

The Development of Dialectical Thinking As An Approach to Integration

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Abstract: This article offers a description of dialectical thinking as a psychological phenomenon that reflects adult intellectual development. While relating this psychological phenomenon to the various dialectical philosophical perspectives from which the description is derived, the article conceptualizes dialectical thinking as a form of organization of thought, various aspects of which can be identified in individual adults' approaches to conceptualizing a range of problems, rather than as one particular stream of intellectual history. The article provides a range of examples of dialectical analyses, contrasting them with more formalistic analyses, in order to convey the power, adequacy, and significance of dialectical thinking for the sorts of challenges that this journal embraces. It suggests that events in all areas of life demand recognition of the limitations of closed-system approaches to analysis. Approaches based instead on the organizing principle of dialectic integrate dimensions of contradiction, change and system-transformation over time in a way that supports people's adaptation when structures undergirding their sense of self/world coherence are challenged. Higher education and psychotherapy are considered as examples of potential contexts for adult intellectual development, and the conditions that foster such development in these contexts are discussed. The article as a whole makes the case for consciously attempting to foster such development in all our work as an approach to integration.

Key words: dialectic, development, transformation, constitutive relationships, interaction, multiple systems, open systems, metasytematic, epistemic adequacy, dialectical thinking, dialectical philosophical perspective, dialectical analysis, psychotherapy, higher education

Introduction

In this article, I present a description of what I have called dialectical thinking that was first written two decades ago.¹ My goal is to present it in a way that suggests its power, adequacy, and significance for the challenges that this journal is dedicated to embracing. I refer the reader to other work (Basseches, 1978, 1980, 1984, 1989) for a full exposition of the philosophical argument, the research methodology for recognizing elements and examples of dialectical

¹ Editor's note: See the author's discussion beginning on p. 49 that describes his use of the term dialectical thinking as psychological phenomenon.

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thinking and assessing individuals' capacity for dialectical thought, and the empirical findings, all of which support my claim that dialectical thinking reflects adult intellectual *development*. Pending examination of that work, I invite the reader to critically evaluate the philosophical position reflected in this article. For readers who cannot embrace this philosophical position, it may be more appropriate to use my description as a diagnostic tool for recognizing dialectical thinking in the thinking of others, than as defining a goal to pursue. However, this article is offered to all theorists, researchers, and practitioners who share the goal of fostering integrative thinking, and as a plausible account of the sort of intellectual development that all our work ought to promote.

Power, Significance, And Adequacy

Let me begin by offering a couple of scenarios of situations in adult life in which dialectical cognitive organization would make a difference in how meaning is made of phenomena. I hope these examples will provide an initial feel for what I include within the scope of dialectical thinking, as well as its implications. In each example, I will start with two non-dialectical, but not unusual, ways of thinking about the problem at hand, and then contrast them with a third, dialectical alternative.

Mary, Helen, and Judy are all mothers of daughters. Each mother has held a set of values that have guided her efforts to raise her daughter. Now, the daughters have grown up and each of them is rejecting many of her mother's values.

Mary is very troubled. She sees only two possible interpretations. If her values are right, she has failed as a parent in not having successfully transmitted those values to her daughter. On the other hand, if her daughter's values are right, the whole foundation of the way Mary has lived her life is wrong, and Mary neither deserves nor is likely to receive her daughter's respect.

Helen, however, is shrugging the matter off. She reasons that values are totally arbitrary and irrational anyway. All people have their own values and live their lives by them, and who's to say which ones are right and which ones are wrong. The important thing is to respect others, even if they have different values. Helen respects her daughter in spite of their differences.

Judy begins to think about the matter by looking at the evolution of values in historical perspective. She reasons that human values change over the course of history as old values interact with changing environmental circumstances. People need values in order to decide how to act, but in acting according to their values they change the world, and the changed world in turn leads to the development of new values. Judy understands her daughter's values as resulting from the interaction of the values Judy tried to share with her and the experiences of the world that her daughter has had but Judy herself never had. Judy says to herself,

Instead of assuming either that I am wrong or that my daughter is wrong, I can try to see what I can learn for my future life from her values borne of her experience. I can also see how she has learned from my values and transformed them to keep up with the times.

Mark, Howard, and George are college juniors. They are feeling very frustrated about three years of the routine of tests, paper assignments, and grades. They worry that going through this process has taken its toll, undermining their love of learning.

Mark is confused. Based on his own experience, it seems to him that students would learn

much more if they were given more freedom to pursue their own intellectual interests, rather than being required to take standardized tests and complete standardized assignments. On the other hand, he assumes that the college is run by experienced educators, who must have determined that the use of tests and assigned papers to measure and grades to motivate is the soundest educational method.

Howard is angry. He locates the cause of his own demoralization and that of his fellow students in teachers' illegitimate presumption that they can pass judgment on students' ideas. He believes that much of grading is subjective and that teachers use their power to impose their own personal tastes on what students think and how students write. Although Howard doesn't accept it as educationally legitimate for teachers to dictate what students should learn and then to evaluate them by subjective standards, he does accept that that's the way the system works. He has decided that he wants to make it through the system, and has cynically dedicated himself to cultivating the art of giving teachers what they want.

George begins to analyze the problem by locating the college within the larger society of which it is a part. The college is expected to perform a certification function for that society, providing transcripts that other social institutions can use in their selection processes. But the college is also expected to provide students with a good education. The problem that he and Howard and Mark are experiencing reflects a contradiction between the certification and educational functions of the college. The need to provide certification (grades) to the outside leads the college and its faculty to employ practices that may not be educationally optimal (i.e., standardized assignments). Similarly, the concerns with providing a good education leads to practices that may not be certificationally optimal (i.e., grading students on subject matter where completely objective evaluation is impossible). George reasons that this contradiction will only really be resolved when the basic relationship of the colleges and universities to society is transformed. He decides that he will devote his time at college to trying to learn all he can that might help him contribute to that kind of transformation of educational institutions. He accepts that in the meantime he will be given standardized assignments and grades and will have to make compromises just as his teachers do between what is educationally and certification ally optimal. But he is resolved not to lose sight of his own educational goals.

In my view, the example of "dialectical thinking" in each of the above cases reflects a power, significance and adequacy that is not present in the non-dialectical alternatives. I will consider the nature and bases of this adequacy in later sections of this article. However, first, I will discuss the sources of my conception of dialectical thinking.

My understanding of dialectical thinking as a psychological phenomenon is derived from a conception of a dialectical philosophical perspective. I will now describe this philosophical perspective in a way that indicates its underlying unity. In doing so, I will take the liberty of casting a net that in some ways may be broader and in other ways narrower than those nets intellectual historians might cast. My net may be broader in that I am grouping ideas and ways of thinking under the heading "the dialectical philosophical perspective" based merely on their philosophical and psychological similarities rather than establishing a "tradition" by demonstrating actual historical connections among ideas and thinkers. My net may be narrower in that I do not try to hold within it the various pre-Hegelian forms of thought that were called dialectical, whereas intellectual historians might advance accounts of the continuity between pre-Hegelian and post-Hegelian uses of the term.

The Dialectical Philosophical Perspective

I view the dialectical perspective as comprising a family of world outlooks, or views of the nature of existence (ontology) and knowledge (epistemology). These world outlooks, while differing from each other in many respects, share a family resemblance based on three features: common emphases on change, on wholeness, and on internal relations.

Dialectical ontologies emphasize (1) that what is most fundamental in reality are some ongoing processes of change; (2) that in the course of these ongoing processes of change within existence as a whole, forms of organization emerge that have a coherence that cannot simply be accounted for by the nature of the parts that are organized within these forms (the forms are temporary and may disintegrate or give way to more complex forms of organization); (3) that everything that exists is in relationship to other things and that these relationships are internal to the nature of the things themselves—they are part of what makes the things what they are (and as a thing's internal relations change, its nature changes).

Similarly, dialectical epistemologies emphasize (1) that both individual and collective knowledge are essentially active processes of organizing and reorganizing understandings of phenomena; (2) that in these knowing processes there emerge individual and collective conceptual systems that give the knowledge a coherence that cannot simply be accounted for by the specific concepts, ideas, and facts organized within them; (3) that concepts, ideas, and facts exist in relationships not only to other concepts, ideas, and facts but also to the lives of the knowers who employ them. These relationships determine the meaning of the concepts, ideas, and facts, and as these relationships change, the meanings of concepts, ideas, and facts also change.

What ties together the emphases on change, wholeness, and internal relations in dialectical world outlooks is the concept of dialectic. This concept underlies both dialectical world outlooks and the particular approaches to analysis that constitute dialectical thinking.

The Idea of Dialectic

Dialectic is *developmental transformation* (i. e., *developmental movement through forms*) that occurs via *constitutive and interactive relationships*. The phrase "movement through forms" is meant to distinguish such movement from movement within forms. To illustrate this distinction, consider what happens when a road is built from one city to another. The road has a certain form to it, and the form of that road regulates the movement of the vehicles traveling between those cities. Thus, we may take this movement of the vehicles as movement within forms. On the other hand, the movement or change associated with the decay of the road, the emergence of trouble spots in terms of accidents or traffic jams, and the process of building a new and better road with a different form to replace or supplement the old road can be seen as a movement through forms. Through the notion of movement through forms, or "transformation" the definition of dialectic relies upon and presupposes both the notion of movement and the notion of form and focuses on a particular relationship between them. Describing this movement through forms or transformation as developmental implies that there is a certain direction to it. This direction is usually associated with increasing inclusiveness, differentiation, and integration.

The definition relates this developmental transformational movement to constitutive and interactive relationships. A relationship may be understood as a connection. Although a

relationship is often thought of as a connection between things, where the things are taken to exist prior to the relationship, the phrase "constitutive relationship" is meant to indicate the opposite—the relationship has a role in making the parties to the relationship what they are (cf., "internal relations," above). The adjective "interactive" implies that a relationship is not static but is characterized by motion or action of the parties upon each other.

Our example of the road will also serve to illustrate the concepts of constitutive and interactive relationships. Constitutive and interactive relationships can be identified among the builders of the road, the road itself, and the users of the road and their vehicles. The road is constituted not only by its interaction with road-builders (who build it) but also by its relationship with the vehicles that travel on it. For if no vehicles were permitted to travel on it, it would no longer be a road. It would perhaps be a road that had been converted to a mall. Or if only airplanes traveled on it, it would be a runway rather than a road. Thus, its being a road depends on its particular relationship to vehicles. Likewise, it is clearly relationships with roads that make road-builders road-builders. It is also, though perhaps less obviously, relationships with roads that make vehicles vehicles. Vehicles are vehicles because they have the capacity to transport one someplace, and the extent to which they have this capacity is dependent on the extent to which suitable thoroughfares exist.

The relationship between the vehicles and the road is interactive, as well as constitutive, in that the vehicles change the road and the road changes the vehicles. This should be clear from the previous discussion of road decay or wear (vehicles changing the road) and of developing trouble spots on the road that cause accidents to the vehicles (the road thus changing vehicles).

Once again, as was mentioned earlier, this interaction between road and vehicles leads to the transformation of the whole situation described earlier in terms of the building of a *new* road. This is the sense in which the transformation occurs via constitutive and interactive relationships. Thus the movement whereby a new road is built as a result of the interactive and constitutive relationships among the previous road, the road-users and their vehicles, and the road-builders, may be seen as an instance of dialectic.

Dialectical Thinking and Dialectical Analyses

Dialectical ontologies view existence as fundamentally a process of dialectic. Dialectical epistemologies view knowledge as a process of dialectic. Because dialectical thinking derives from a general world outlook, individual dialectical thinkers are likely to view both existence and knowledge dialectically. But it is possible to hold a dialectical view of one realm and not the other or to view neither realm as a whole in a fundamentally dialectical way but to think dialectically about particular phenomena. Most generally, we can say that dialectical thinking is any thinking that looks for and recognizes instances of dialectic and that reflects this orientation in the way in which it engages inquiry. Orienting toward dialectic leads the thinker to describe changes as dialectical movement (i.e., as movement that is developmental movement through forms occurring via constitutive and interactive relationships) and to describe relationships as dialectical relationships (i.e., as relationships that are constitutive, interactive, and that lead to or involve developmental transformation).

Formal operational thinking as described by Piaget can be understood as efforts at comprehension that rely on the application of a model of a closed system of lawful relationships to the phenomenal world. In contrast, dialectical thinking can be understood as consisting of

efforts at comprehension relying on the application of a model of dialectic to the phenomenal world. These latter efforts may be termed dialectical analyses, in contrast to formal analyses. I am suggesting that dialectical thinking is an organized approach to analyzing and making sense of the world one experiences that differs fundamentally from formal analysis. Whereas the latter involves the effort to find fundamental fixed realities – basic elements and immutable laws – the former attempts to describe fundamental processes of change and the dynamic relationships through which this change occurs.

Dialectical analyses can be found in the history of a wide range of intellectual disciplines, representing the natural sciences (Provine; Feyerabend; Horz et al), social sciences (Jay; Kilminster; Mandel) and humanities (Jameson; Adorno and Horkheimer). They have been used to support political stances ranging from the very conservative (Hegel) to the revolutionary (Marx and Engels). To illustrate the role of such analyses in intellectual history, I will consider briefly aspects of the dialectical analyses found in the work of Karl Marx and Thomas Kuhn. Then I will discuss dialectical analyses in day-to-day life.

Marx (1967) started with the observation that people collectively interact with nature so as to produce what they need to perpetuate themselves. He referred to this process as labor. In any particular society, this productive and reproductive activity takes a particular form (mode of production) and is characterized by a particular structure of social relations (relations of production) among the participants. Marx analyzed the history of production as a dialectical process in which many aspects of economic, social, technical, and intellectual life are all interrelated within a form of organization inherent in the existing mode and social relations of production. Tensions develop within these interrelationships as the form of productive life continues over time until eventually these tensions lead to the creation of a whole new mode of production that replaces the previous one. Marx described the replacement of feudal society with capitalist society as an instance of this kind of dialectical transformation and predicted the replacement of capitalism with communism.

Kuhn's book, *The Structure of Scientific Revolution*, provided a dialectical analysis of the history of science. He argued that within a scientific discipline, research is shaped by what he called a *paradigm*. A paradigm binds together implicit assumptions about the phenomena being studied with assumptions about the methodology appropriate for studying those phenomena and with methods of defining problems and recognizing solutions. However, a paradigm at its root is a particular piece of research yielding a particular insight, which serves as a model for other researchers. According to Kuhn, research following a paradigm tends to produce anomalies—findings that are not easily reconciled with other knowledge in the field. When enough such anomalies are produced to make scientists within the field uncomfortable, new alternative paradigms are advanced that compete with the dominant paradigm for followers. A scientific revolution has occurred when a new more comprehensive paradigm, with a new set of assumptions, a new methodology, and a new way of defining what constitutes a research problem and what constitutes a solution attracts enough followers to become dominant and to define the nature of the field.

In the cases of Marx and Kuhn, dialectical analyses were presented as alternatives to formal analyses in classical economic theory and philosophy of science, respectively. These formal analyses assumed that a single set of fundamental laws of economic behavior in one case and fundamental rules of evidence for scientific hypotheses in the other case were universally applicable. Neither the constitution of the economic laws by the existing social relations of production nor the possibility of transformation to new modes of production in which economic

behavior was different was recognized by classical economic theory (Smith). Similarly, neither the constitution of rules of evidence by paradigms currently popular within scientific communities nor the possibility of reorientation of sciences to paradigms with new rules of evidence was recognized by confirmationist (Reichenbach) or falsificationist (Popper) philosophies of science.

We can find many examples of problems of adult life that, like scientific problems, may be approached in relatively formalistic or relatively dialectical ways, with differing outcomes. Consider, for example, the choice of a marriage partner. If I were to adopt a formalistic approach to analysis I might start with the assumptions that I am who I am and that there are one or more people out there who are "right" for me. I might proceed to analyze my personality traits and to try to logically deduce the traits a partner should have to be compatible. Courtship would then consist of evaluating potential partners to see if they have the desired traits and testing my hypotheses about the traits required for compatibility. Notice that the formalistic approach begins with the assumption that people have fixed traits and that the goodness of a relationship is systematically determined by a matching of traits.

A dialectical approach might begin with the assumption that my traits are not fixed and that the relationships I enter will shape who I become as much as they are shaped by who I am and who my partner is. Here, courtship would involve entering relationships with potential partners, being open to being changed by relationships. We would then need to evaluate whether the relationship is evolving in ways that allow both of us to develop as individuals while it continues to develop as a relationship.

The alternatives of formal analysis and dialectical analysis may also be applied when a relationship breaks up. If I adopt a formal approach, I might try to explain to myself why the relationship ended by choosing among the following three interpretations.

- a. I was inadequate as a partner.
- b. My partner was inadequate as a partner.
- c. We weren't really right for each other, and we made a big mistake in choosing each other.

If I adopt explanation (a), the result is likely to be an increase in pain resulting from lowered self-esteem. If I adopt explanation (b), the result is likely to be a great deal of anger at my partner, which, among other things, will make it much harder for us to get back together in any sense. If I adopt explanation (c), the result is likely to be my devaluing a great deal of what was beautiful and valuable in our relationship for as long as it lasted, as well as possible hesitancy to make future commitments. I may say, "If I thought this person was right for me and I was wrong, it means I can't trust my own judgment."

In contrast, if I take a dialectical approach to analyzing the break-up, I am likely to look for how experience both within and outside of the relationship has led us to grow in different directions, so much so that we would be hampered by remaining so tied to each other. The assumption is that a relationship can reach a point where it tends to interfere with the development of one or both of the partners rather than helping them to grow further and growing with them. This kind of analysis is likely to make it easier, rather than harder, to deal emotionally with the breakup. It also is likely to facilitate our working together to strengthen or rebuild the relationship. If we don't blame each other and don't treat the relationship as a mistake, but instead treat the occurrence as a natural function of human development, we are more likely to ask, "How does the relationship need to change in response to the changes it has brought about in us in order for it to continue?" If we do this, a developmental transformation of

the relationship rather than its continued disintegration is more likely to occur.

Another example of the difference between formalistic and dialectical approaches may be found in the analysis of value differences between parents and their children with which I introduced this paper. There a formal analysis (Mary's) led to a choice between viewing oneself as having failed as a parent or as unworthy of one's daughter's respect. The dialectical analysis (Judy's) viewed the problem in the context of a dynamic approach to the evolution of values. Similarly, in the example of frustrated college students, the formal analysis (Mark's) assumed that problems in the college's procedures derived from an educational theory. This analysis led to the two choices of either rejecting the wisdom of one's teachers or discounting one's own perceptions as incorrect. The dialectical analysis (George's) interpreted the problems as reflecting tensions in the interrelationship of various aspects of the institution's functions and led to a recognition of problems facing teachers and students alike, as well as of potentials for the institution to be transformed.²

In each case, a dialectical analysis does not preclude a formal analysis. We may believe that relationships change and that people change and still ask questions about what makes partners compatible and how individuals can learn to be better partners. We may believe that values change over time and still ask ourselves if our daughter's view or our own view is more adequate on any particular value disagreement. We may trace problematic procedures at a college to fundamental contradictions among its functions and still inquire as to the educational impact of those procedures.

However, the capacity for dialectical analysis makes it possible both to see the limits and to see beyond the limits of the context in which we apply formal analysis. For example, in the matter of finding a marriage partner, I may hypothesize that I am a serious person and would have trouble getting along with someone who was not equally serious. But a dialectical perspective would prepare me for the possibility that in getting to know a very playful new friend I may reverse my thinking about compatibility and find I get along better with someone who can help me to laugh and play. I may even transform my prior assumptions about myself and find, that I am a fun-loving person. I might then either (1) look back at my prior seriousness as simply an emotional defense and understand the interpretation of myself as serious as itself a useful product of the historical moment, or I might say (2) "No, I really was a serious person then and now I am a fun-loving one." While (1) reflects a dialectical *epistemological* perspective on the evolution of self-knowledge over time through interaction, (2) reflects a dialectical *ontological* perspective on the evolution of personality through interaction.

In *each* of the cases discussed above, I think the dialectical analysis has a power that is absent in the formal analysis. At the same time, the dialectical analysis can make use of the power provided by the formal analysis. Marxian economic theory may make use of the classical economic theory's clarification of the laws of human economic behavior under capitalism but also analyze the potential and actual transformations of those laws. Kuhnian analysis can make use of philosophical clarification of the rules of evidence employed within the paradigm that

² While the focus in this section is the contrast between formal and dialectical analyses, Helen and Howard's thinking in these examples represent a "relativistic" alternative to both. Relativistic approaches often avoid the constraints that formal analyses impose, but they do so at the expense of eschewing the possibilities for integration that are present in dialectical analyses. While the discussion of the relativist alternative is beyond the scope of this analysis, see Basseches, 1984 for a fuller analysis of its structure, strengths and weaknesses.

dominates a discipline, while simultaneously analyzing historically how that paradigm achieved hegemony and where it is likely to confront its limits.

As stated above, dialectical analyses of courtship, break-ups, intergenerational value disagreements, and frustrations of college do not preclude formal analyses. But with respect to social reasoning it is important to note that in each case dialectical analyses provide alternatives to views of the problem that are destructive to self or others. In one of the examples, the mother's formalistic analysis leaves her with two emotionally self-destructive alternatives. The dialectical analysis provides an alternative that affirms the self within the context of historical change. In other cases, the constraints of formal analysis are oppressive to other people. The "formalistic" approach to courtship, which attempts to evaluate the traits of potential partners, may be experienced by a potential partner as a barrier to emotional closeness as well as to the partner's influence. The "dialectical" approach, which anticipates the possibility of development resulting from interaction with partners, is, in contrast, likely to be experienced as a warm invitation to interact.

In general, formal analyses that establish categories of analysis from the thinker's own perspective tend to remain relatively impermeable to the differing perspectives of others.³ Dialectical thinking, in contrast, is actively oriented toward shifting categories of analysis and creating more inclusive categories, in response to the perspectives of others.

Costs of Dialectical Approaches

I do not want to present dialectical thinking as either an intellectual or psychological panacea. Dialectical analyses are not without costs. The willingness to question the permanence and intransigence of the boundary conditions of a problem and to ask about situations that lie beyond those boundaries characterizes each of the dialectical analyses cited above. In one case, the boundaries were the capitalist form of production; in another, existing paradigms; in a third, existing conceptions of one's own personality; in a fourth, the social conditions in which one's moral principles were formed; and in a fifth, the assumption that educational practice follows from educational theory. In questioning these boundaries, we may be questioning precisely those points of reference that provide us with a sense of intellectual stability and coherence about our world.

To think dialectically, is, in a certain sense, to trade off a degree of intellectual security for a freedom from intellectually imposing limitations on oneself or other people. The open-mindedness thus gained is extremely important from the perspective of a concern with sociocognitive development because it facilitates the joining in collective meaning-making efforts with others whose reasoning is shaped by very different world-views or life-contexts. However, if our concern were only with individual psychological well-being, and not with sociocognitive development, we might not be so quick to advocate this tradeoff. It might well depend on the likelihood of the individual being able to organize life in such a way as to avoid

³ This problem is analogous to an oft-discussed problem of social research. When researchers deal with data by sorting subjects' responses into categories predetermined by the researchers, this excludes the possibility of the subjects contributing from their own perspectives to the definition of the problem and the shape of the results.

encountering events that shatter particular sources of intellectual security.

We face sources of limitations other than intellectual ones, and other sources of pain as well. In the example of the relationship breaking up, loss of the reassuring presence of someone one loves and whom one may have expected to spend one's life with is painful, usually excruciating, no matter how one thinks about it. Dialectical thinking cannot free one from that pain. However, the kind of formalistic analysis of the break-up that I presented before intellectually reinforces the pain. It adds to the pain of loss the self-punitive pain of failure or inadequate judgment or the divisive pain of blame and hatred. The dialectical analysis is more likely to allow one to experience the pain as loss and to mourn the loss. At the same time the pain of loss may be counterbalanced by an emotionally positive intellectual awareness of (1) order in the developmental process, (2) new discovery, and (3) the opening of new possibilities.

In the case of the Marxian analysis presented above, if one is embedded in the midst of a capitalist economy, whether as a government economic advisor or as an individual laborer and consumer, it may seem far more worthwhile to spend one's time analyzing the laws of that economy formalistically than analyzing how it got to be that way, how it maintains itself, and where it could be going, dialectically. Granted, not being able to imagine what living under different laws of economic behavior would be like is a limitation; but needing to live among other people, all operating according to the current laws, poses a more serious limitation. Again, if we were arguing solely about individual welfare, the tradeoff between analyses that help one make predictions given boundary conditions that are unlikely to change in the near future and analyses that might help one to change or prepare for change in those conditions would be tough to evaluate. But from the point of view of humanity, as a socioepistemic subject, involved in an ongoing pursuit of truth, the added power made possible by the capacity for dialectical analyses seems important to recognize. While recognizing the importance of seriously addressing the question, "Who has time for what kind of dialectical analyses, and when," I do want to claim that dialectical thinking is an important phenomenon of adult sociocognitive development.

To review, the following general characteristics of dialectical thinking have been cited above.

1. Dialectical thinking is thinking that looks for and recognizes instances of dialectic-developmental transformation occurring via constitutive and interactive relationships.
2. Dialectical thinking is philosophically rooted in a family of world outlooks in which knowledge and existence are viewed as essentially dialectical processes and in which change, wholeness, and internal relations are emphasized.
3. Dialectical analyses draw attention to the limits of the contexts in which formal analyses are applicable.
4. As a result, dialectical analyses have a power to deal with relationships and transformations beyond the boundary conditions of a formal analysis, while still making use of the power of the formal analysis within those boundaries.
5. Dialectical approaches are more permeable than formalistic approaches to the perspectives of other people who may define a problem in fundamentally different ways.

Dialectic as an Organizing Principle

The organizing principle for formal operational thought is the structured whole, or system. In contrast, the organizing principle for dialectical thinking is the dialectic. If we equate the notion of form in the definition of dialectic with that of structured whole or system we see how the

concept of dialectic builds upon, but is more complex than, the concept of system. Dialectic refers to the developmental transformation of systems over time, via constitutive and interactive relationships.

Thus, whereas formal thinking is systematic, dialectical thinking is metasystematic. In formal operational thought, an underlying (closed) system organizes a *logic of propositions* into a coherent whole. It enables the thinker to deal systematically with various propositions and their necessary interrelationships. It also makes possible the analysis of phenomena that can be effectively modeled as comprising closed systems. But the closed-system model is not adequate for problems requiring analysis of (1) multiple systems and their relationships to each other, or (2) open systems that undergo radical transformation.

In contrast, in dialectical thinking, an underlying model of dialectic organizes a *logic of systems* into a coherent whole. It enables the thinker to deal with various systems and their relationships to each other over time dialectically. The model of dialectic does provide a basis for analysis of (1) multiple systems and their relationships to each other, as well as (2) open systems that undergo radical transformation.

In dialectical thinking, what it is that remains recognizable across a range of changes is the historical process as an evolving whole. Any change at all, no matter how radical, can be equilibrated if it can be conceptualized as a moment in a dialectical process of evolution. New events are integrated within a dialectical conception of a process as later steps in the evolution of that process; old constructions are conserved- they remain part of the process of dialectic- although their historical role is reconstructed in the light of subsequent transformations.

For example, consider this dialectical analysis of sex roles. Systematic regularities have existed throughout history in male and female sex roles. In each era, the description of regularities in male and female sex roles has led to abstractions about how women's nature and temperament is on the whole different from men's. As a result of a range of changes in society (e.g., overpopulation), phenomena began to occur more regularly that were discrepant with traditional sex roles. The abstract models, as well as social norms and laws that are based upon and support those models, were then viewed as no longer adequate. Contradictions or tensions emerged in the system of sex role-regulated behavior including demands for political, social, and economic equality of the sexes. These contradictions will only be resolved as new more developed conceptions of maleness and femaleness emerge that are consistent with a greater range of male and female activities and with equality between the sexes (see Gilligan 1978, 1982).

The basis of the equilibrium in this way of thinking are (1) the assumption that/change is what is most fundamental; and (2) the ability to conceptualize changes as (a) emergences of contradictions within existing systems and (b) formations of new, more inclusive systems. The nature of maleness and femaleness is not viewed as fundamental; it is seen as likely to change through history. At any point in time it may be useful to conceptualize the regularities in male and female roles, but these conceptualizations are meaningful as part of a historical process in which they will be challenged and transcended.

A closed-system model of sex-role behavior, which claims that such behavior derives from fundamental immutable laws of male and female temperament, must necessarily ignore or attempt to suppress what begin as anomalies and later become new patterns of behavior by males and females, if the equilibrium of the system is to be maintained⁴ (i.e., if maleness is to continue

⁴ Note the arguments of the "Moral Majority" here.

to be recognized as maleness and femaleness is to continue to be recognized as femaleness). In contrast, a dialectical model can incorporate such anomalies and new patterns while maintaining equilibrium by recognizing them as developments in the continuing dialectic of the relations of the sexes.

I have argued elsewhere (1980, 1984) that dialectical thinking describes a post-formal level of cognitive organization. This argument is based in part on the fact that dialectic as an organizing principle builds upon (and treats at a level of greater complexity by integrating with the dimension of change over time) the concept of system, which is the organizing principle of formal operations. The argument is also based in part on the greater equilibrating power (ability to maintain recognizable continuity in the midst of a broader range of change) of dialectical cognitive organization vis-a-vis formal operational organization. But it should be clear from the above example that my view that dialectical thinking is a necessary advance in equilibrium is also based on the general ontological assumption that people will be confronted with anomalous events that do not conform to prior closed-system laws.

In the natural sciences, this general ontological assumption amounts to the assumption that scientists will have to deal with scientific revolutions (Kuhn). In the life sciences and social sciences, it amounts to the assumption that the phenomena dealt with are highly susceptible to rapid and radical change, which scientists will need to comprehend. In day-to-day life, it amounts to the assumption that for making practical decisions, closed systems (including moral systems) that are constructed on the basis of limited data and from limited perspectives will be inadequate. Social life is complex and requires multiple perspective-taking. People will be confronted with new data and new perspectives, and it is important that their cognitive structures leave them open to taking these new data and perspectives into account, accommodating to them, and dealing with them constructively. Confrontations, in science and in life, with phenomena that demand recognition of multiple interacting systems and radical transformation of systems, will point out the limits of formal thinking and stimulate the construction of more dialectical forms of reasoning.

Facilitating the Development of Dialectical Thinking

The above assumptions imply the importance of dialectical thinking to the achievement of cognitive equilibrium. This does not, however, imply that all adults in fact achieve this level of equilibrium. Research indicates that just as all adults do not fully develop formal operations, so they all may not develop dialectical thinking. Whether individuals do develop dialectical thinking depends on both environmental factors and developmental characteristics of the person.

First of all, fully developed dialectical thinking presupposes something like what Piaget calls formal operations. The ability to organize the world into an abstract consistent systematic pattern is a prerequisite to proving an account of how such patterns evolve and change. It is certainly possible to recognize the ontological and epistemological centrality of change, as well as the power of relationships, without organizing the world into systems. In fact, these recognitions may constitute preformal precursors and dialectical thinking. However, to do more than assert the importance of change and relationship—to actually describe the course of dialectical change over time—requires the ability to describe the temporary patterns of organization systems that constitute moments in dialectical processes.

When adults systematize the world (1) using sets of fixed categories, and (2) holding to static

ontological and epistemological assumptions often associated with formal thought, their maintenance of cognitive equilibrium depends on their power to seal themselves off from anomalous data and discrepant viewpoints. For example, with respect to the analysis of sex roles above, individuals may attempt (1) to force others to conform to their notions of sex-appropriate behavior, or (2) to isolate themselves from individuals whose behavior does not conform, in order to maintain their systematic understandings of the nature of masculinity and femininity. These strategies are surely not optimal from the point of view of a concern with expanding human sociality, but they may succeed in the short term if the individuals employing them are powerful enough. However, if adults cannot seal themselves off from discrepant events, they are likely to experience frustrations and conflicts resulting from the limits of fixed categories of thought for addressing a changing reality.

When this happens one of two things is likely to occur. Either the adults will reject formal operational thinking and resort to less logical forms of thought, or the adults will begin to reorganize their formal operations within the context of the more adequate organization of dialectical thinking. A combination of personal support, exposure to diverse perspectives, and opportunities for careful, critical reflection will facilitate the latter outcome of Inglis and Steele's (in this issue) description of "complexity intelligence." The description of dialectical thinking as an approach to modeling events is clearly more specific in some respects, while the authors' definition of complexity intelligence is more specific in other respects.

I would like to consider briefly the categories of practice mentioned in that article. The authors mention personal therapy and coaching as examples of professions intended to support development at the individual level, while they also suggest that "cultural coaching" be institutionalized as the practice of creating containers for dialogue, exploration of diversity and differences, and opportunities for transforming exchanges. On the one hand, as someone who has practiced psychotherapy for over 20 years, and spent much of the time engaged in the training and supervision of clinical psychologists in psychotherapy, I would have to say that the authors' view of this profession is somewhat over-idealized. While some in the profession may aspire to stimulate complexity intelligence, it is probably a minority of the profession who define their role in anything like this way, and an even smaller minority that practices in the ways the authors describe. (I have written extensively on this topic-- See Basseches, 1997a, 1997b, and 2002). At the same time there are also several professions that come to mind, in which at least a substantial minority of practitioners might view themselves as engaged in something quite like the practice of "cultural coaching" as defined by Inglis and Steele. Higher education is one example of such a profession, but there are probably quite a few others such as politics and journalism.

In the remainder of this article, I will consider this range of contexts -- with a focus on higher education and psychotherapy as institutionalized examples at the individual and cultural levels. I will address the question, "What conditions must prevail and be widely available to adults if they are to serve as effective contexts for the development of dialectical thinking?" Several hypotheses suggest themselves.

First, these institutions must not be content to maintain a discourse simply at the level of "established facts." For example, institutions of higher education must present students with multiple frames of reference-multiple justifiable coherent ways of interpreting facts based on diverging assumptions-that can be contrasted to each other. This experience is likely to lead students to recognize the active, relativistic nature of the process of interpretation, a crucial recognition in the movement from formal to dialectical forms of cognitive organization.

Similarly, students should not be presented with single "correct" methods of discovery.

Rather, alternative paradigms for research should be contrasted, and all methods should be open to question based on their appropriateness to various human goals. The recognition of the relativity of the very process of research (i. e., the construction of facts) to alternate modes of interpretation forms a crucial foundation for development of dialectical thinking.

At the same time, educational institutions should not be content to leave students in the transitional swamps of relativism. Students should recognize that there are multiple ways of looking at things. However, it is also important to recognize that these multiple ways of looking at things, along with the people who look at things in these ways, interact with each other over history. Advances in human knowledge occur when people succeed in synthesizing valuable aspects of different perspectives so that they function together as a whole, just as advances in history occur as the people who look at things in different ways learn to live together harmoniously.

Multiple conflicting frames of reference and multiple points of view must be presented to students as facts of life and as crucial moments in dialectical processes. But while these facts of life are presented as facts to be recognized, they must not be presented simply as facts to be accepted. Rather, each instance of conflicting points of view must be presented to students as an epistemological challenge—a challenge not only to the student but to the faculty as well. It should not be expected that the student will meet the challenge by resolving such conflicts in the course of the semester, or perhaps even in his or her lifetime, but it should be recognized that to be a seeker of truth means to try. For it is through the efforts of those who have taken on the challenges of trying that knowledge has advanced.

Finally, educational institutions must provide personal support for development, or, as Perry (1978, 267) has put it, educators must share "in the costs of growth." They must recognize the pain of letting go of a world where every question has a right answer and either authorities or logic can be counted on to provide the correct answers, to slowly build a world where the only answers one will have are those one has struggled for—a world where in many cases one will struggle and not find any at all and where in the rest of the cases the answers one finds new questions. Educators must at least acknowledge their own pain, which comes of being dedicated to truth.

For if teachers hold up a bravado of confidence and comfort, students have to cope not only with their own pain but also with the feeling there is something wrong with them for feeling this pain when their teachers appear to breeze through a relativistic world so nonchalantly, in command. Beyond acknowledging their own intellectual pain sharing it with students, educators can actually share in students' if not by holding hands, at least by holding minds. Educators will themselves with many more opportunities to revel in the joys of students' growth—to share the release of emancipation that occurs the students realize new degrees of freedom—if the educators are willing to share in growth's costs.

Now let us compare the institution of higher education, a context in which the shared social commitment to rationality is normally taken for granted but where the need for personal support is too often ignored, with psychotherapy, a context in which the reverse is often true. Psychotherapy is another context in which the development of dialectical thinking in adults may be fostered. In this context, one finds more prevalent recognition of the importance of providing personal support at times when the individual's sense of coherence in the self and world are under attack. However, a greater understanding of, and more explicit commitment to, dialectical rationality on the part of therapists would make psychotherapy a more effective context for development.

The modal source of threat to self/world coherence is somewhat different in psychotherapy and higher education, although there is also significant overlap. Whereas in higher education the challenges to one's way of making rational sense of things are likely to come from exposure to alternative ways of making rational sense, in psychotherapy aspects of one's experience of self and world which are internally in tension with one's ways of making sense are more often the source of the challenge. Comparable to the educator's task of balancing supporting students' realization of the existence of alternative ways of looking at things with the awareness of possibilities for growth from the interaction of perspectives is the therapist's task and supporting both openness to discrepant aspects of one's experience and the desire to build a coherent sense of self and the world that integrates these discrepant "irrational" experiences. While in the social setting of higher education the shared commitment to rationality is built upon to maintain the balancing act between doubt and integration, in psychotherapy a commitment to suspending the demands of rationality is needed to protect the dialectic from "rationalization" and to maintain clients' openness to their own experience. Nevertheless, a commitment to the client as a rational meaning-maker is equally important to support the client's integrative tendencies and capacities, within which dialectical thinking can develop as a crucial tool.

Within higher education, the relationship between theorizing and practice is perhaps analogous to the relationship the therapist must maintain between the client's rational capacities and the fuller reality of the client's experience-in-the-world. The positive effects of the educational process are likely to be limited insofar as it is divorced from practical concerns. If one only studies the systematizations of science and philosophy as abstract objects rather than attempting to systematize the dynamic contradictory realities of life beyond the laboratory and the classroom (students' own lives and those of others), encounters with the discrepant may be limited. On the other hand, if (as happens in much preprofessional education), practical problems are addressed but the definitions of the problems are taken uncritically, from a single point of view, discrepancies may also be avoided (especially if the point of view is that of powerful elements of society-elements strong enough to impose the order of a static system on the lives of others.)

Conclusion

Looking back at what I wrote 20 years ago, I continue to believe that we have no choice but to seek patterns, build patterns, and live within patterns. But I agree with Inglis and Steele, and the others whose work they cite, that the processes of disequilibrium emerging with the patterns are so pervasive that attempting to maintain and rebuild coherence at every organizational level is extremely difficult work for all of us.

Looking back, I also noticed that in my example of a dialectical approach to courtship, marriage, and breakup, I moved subtly from use of the pronoun "I" to use of the pronoun "we." In doing so, I also subtly neglected that possibility of a relationship that one partner approaches dialectically, while the other approaches it with a relatively fixed and resistant-to-change model of what marriage should be. Living, in the twenty years in between, through the pain of such a marriage and its breakup, has sensitized me to the more general pervasiveness in the world of a particular type of an encounter. These can be characterized as encounters between those adopting more dialectical or integrative perspectives, and those who cherish structures, however magnificent, in ways that lead them to defend those structures at the expense of being able to

take in what is left out. I invite, indeed implore, the readers of and contributors to *Integral Review*, to attend to and to develop the theory, research and praxis of such encounters.

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