*, the flow of movements-in-thought is indicated by the transitions from one thought form to another in real time, while the result of text analysis of an

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interview is indicated underneath the graph in terms of four different cognitive scores on which feedback is given.

The most general finding regarding the phase of dialectical thinking an interviewee or author is presently in is the *fluidity index*. This index expresses the total weighting of thought forms used by an interviewee during a 1-hr semi-structured conversation (about any topic whatsoever). By contrast, the *cognitive score* expresses this finding in terms of the proportional weight of each thought form class used (i.e., moment of dialectic referred to). This score's 4th part (T), the *Systems Thinking Index*, indicates the client's *potential* for future growth into dialectical thinking. Finally, the *discrepancy index*, which distinguishes between *P/R-* and *C/T-related* thought forms, expresses the strength of an individual's *critical* (left-hemisphere) vs. *constructive* (right-hemisphere) thinking.

For further details on DTF see Laske 2008, including the extensive *Manual of Dialectical Thought Forms* included therein. For organizational applications of DTF see Laske 2015.

3. Finding Salient Epistemic Structures in Wilber's Work: Epistemic Limits of Integral Cohorts

From a DTF perspective, it is a fair assumption to make that both individuals and teams, depending on their social-emotional level of meaning making, are limited in their dialectical thinking capability. This has special relevance for present attempts to import integral themes and ideas into DCR in the absence of a focus on dialectical thinking -- a self-contradictory proposal.

Asking the question of which epistemic structures 'found' in Wilber's (or anybody else's) work might have salience for DCR sounds like an administrative or archival, rather than a meta-theoretical, one which one could equally ask of the bible. The crucial question that arises is rather how far any such artifacts surpass purely analytical reasoning, thereby strengthening the path toward dialectic. To qualify epistemic structures simply as *integral* would amount to a quid pro quo. What is required is to review their potential for dialectical thinking in real-time. Salience is not a quality of single concepts (that in isolation have no meaning by themselves), except in purely logic-definitional thinking. Rather, their salience depends on how they are used in real-time dialogue, and what, consequently, is their function in constellations of movements-in-thought, spoken or written.

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The pervasiveness of thought forms in spoken language is not in doubt. When filtered through the lens of CDF (i.e., analyzed both social-emotionally and cognitively), natural language expressions used in interviews show clear and measurable structural differences in thought complexity, both between individuals and within the same individual longitudinally. When evaluating CDF case studies, one finds that specific Kegan-stages have been reached by specific dialectical thinking paths and are associated with specific limits of dialectical thinking. Such epistemic limits, both of individuals and teams, can be precisely assessed through DTF. In what follows, I will focus on the epistemic limits of cohorts the integral movement can be thought to be composed of and view them as candidates applying for entering DCR from where they are developmentally.

Insert Fig. 8 here

Given that members of any cohort make meaning along Kegan's trajectory of social-emotional stages while simultaneously residing in a specific phase of dialectical-thinking development, we can speak of cohort-specific *epistemic limits*. In DTF, these limits show up in the form of low fluidity indices as well as imbalances in the proportional use of thought form classes (moments of dialectic). To what extent these limits are purely cognitive or are equally rooted in social-emotional maturity levels is presently empirically unknown, due to a lack of research on the intrinsic linkage between the two strands of adult development. However, in teaching and carrying out organizational interventions, the intrinsic nexus between a social-emotional stage of *meaning making* and a particular phase of *making sense* of the world through dialectical thinking clearly comes into view, as intimated in Fig. 9 (see Laske 2009, 253; for more details, see Laske 2008, chapter 8).

Insert Fig. 9 here

Now that members of the integral movement (and of CR) are beginning to absorb dialectical ontology, substantive questions regarding a 'synthesis' of Bhaskarian and integral thinking arise. One such question is: what kinds of teaching program are required to broaden integral toward dialectical thinking?; and furthermore, how can integral thinkers be supported by scaffolding that facilitates a shift from an argument-based (monological) to a dialog-based epistemology? The first transition is a precondition of the second one. In both cases, empirical proofs would be of great value pedagogically. DTF delivers a straightforward metric for

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scrutinizing empirically to what extent an integral (or CR) cohort succeeds or fails in making either of these transitions, no different as can be ascertained in organizational teams.

Given that developmentally unified teams--whose members operate from the same developmental level--belong into phantasy land, we can begin to understand the *cognitive profile of integral cohorts* by investigating how they are composed in terms of minority and majority within specific social-emotional ranges (2-3, 3-4, 4-5). This makes it possible to distinguish cohorts whose majority is either more, or less, developed than the minority. We can call the first type *upwardly*, and the second one *downwardly*, divided, to indicate that in cohorts lacking a highly developed majority, less developed members are likely to sabotage the cohort's agenda by reducing it to the lowest possible denominator (their own), to the effect that the cohort enters into a downward dynamics due to insufficient self-organization and thus collaboration.

Applying these team-typological criteria to integral cohorts, we can distinguish the following 6 types of cohort shown in Fig. 10, further detailed in Figs. 11 and 12, below:

1. *Upwardly divided level-2 cohorts (UD2)*; majority at level 2, minority at level 3
2. *Downwardly divided level-3 cohorts (DD3)*; majority at level 3, minority at level 2
3. *Upwardly divided level-3 cohorts (UD3)*; majority at level 3; minority at level 4
4. *Downwardly divided level-4 cohorts (DD4)*; majority at level 4, minority at level 3
5. *Upwardly divided level 4 cohorts (UD4)*; majority at level 4, minority at level 5
6. *Downwardly divided level 5 cohorts (DD5)*; majority at level 5; minority at level 4

Insert Fig. 10 here

In each cohort, the developmental tension between majority and minority results in idiosyncratic social-emotional cultures characterized by specific *epistemic limits* that stem from the different levels of *cognitive development toward dialectic* of cohort members. In Fig. 11, below, I consider these thinking limits as establishing different *strata*, thereby differentiating the level of complexity management that members of a particular cohort are capable of, as well as the specific thematic focus of their universe of discourse.

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Insert Fig. 11 here

As we move from UD2=Stratum-1 cohorts (in which the cohort majority resides on Kegan-level 2) to DD5-Stratum-6 cohorts (in which the cohort majority resides on Kegan-level 5), lack of dialectical thinking capability is dramatically lessened.

For example, a *downwardly* divided level-4 cohort (DD4; in which most members reside at Kegan-stage 4 while a minority remains at level 3) has a surer grasp of absence and negativity than an *upwardly* divided level-3 cohort (UD3). Importantly, this differential is likely to determine the relationship of a cohort's *interpersonal* process to its *task* process, whether in academic or organizational work. The task process ("how to get the job done") is determined by cohort members' phase of dialectical thinking, and in more immature cohorts tends to become overwhelmed by their members' interpersonal process.

Insert Fig. 12 here

We can say, then, that each of the six cohort types distinguished in Fig. 12 is characterized by a peculiar *quality of discourse* expressive of its epistemic limits. For instance, according to Fig. 11, even logical debate is unlikely in a UD2-Stratum-1 cohort, while a UD3/Stratum-3 cohort can be expected to have a beginning grasp of absence (Bhaskar 2E; DTF Process thought forms), having begun to acquire thought forms articulating negativity that are missing from a more immature consciousness. Each of these subgroups has its own epistemological ecology which, in turn, demands a specific pedagogical approach to strengthening cohort members' dialectical thinking.

As shown in Fig. 13, the higher the cognitive stratum of a cohort, the more cohort members are capable of handling complexity in terms of MELD and its DTF thought-form equivalents. Consequently, they will be increasingly open to conceptualizing issues referring to future potential and the creative potential of conflict, rather than being wedded to the status quo, thus differing in terms of transformational thinking capability. Simultaneously, true dialog will increasingly become possible and so will an autonomous *task* process that is not derailed by a cohort's *interpersonal* process, based on their cognitive-developmental level alone.

Insert Fig. 13 here

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These assessment-based considerations of developmentally different cohorts lead to the question of how to guide integral and CR cohorts on a developmental journey toward DCR that amounts to a mental growth assignment. Put differently, transition to DCR is not an ideological or political issue but one of developmental assessment giving rise to a specific pedagogical, initially experimental, strategy for helping cohorts mentally grow toward DCR.

4. Two training programs for scaffolding dialectical thinking: IDM's Case Study Cohort method (CSCM).

What is presently lacking both in schools and universities are strategic mental growth assignments that permit individuals to transcend purely analytical reasoning beginning in late adolescence. This lack reflects a one-sided, overly left-hemisphere oriented, culture (McGilchrist) that is unable to make Bhaskar's UDR movement based on MELD. As a result, most individuals' *real world* is a woefully, merely representational, replica of real-world experience that is increasingly lost in a hall of mirrors. The same can be said of most so-called *meta-theories* that only pay lip service to dialectic, -- a tradition in the integral movement it is time to overcome.

The need to break away from left-hemisphere monotony and stare is addressed by IDM's *case study cohort method* of teaching dialectical thinking (see www.interdevelopmentals.org). The name of the method derives from the fact that IDM study cohorts are organized around the pedagogical goal of writing a developmental case study on a single organizational client of the student's choice whose outcome the entire cohort including the instructor is taking responsibility for.

Case studies involve a broad range of mind-opening activities, from semi-structured interviewing to evaluating and scoring interviews and--based on evaluation outcomes-- giving feedback to interviewees with the option of further coaching, mentoring, or consultation. The studies are carried out under the supervision of the Director of Education. The latter functions as a cohort leader and guarantor of assessment inter-rater reliability. Along the IDM certification track, writing such a case study requires 9-10 months of study of both dialectical and social-emotional thinking and listening exercised in work with interviewees coming from both for-profit and non-profit organizations. Organizational clients' pragmatic concerns provide the real-world environment for students' mental growth assignments comprising both meaning- and sense-making. Students' development is supported by clients in positions of high

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organizational responsibility who, by participating in case studies, function as midwives of students' adult development as well as their own.

At IDM, we use this method of teaching in two forms:

1. an artisan (esoteric) form for educating CDF/DTF *trainers*
2. an applied (exoteric) form for those not intending to become CDF or DTF experts, but rather want to use these orienting frameworks in immediately rewarding applications, including that of starting a new business.

In full recognition of the pragmatic demands of students' organizational clients, a case study is about people-in-context, especially executives and team leaders. This mandate is reflected in the structure of the cognitive interview that explores executives' *internal workplace*, i.e., the way in which they conceptually represent their role identity, tasks, work environment, and professional agenda (Laske 2008; Jaques 1998). These clients form the *invisible cohort* associated with IDM study cohorts. Meta-theoretically, each case study takes on clients' epistemic fallacies and category errors which condemn clients to positivistic thinking and downloading, rather than allowing for deep, dialectical thinking. (This orientation is equally helpful to members of the integral community. Evidently, by using DTF for assessing their own movements-in-thought and receiving feedback, they could move closer to acting as an *educational* force within society as they profess to want to do.)

As my colleague J. De Visch has shown in two recent books (2010, 2013), absence of dialectical thinking in executive (or other) teams not only obstructs social change, but eventually leads to companies' sub-performance or even demise. Executives' epistemic fallacies, which ultimately sabotage emancipatory change in and outside of companies, clearly come to light in 1-hr recorded and transcribed cognitive interviews scrutinized by IDM cohorts. Structurally relevant interview fragments are weighted in terms of the clarity of thought forms articulated therein, a method of qualitative research that when applied to written texts such as annual reports is referred to as *dialectical text analysis* (Frischherz 2013, 2014a). It is a hallmark of dialectically complex texts that they invite to be scored not only in terms of single thought forms, but constellations of thought forms linking different classes (Adorno 1999, 134 f.), as shown by the example below.

Insert Fig. 14 here

In a society caught and confined in culturally approved and thus thoughtless analytical reasoning, retroductive scaffolding of clients' cognitive development is difficult since it encounters many psychological and institutional obstacles including counterarguments. In my experience, learning cognitive (DTF) interviewing is the royal road for mastering these

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difficulties. Acquiring the ability for such interviewing amounts to a revolution of one's way of conceptualizing what Bhaskar would call the 'real', rather than merely the 'actual', world.

Cognitive interviews center on laying bare clients' category errors and epistemic fallacies that hinder the speaker's world from showing up in its full, right-hemisphere, complexity. Category errors come to light in the process of differentiating the base concept that a specific thought configuration is structured around (e.g., 'role identity' in an organizational, 'quadrant' in an integral, context). In the interview fragment quoted in Fig. 14, the *base concepts* of *force field* and *system stability* are explored by the interviewer. By way of a *Cognitive Behavior Graph* such as Fig. 7, members of a study cohort mentally reconstruct a client's cognitive world construction from a third-person perspective for the purpose of scoring and giving empirically based feedback.

As this demonstrates, work with CDF/DTF is based on dialogue, not argument or debate. There are no winners except the cohort as a collaborating team. Such work is focused on the unpacking of assumptions that lead to category errors in the sense of Bhaskar's retroduction, for the purpose of assisting clients in their work or life in real time.

DTF dialogue is differentiated in favor of one of three dialogue modes shown in Fig. 15, below.

Insert Fig. 15 here

In different DTF pursuits, one of these modes—attentional support, interpretation, enactment—is typically the dominant one, the other two functioning as support tools. For instance, attentional support dominates interviewing while interpretation is paramount in interview evaluation, and enactment (modeling of thought form use) is the focus of critical facilitation of cohorts and teams.

All modes require deep listening, but in different ways. In *attentional support*, the focus is on discerning the dialectical thought form structure of a client's speech flow, while *interpretation* seizes upon the client's category errors. Once these have been revealed to the client through commentary or questions, the DTF interviewer proceeds to remediate them, enabling the client to proceed to UDR movements (*enactment*). In this way, not only is analytical reasoning critiqued, but *novel experiences* leading to cognitive development are created in and for clients.

Case study cohorts differ in developmental composition and structure as do teams. Their success is not guaranteed. The success of a case study cohort hinges on whether cohort members form a downwardly or upwardly divided team, and thus on the extent that they make effective use of the instructor's developmental modeling. The quality of such modeling determines the degree of cohort members' ability, to balance the three dialogue modes they

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are taught in carrying out a case study. Each of the three dialog modes is rehearsed separately, before linking it to others. This stepwise learning in case study work is structured as follows:

1. In the first step, **interviewing**, emphasis lies on *attentional support* for the purpose of discovering the thought form structure of a client's utterances. Interpretation and enactment function as support tools.
2. In the second step, **interview text analysis**, the cohort dialogue focuses on the *interpretation* of structurally relevant interview fragments in terms of DTF thought forms. Enactment in the narrow sense happens in each member's internal workplace where developmental thinking is brought to bear on text fragments.
3. In the third step, **writing the case study itself**, enactment (in the broad sense) is accomplished. Each cohort member's task is to pull together in a coherent synthesis all empirical evidence gathered about a client's cognitive and social-emotional profile including the linking of the two profiles from a meta-perspective.

The case study culminates in a written feedback report supervised by the IDM Director of Education and formulated on a level the client can readily understand. Through this report, the client herself is given the opportunity for enactment in subsequent (team) coaching or mentoring sessions. Those who have made one or more case studies are able to as *critical facilitators* modeling the use of DTF for others.

More generally, IDM case studies school adults at various stages of social-emotional and cognitive development as *critical facilitators* of themselves (initially) and others (eventually). How far this purpose is realized by a specific study cohort or organizational team depends on the cohort's developmental profile, thus on whether it is upwardly or downwardly divided and in what way. Cohort members can opt for learning about their own present developmental profile. If they do, a longitudinal study can be requested 2-3 years later (Frischherz 2014a) which also holds for clients. In my yearlong experience, clients informed of their developmental profile by IDM cohort members often become promoters of high-quality dialogue in organizational teams, thereby contributing to effective collaboration of team members (De Visch & Laske 2020).

5. Dialectical thinking as the integral movement's central social practice: Esoteric and exoteric programs for teaching dialectical thinking.

It seems bizarre that a philosophical movement like the integral one, as it is trying to embrace DCR has not yet embraced the very tools that make dialectic possible, usually referred to as dialectical thinking. Dialectical thinking has a long tradition that has been thoroughly reviewed and superbly worked through by Bhaskar. Evidently, I see dialectical thinking as the essential tool for developing DCR, as well as the principal tool for integrating epistemic structures deriving from Integral and/or CR into DCR. For the integral community which is more

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accomplished at concocting 'models' than investigating the structure of its own thinking, the need for developing a practice of dialectical thinking seems to be a novel issue. This chapter is meant to move working on that issue along. DTF dialectic is no ideology, but is pragmatic, hands-on, learned by doing: what is a dialectical ontology or epistemology without a pervasive practice of dialectic?

I have shared some details of the DTF *Train the Trainer* certification program in dialectical thinking in the larger environment of CDF. In doing so, I largely dwelt on the 'artisan' form of teaching dialectical thinking, as exemplified in Fig. 14, to make clear how the manifestation of MELD in human speech is assessed by using four classes of dialectical thought forms. I have not found a more effective method of sponsoring mental (including social-emotional) growth than to teach study cohorts dialogical dialectic, at least in an academic environment. In my experience, this approach is the royal road to learning dialectical thinking, superior to using meditation, discussion, hosting, holacracy, or something even more fashionable. This is the case because in such teaching, students' subjective experience of DTF is balanced against the pragmatic goal of understanding a specific interview text by making use of the three DTF dialogue modes depicted in Fig. 15. Learning to consciously separate and combine these modes amounts to raising the level of adult awareness as no other method.

There exists a 2nd, 'exoteric' or peer form of teaching dialectical thinking through DTF whose adepts are managers and executives, rather than DTF trainers. This second form of teaching is already being carried out by those IDM students who work in organizations as consultants, coaches, and mentors, and managers (De Visch & Laske 2020). In my view, DCR could begin to show its educational relevance for the organizational world once it takes up DTF tools in both forms of teaching here distinguished, something I have not seen even a beginning of.

6. Conclusions and Outlook

Work with CDF/DTF has amply demonstrated that severing developmental from dialectical thinking -- characteristic of the integral community's present work -- makes as little sense as separating social-emotional meaning making from cognitive sense making (Laske 2020). In each case, intrinsically related dimensions are ripped apart. In addition, the epistemic structures accumulated by neo-Piagetians since the 1970s to a large extent manifest purely analytical reasoning and thus only reinforce the present predicament the integral community as a whole is in.

My counterproposal, therefore, would be to use DTF thought forms (Fig. 6) as seeds for developing new, DCR-instantiating, epistemic structures now found lacking, instead of borrowing from the neo-Piagetian storehouse. Whether such new structures are argument- or dialog-based, we can develop and teach them while honoring the four phases of dialectical-

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thinking development integral cohorts will need to pass through to mature in their ability to handle meta-theoretical complexity.

As we know empirically, there exist four different human *Inquiring Systems* that gradually emerge and merge over the human lifespan (Fig. 1; for details see Laske 2008). While the Lockean (empirical) Inquiring System helps individuals transcend Common Sense, Hegel showed 200 years ago that this transcendence remains epistemologically weak. Even when we move to a Kantian Inquiring System, as the sciences do, we fail, as Bhaskar's work has shown, to move closer to the real world because of falling prey to epistemic fallacies. It is thus imperative that we take advantage of the early stirrings of dialectic in the adolescent mind that Basseches' research revealed and build on its momentum, to secure a broader constituency of dialectical thinkers, both in academia and the world of organizations and politics. What is foremost needed, therefore, is a group of DTF trainers stemming from the integral community who have been thoroughly educated in developmental as well as dialectical thinking. Such an education would help them appreciate the present limits of integral thinking and make them venture out into dialectical territory beyond merely paying lip service to dialectic as Wilber has done.

In my 20-year teaching experience at IDM, a student who has submitted two CDF case studies based on the 'artisan' (rather than the 'peer') schooling path described above, is ready to enter a program for becoming a DTF trainer. Such a person has internalized the dialogue s(he) partook in during the case study learning process, and has, in addition, committed to spelling out her understanding of transcribed interviews in deep dialogue with herself, thereby nurturing the *internal dialogue* on which dialectical listening is based. Not only such a person's way of thinking, but her way of listening to others and communicating with them, has been substantially transformed: s(he) can now see the real world as being in unceasing transformation, with herself as embedded in it. She cannot easily be convinced that "integral thinking" without dialectic is even a possibility. Once she is so aware, she has become a *transformational thinker* who is motivated to become an agent working on behalf of the global issues that beset humanity at this point in history.

I would see DTF trainers certified by IDM as ambassadors of dialectical thinking as much as of DCR. Dialectical epistemology and ontology make a good marriage. DTF practice having become part of students' professional life, such students can help not only individual clients, but commercial organizations and political factions *get real* about the real world. In addition, DTF-trained individuals can begin to influence the social, not only the developmental, sciences, and promote a dialog between sciences based on dialectical thinking, something presently lacking. Meta-theory by itself will not do it.

DTF training is also of relevance longitudinally. If, after individuals' middle twenties, analytical reasoning is not given a chance to move on to dialectic, developmental arrest sets in even in the social-emotional domain of meaning making (as my own studies bear out). The ensuing

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stasis only deepens individuals' helplessness on account of feeling trapped in the administered world that Adorno predicted 75 years ago, which now takes the algorithmic form of pervasive control. The cause of this helplessness, easily covered up by dazzling 'integral' contents, is the structure of adults' thinking that is presently not on a par with what the contemporary world cognitively requires of citizens. The blueprint of pedagogical action I have shared in this chapter can certainly be refined and adapted to changing circumstances.

Executive Summary

My ultimate concern in this chapter has been that of extending DCR into social practice through adoption of DTF as a vehicle for fully embracing Bhaskar's legacy within the integral movement. I do not know a better way to honor Bhaskar's legacy. *E-ducere* means *to lead out of*, and if there is one thing to lead out of, it is the absence of dialectical thinking in Western culture, already diagnosed by H. Marcuse in the early 1960s (Feenberg & Leiss). Since, due to Bhaskar's work, dialectical thinking is no longer viewed as a form of 'salon communism', there is perhaps a chance for establishing institutes of dialectical thinking as think tanks of the 21st century, threatened as our century now is by global crises encountering mainly feeble analytical minds.

If developed as part of the Institute of Education at the University of London, a *Center of Dialectical Epistemology* could establish a pioneering agenda: to teach dialectical thinking in an administered world shaped nearly entirely by analytical reasoning acting as the thought master, rather than the emissary of the right hemisphere's holistic thinking. Before addressing the thinking limits of contemporary organizations and institutions with integral thinking in the conventional, non-dialectical, sense, however, such an institute would first have to address the thought limits of present-day integral cohorts whose grappling with Bhaskar's legacy has only just begun.

I want to thank Brendan Cartmel for his meta-critique of this paper and his moral support in writing it.

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Illustrations

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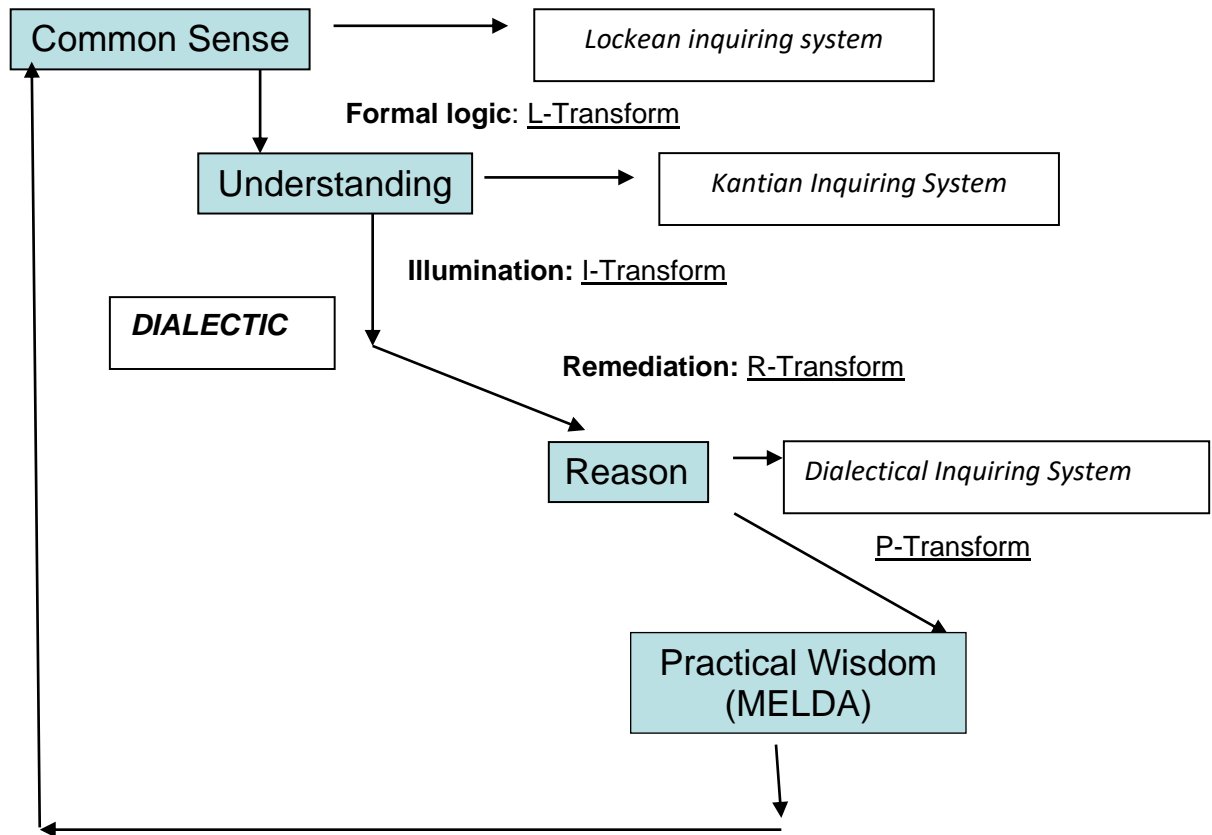


Fig. 1. Bhaskar's four eras of adult cognitive development.

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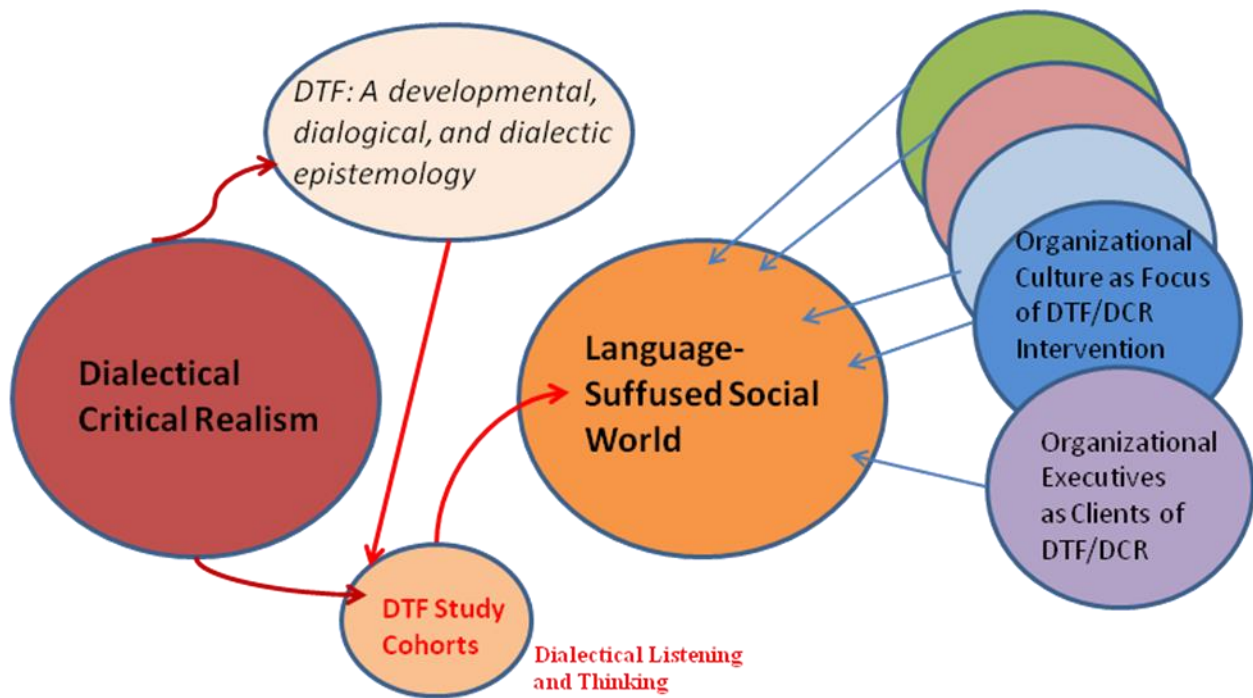


Fig. 2. DTF powered by DTF study cohorts serving a bridging function between DCR and the language-suffused social world of organizations.

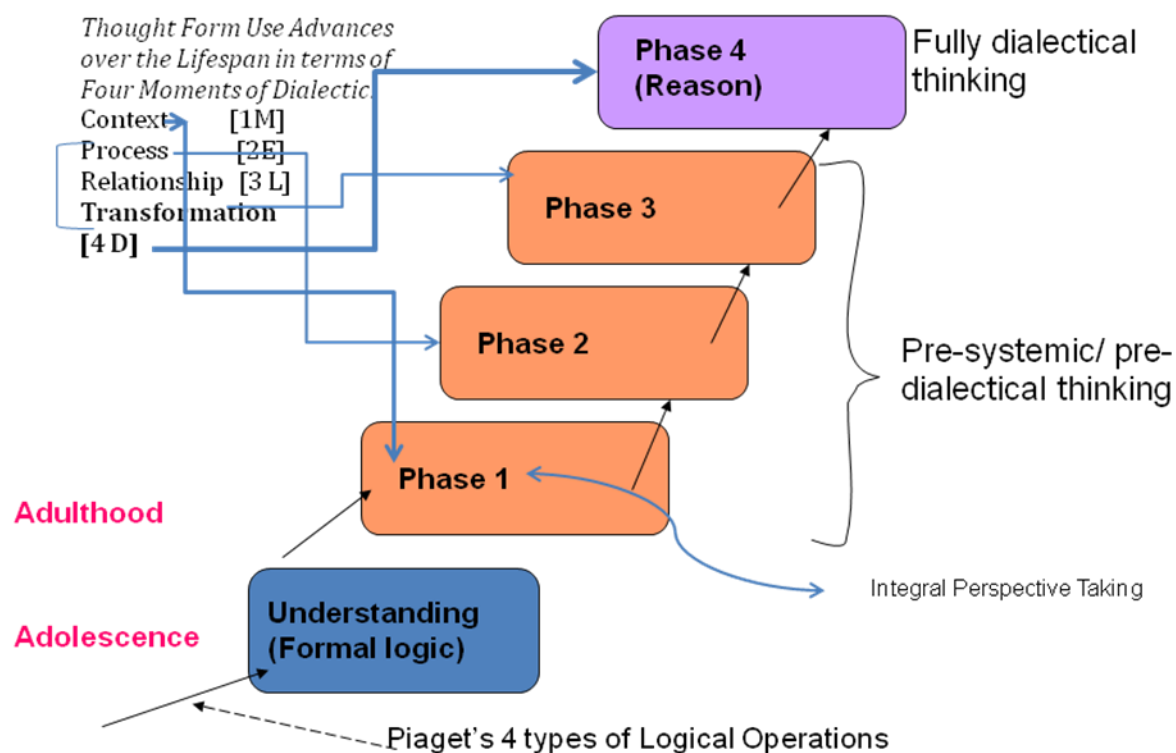
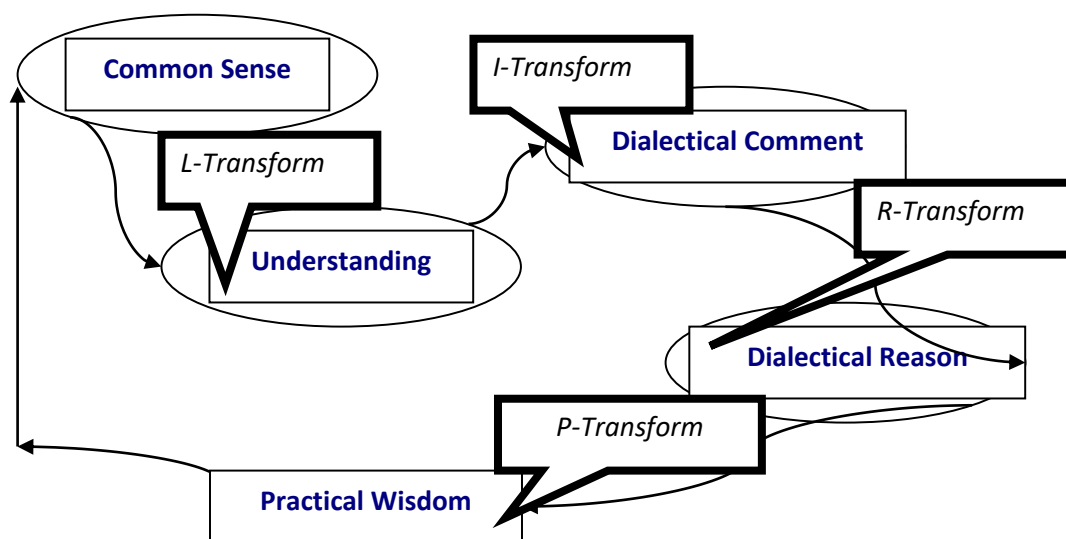


Fig 3. The four phases of dialectical-thinking development in adults according to Basseches/Laske.



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Fig. 4. The four transforms of dialectical thinking according to Bhaskar (1993).

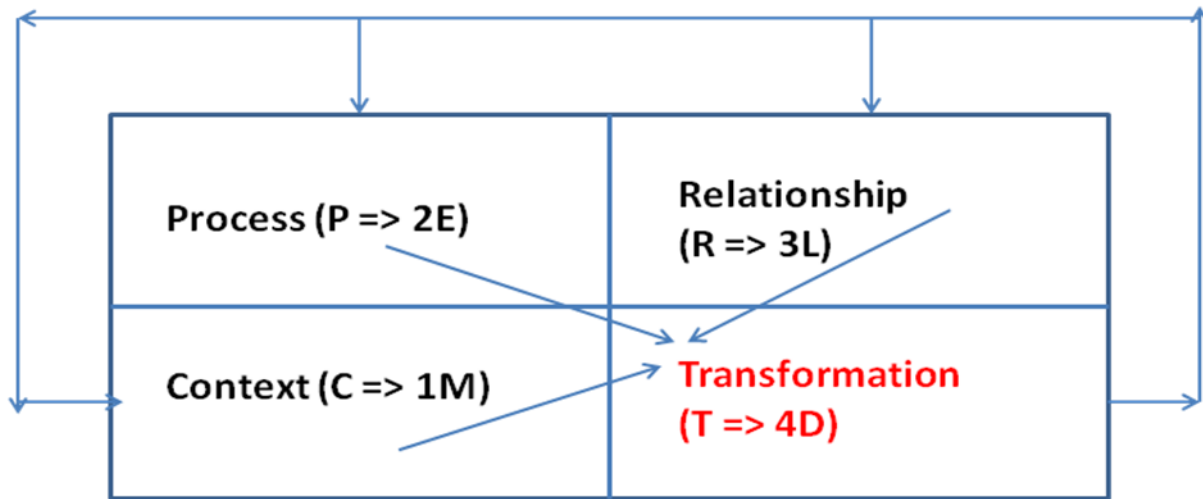


Fig. 5. The four classes of thought forms associated with MELD in DTF ($P=2E$; $C=1M$; $R=3L$; $T=4D$).

DTF Taxonomy of Dialectical Thought Forms

Process TFs (2E) Illumination	Context TFs (1M) Illumination	Relationship TFs (3L) Illumination	Transformational (Meta-systemic) TFs (4D) Remediation
1. Unceasing motion, negativity <i>Contrast: 22</i>	8. Contextualization of part(s) within a whole; emphasis on part <i>Contrast: 10-13</i>	15. Limits of separation. Focus on existence and value of relationship <i>Contrast: 16-21</i>	22. Limits of stability, harmony, durability (incl. quantitative into qualitative changes) <i>Contrast: 3, 12, 23</i>
2. Preservative negation, inclusion of antithesis (non-A) <i>Contrast: 27</i>	9. Equilibrium of a whole; emphasis on whole <i>Contrast: 10-13</i>	16. Value of bringing into relationship	23. Value of conflict leading in a developmental direction <i>Contrast: 2, 22, 24</i>

movement <i>Contrast: 3-4, 6</i>	<i>Contrast: 25, 28</i>	(logically prior to what they relate) <i>Contrast: 2-3, 15-20</i>	complex realities; critique of formalistic thinking <i>Contrast: 2, 6, 16</i>
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Fig. 6. Compact Table of DTF Thought Forms
adapted from Basseches & Bopp, 1981.

Sentence No.	Process	Context	Relationship	System
1	6			
2				22
3	(5)	(9) 14	15	
4			20	22 (24)
5				27, 28
6			19	25
7				22
8		14		
9		8	19, 20	
10	5			26, 27
11				28

- **Fluidity Index = 3+4+5+10 = 22**
- **Cognitive Score = [14, 19, 24; 48 (%)] – hollow transf. thinking**
- **Systems Thinking Index = 48 (%)**
- **Discrepancy Score = (4+10) : (3+5) = 14 : 8 – Manager C is a better constructive than critical thinker**

Fig. 7, Cognitive Behavior Graph of a manager, showing the movement in thought of his interview, associated with DTF cognitive scores (Frischherz, 2014a).

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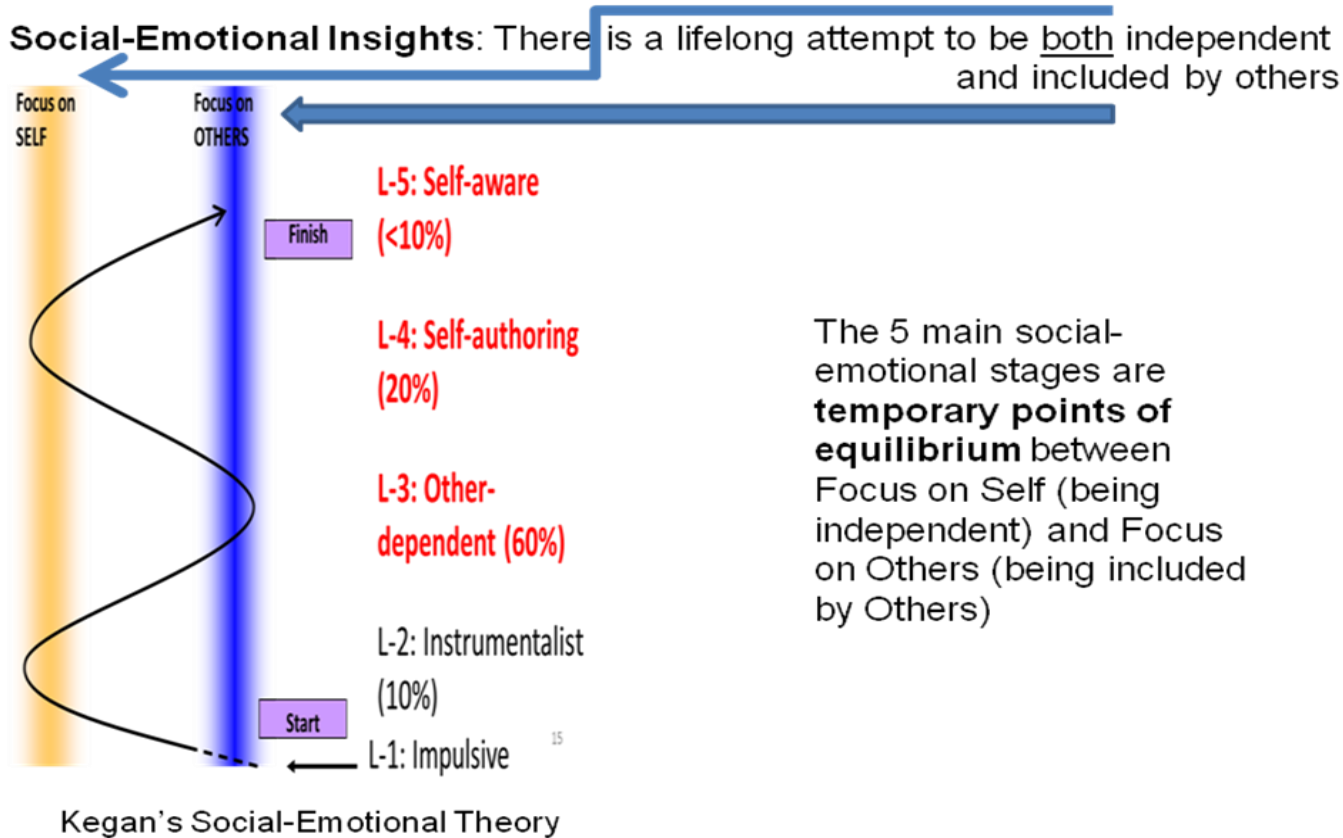


Fig. 8. Social-emotional stage progression according to Kegan.

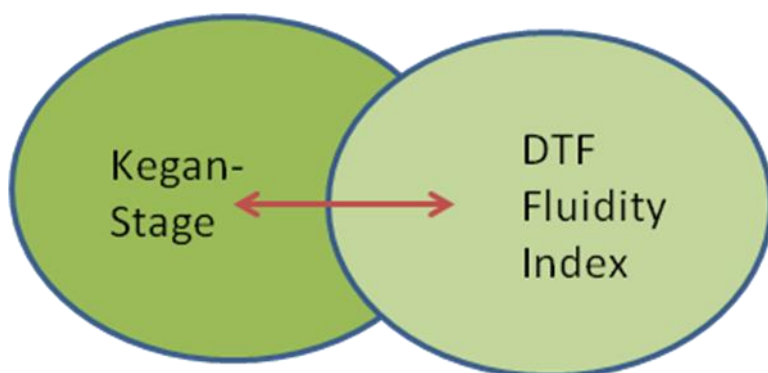


Fig. 9. Nexus between social-emotional meaning making and cognitive sense making in CDF

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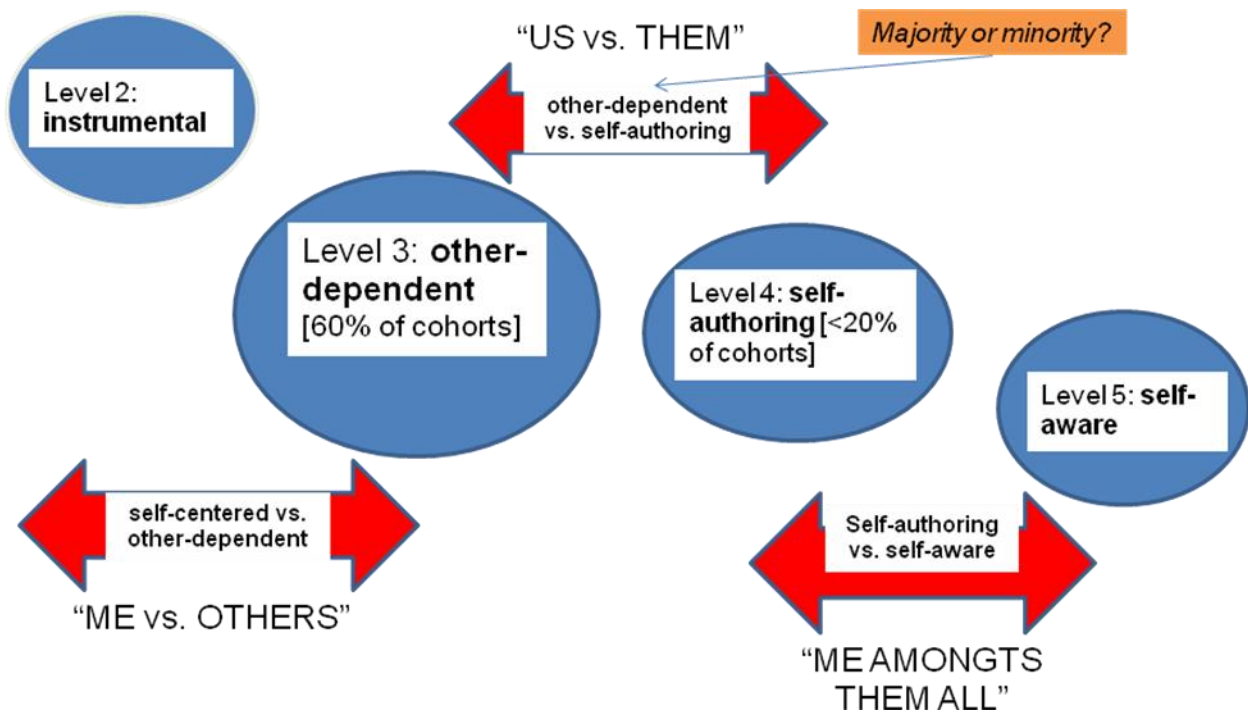


Fig.10. Social-emotional differences between cohorts, leading to the distinction of 6 structurally different developmental types of cohort further detailed in Fig. 11 and 12.

		Phase 1	Phase 2	Phase 3	Phase 4
		F=>0<10	F>10<30	F=>30<50	F=>50<85
Stratum 1	Stratum 2	Stratum 3	Stratum 4	Stratum 5	Stratum 6
F=>0<10 Declaration	F=>10<20 Debate	F=>20<30 Discussion	F=>30<50 Discussion	F=>50<65 Discussion	F=>65<85 Dialog
Stratum 1 Team (UD2)	Stratum 2 Team (DD3)	Stratum 3 Teams (UD3)	Stratum 4 Team (DD4)	Stratum 5 Team (UD4)	Stratum 6 Team (DD5)

Figure 11. Epistemic limits (F) of 6 developmentally differing cohorts, calibrated in terms of the DTF Fluidity Index.

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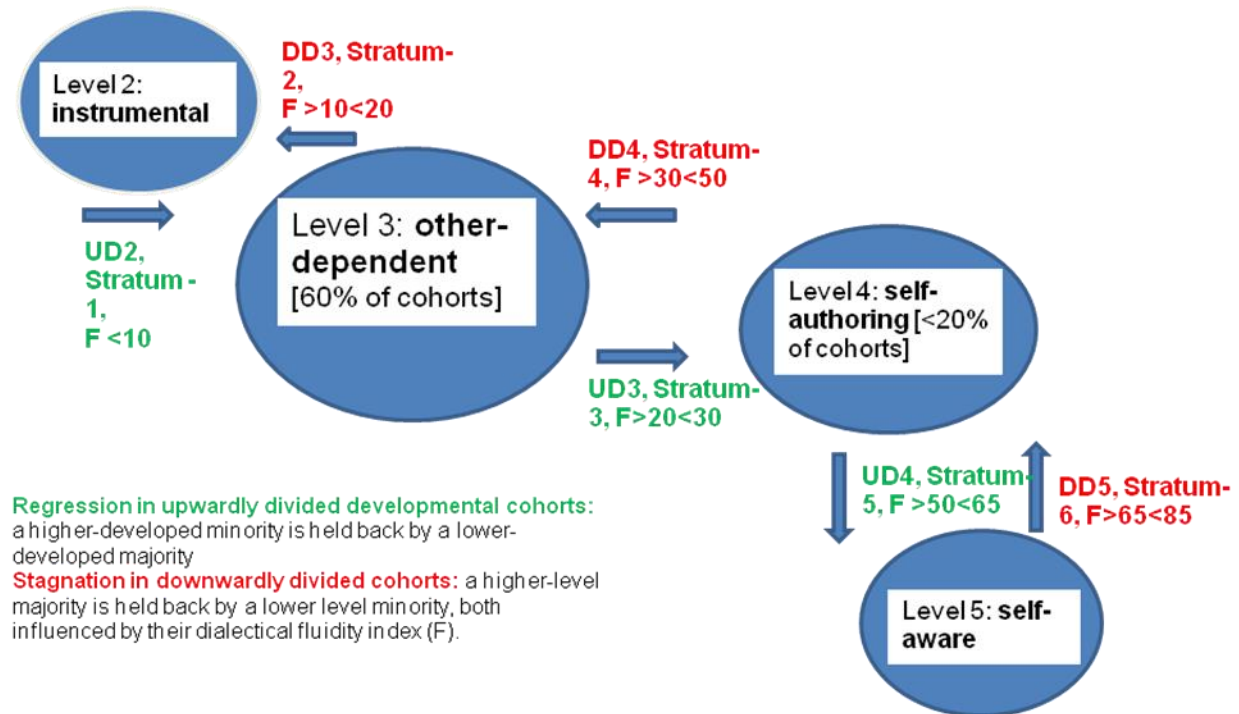


Fig. 12. CDF cohort typology showing the social-emotional and cognitive developmental differences between cohorts. (Level-3 cohorts are shown as the most numerous).

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Type of Team	Focus of Universe of Discourse	Predominant Moment of Dialectic	Need for Thinking Dialectically
Stratum-1; UD2	Service and Execution Excellence	Context thinking; Focus on Present	Present
Stratum-2; DD3	Service Differentiation and Optimization of Practices	Start of Process Thinking Working with Difference (Negativity)	
Stratum-3; UD3	Rethinking Operational Processes: New Value Streams, Change Management	Advanced Process Thinking ; Beginnings of Relationship Thinking	
Stratum-4; DD4	Creating Breakthrough by Developing and Testing Alternative Strategies	Strengthening of Relationship Thinking; Beginning Coordination of C, P, R thought forms	
Stratum-5; UD4	New Business Models, Re-shaping of competitive position	Increased Coordination of C, P, R thought forms, leading to Transformational Thinking	
Stratum-6; DD5	Repurposing Industry by Provoking Unconventional Uses of Services and Tools Offered	Equilibrated Thinking in Terms of All Four Moments of Dialectic	Future



*Figure 13 (for column 3, see also Figure 1, upper left)
Cohort differences in the ability of handling complexity
as a function of social-emotional cohort structure
and phase of dialectical thinking measured through DTF.*

Bit Number & Thought Form (weighted from 0 to 3)	Questions to Ask Yourself:
	<ol style="list-style-type: none"> 1) What structural evidence leads you to selecting this Thought Form? 2) If several Thought Forms are applicable, explain your choice. <p><i>Note: Weights are assigned to Thought Forms only across the entire interview, not individually.</i></p>
Cognitive Interview, Task House	
(Base Concept #1= "force field"; #2 = "stability")	
Bit #3, TF 21 [weight = 1]	<i>Interviewer:</i> You seem to be taking into account force fields that play a role in this company, and the circumstances under

<p>(constitutive, intrinsic relationship)</p> <p>TF 22 [weight = 1] (Limits of stability, harmony, and durability)</p> <p>TF17 [weight = 0.5] (Critique of reductionism)</p>	<p>which this project has started ...</p> <p><i>Interviewee (Consultant):</i> Well yes, I was referring to certain forces, some tearing things apart, others holding things together, and the conflict energy needed to transform the status quo.</p> <p><i>Interviewer:</i> If you look at those force fields more closely, what do you see?</p> <p><i>Interviewee:</i> Well, the dilemma lies in that efficiency should be increased while no one would lose their job. This is a human resource problem since probably some people do not have the competences needed to be peak performers. So, management wants to lift up the organization towards a more service-oriented organization. One issue is the accountability level on which people should perform in their new roles. Another issue is to prepare these people to take a quantum leap. However, they will probably not be able to make this leap under the present reward system or given what their competences are. So, there are many conflicting forces I am seeing, but I doubt that my clients are seeing them. I see a gap between reality and how it is viewed by my clients. But I cannot close this gap for them; I need to educate them so they can see it.</p> <p><i>Interviewer:</i> What does that say, you think, about the system's stability?</p> <p><i>Interviewee:</i> We will have to consider that there is an external force field as well, and together with the internal one, it may rip the company apart. We are now in a financial crisis, and we haven't seen the deepest point yet. So, people are looking at efficiency and they have never, never been confronted with the fact that they will have to lay-off people. They won't be able to do it before the end of 2009 because they signed an agreement with the union. So, they won't risk that. Except if they would be confronted with extreme situations. Until now they have government support. But I expect they will be asked to take hard measures by the first half of 2010. And they are not at all preparing for that.</p> <p><u><i>Justification of the Scoring</i></u></p> <p><i>In constructing his internal workplace, the speaker sees individuals determined by the constitutive relationships</i></p>
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	<p><i>they are in that have defining quality (relationship TF 21); he also points to the overall systemic context as a factor determining the issues that will need to be considered by clients (transformational TF 22). Finally, he articulates a weak critique of reductionism (TF 17), highlighting that his clients are not looking at the outside world.</i></p>
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Figure 14. IDM case study, Thought Form Scoring Sheet.

Fragment of a transcribed cognitive interview, cohort-evaluated for the purpose of establishing the interviewee's (executive's) cognitive profile as a basis of feedback to her about the structure of her present thinking; from a 2009 IDM case study.

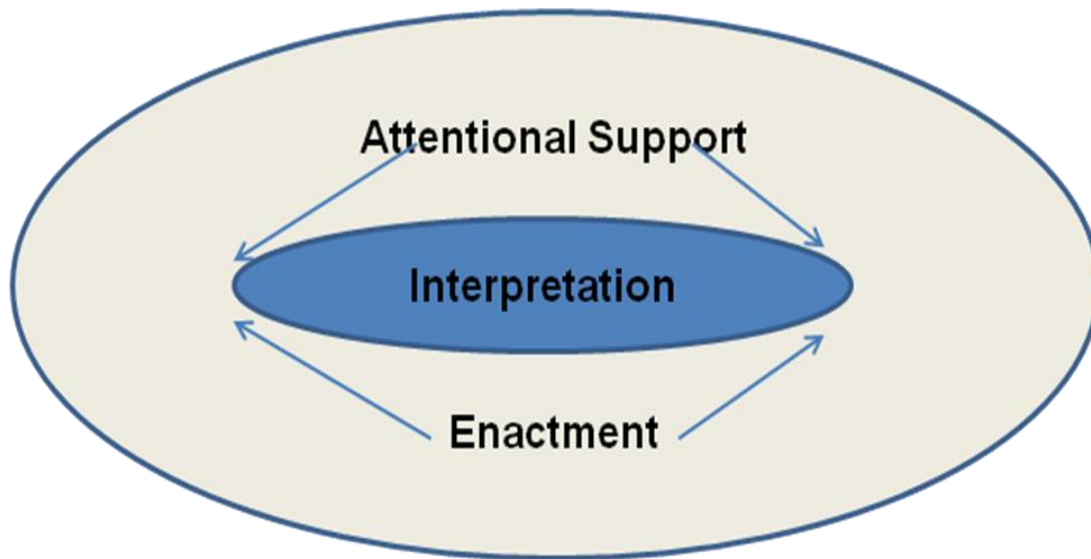


Fig. 15. The three DTF dialogue modes as used in teaching, coaching, and consulting