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CONCEPTUAL COMPLEXITY AND THE HELPING RELATIONSHIP

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Abstract

The purpose of this article is to provide a perspective on the relevance of conceptual complexity theory to counselling. Some origins of conceptual complexity theory are traced and descriptions of current theoretical positions are provided. Potential counselling applications of conceptual complexity are discussed and examples of research efforts bearing on such applications are given.

Résumé

Cet article touche à deux thèmes interreliés. Il comprend d'abord un survol de la littérature consacrée à la complexité conceptuelle et aux liens de ce phénomène avec la perception d'autrui. Dans une deuxième temps les auteurs discutent des rapports de cette littérature avec le domaine du counselling, et ce, dans le contexte des résultats de recherche pertinents.

Cognitive factors play a central role in helping to determine the effectiveness of a counsellor. In order to understand a client as fully as possible, a counsellor must be able to perceive him or her along a variety of dimensions and to integrate these into a perspective that reflects the complexity of the thoughts, feelings, behavior, or overall life situation of the client. Whether this understanding process is termed "empathy," "perspective taking," "accurate person perception," or "social cognition," it is clear that the cognitive characteristics of the counsellor have an important bearing on bringing about its successful facilitation.

Implicit in the above is the suggestion that, in order to be optimally helpful, counsellors need to be conceptually or cognitively complex. Although a substantial theory and knowledge base has been established with regard to conceptual complexity, relatively little attention has been given to this area in the counselling literature, at least not in the North American scene. In light of this situation, the focus of this article will be upon establishing a relationship between the area of conceptual complexity and the field of counselling. In order to accomplish this, some of the origins of conceptual complexity as a clinical and research focus will be identified, selected contemporary theoretical positions will be described, and several potential applications of conceptual complexity theory in a counselling context will be pointed out.

Conceptual Complexity

The focus of this article is compatible with the increasing attention being given to cognitive processes in psychology in general (Bandura, 1977; Cantor, 1981; Hamilton, 1981; Mahoney, 1977; Mischel, 1973, 1979, 1981) and in clinical practice in particular (Beck, Rush, Shaw, & Emery, 1979; Coyne & Lazarus, 1980; Ellis, 1980; Folkman, Schaefer, & Lazarus, 1979; Greenberg, 1981; Kelly, 1981; Landfield & Leitner, 1980; Mancuso & Adams-Webber, 1982; Meichenbaum, 1977; Murphy, 1980).

Conceptual Complexity: Origins and Interpretations

The Psychology of Personal Constructs originated by Kelly (1955) can accurately be described as being seminal to the development of conceptual or cognitive complexity as a legitimate field of investigation. Because of its fundamental influence, Kelly's (1955) theory will be described in some detail, particularly with regard to dimensions of it that pertain directly to conceptual complexity.

Kelly's Psychology of Personal Constructs is grounded in the philosophical view that reality and truth can be interpreted in a multiplicity of ways. An individual has the capacity to assume an active role in formulating perspectives or points of view that serve both to make sense out of human experience and to predict and control interpersonal life events. Arriving at a meaningful perspective on experience and being able to predict and control life events is very much dependent on an individual's personal constructs and the way in which these are organized into a construct system. As Kelly (1955) explains:

Man looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed... Let us give the name constructs to these patterns that are tentatively tried on for size. They are ways of construing the world. (p.9)

"We generate a construct system by construing events and then act in terms of that framework" (Ryckman, 1978, p. 198). According to Kelly (1955), an individual is continually trying to improve his or her constructs by increasing their number and by changing them to provide better fits with reality and life events.

The personal construct system has important structural characteristics. People not only differ in the content of their constructs, but they also differ in the ways in which their constructs are organized. Constructs are organized in a hierarchical manner with some being designated as "superordinal" and others as "subordinal." Kelly (1955) suggested that an individual's personality might be better understood if the organizational properties of his or her construct system were known.

Kelly (1955) made an important contribution to both clinical practice and research by developing the Role Construct Repertory Test. Through the use of this test, it is possible to analyze the content but not the organizational structure of an individual's construct system (Hunt, 1976).

With its emphasis upon construct formation, individual differences in construing other people, and the structural characteristics of personal construct systems, Kelly's (1955) theory served as a basic framework within which research relative to conceptual complexity in an interpersonal context could be undertaken.

The concept of cognitive complexity was introduced by Bieri (1955). Within the framework of personal construct theory, Bieri (1955) examined the relationship between the degree of differentiation in an individual's construct system and the ability to predict the behavior of other people. Bieri (1955) termed the degree of differentiation of the construct system as "cognitive complexity-simplicity." "A system of constructs which differentiates highly among persons is considered to be cognitively complex. A construct system which provides poor differentiation among persons is considered to be cognitively simple in structure" (Bieri, 1955, p. 263). As predicted, cognitively complex subjects were more proficient than those who were cognitively simple in predicting the behavior of other people. Furthermore, it was found that cognitively complex individuals were less prone to assuming similarities between themselves and others and also less likely to assume that others would behave as they themselves would in a variety of situations.

Bieri (1966) came to regard cognitive complexity as an information processing variable which could be defined as, "... the tendency to construe social behavior in a multidimensional way, such that a more

cognitively complex individual has available a more versatile system for perceiving the behavior of others than does a less cognitively complex person" (p. 14).

Whereas Bieri (1966) focused on differentiation as a facet of cognitive complexity, other theorists emphasized both differentiation and integration. For example, in Crockett's (1965) interpretation, an interpersonal cognitive system is "considered relatively complex in structure when (a) it contains a relatively large number of elements and (b) the elements are integrated hierarchically by relatively extensive bonds of relationship" (p. 49).

Conceptual complexity forms an integral part of what has come to be known as Conceptual Systems Theory. The basic theoretical framework for Conceptual Systems Theory was developed by Harvey, Hunt, and Schroder (1961) and, since its inception, it has been extended and refined (Hunt, 1966; Hunt & Sullivan, 1974; Schroder, Driver, & Streufert, 1967). Various theorists have adopted different emphases within the general framework of Conceptual Systems Theory (Stewin, 1976). Schroder *et al.* (1967) have formulated an information processing approach to conceptual systems functioning, central to which is the dimension of integrative complexity. Hunt and his colleagues (Hunt, 1966; Hunt & Sullivan, 1974) have focused on conceptual level, environmental conditions, and the matching of these two dimensions to optimize development. While these two approaches have somewhat different emphases, they nevertheless share a common theoretical base. As Stewin and Anderson (1974) have pointed out in comparing Conceptual Systems Theory as developed and elaborated by Harvey and Hunt with the Schroder *et al.* (1967) information processing approach to conceptual systems functioning:

In both models... the individual is ascribed a position along a concrete - abstract continuum and is presumed to possess a number of personal and conceptual attributes associated with his information processing style. (p. 233)

It should also be noted that these approaches bear some resemblance to other personality theories in which cognitive factors occupy a central position, with the most notable of these perhaps being Kohlberg's cognitive - developmental theory (Kohlberg, 1969) and

Loevinger's theory of ego development (Loevinger, 1977). However, the concept of conceptual complexity, as interpreted for the purposes of the present paper, does not constitute a clearly articulated or major component of these theories. Since the focus of this paper is specifically upon conceptual complexity and its relevance to counselling, these theoretical positions will not be dealt with.

Much of the research investigating the relevance of conceptual complexity theory in a counselling context has relied upon the frameworks provided by Schroder *et al.* (1967) and Hunt and Sullivan (1974). For this reason their positions will be further described in some detail.

In the theoretical framework developed by Schroder *et al.* (1967), four levels of integrative complexity are identified - low, moderately low, moderately high, and high. With regard to the nature of these levels of information processing, Schroder *et al.* (1967) explain:

Many gradations or structural levels could be described along the conceptual - complexity dimension.... We would like to emphasize that these are merely points on a somewhat continuous dimension which have been selected solely for purposes of communication. (p. 15)

Since the four levels of information processing identified by Schroder *et al.* (1967) are assumed, to some extent at least, to exist on a complexity continuum, only the low and the relatively high levels will be briefly described in order that the reader might gain a general appreciation of the basic nature of the model. The low and relatively high levels of integrative complexity have also tended to be of greatest interest to researchers employing this model in a counselling context.

At the lowest level of conceptual complexity, which Schroder *et al.* (1967) describe as having a "low integration index," the individual's cognitive processes tend to be characterized by a unidimensionality of stimulus interpretation. Comparatively few degrees of freedom in thought processes exist at this level and cognitive dimensions are dichotomous in the sense that stimuli are matched against yes-no categories. Individuals at this level of conceptual complexity tend to employ categorical, black-white thinking in

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their interpretations of people and situations and characteristically try to avoid conflict and ambiguity. The behavior of individuals functioning at a low level of conceptual complexity tends to be very much grounded in external factors. Schroder *et al.* (1967) also suggest, in keeping with Bieri (1955) that individuals functioning at a low level of conceptual complexity tend to have an overgeneralized perception of other people; that is, they perceive the world solely in terms of their own conceptions rather than being sensitive to situational changes and alternative interactions that others might have.

At the highest levels of conceptual or integrative complexity, individuals are able to adopt a distinctively abstract and theoretical approach in their thinking processes (Schroder *et al.* 1967):

As with other levels, an increase in the number and complexity of the parts of the mediating structure is accompanied by (a) an increase in the degree of diversity the system can generate and handle, in the number of schemata and dimensions, and in the complexity of their organization; (b) greater discrimination between stimuli within dimensions; and (c) an increased potential for the structure to generate alternate patterns of interaction and new schemata without the imposition of new external conditions. (p. 23)

According to Schroder *et al.* (1967), persons functioning at relatively high levels of integrative complexity are less absolutistic in their thinking, more able to generate alternatives, and more likely than individuals operating at lower levels to seek out a wide range of information before resolutions are determined. Schroder *et al.* (1967) suggest that high integrative complexity is associated with the capacity to interpret social situations from different points of view and to "simultaneously weigh the effects of taking different views" (p. 21).

Cognitive complexity is an integral part of the conceptual level theory developed by Hunt and Sullivan (1974) who point out that conceptual level theory actually represents a specific version of the theory of personality development and organization originated by Harvey, Hunt, and Schroder (1961).

In conceptual level theory (Hunt & Sullivan, 1974), "Development is considered on a dimension of Conceptual Level, which is a dimension of increasing conceptual complexity and interpersonal maturity" (p. 208). Hunt and Sullivan (1974) suggest that the developmental process can be characterized in terms of three interrelated stages: individuals in Stage A tend to be immature, unsocialized, very concrete, and incapable of generating their own concepts; individuals in Stage B tend to be dependent, conforming, concerned with rules, and categorical in their thinking; and individuals in Stage C tend to be independent, self-reliant, inquiring, and capable of generating alternatives and new concepts. The information processing characteristics of these stages very closely parallel the conceptual complexity levels described by Schroder *et al.* (1967). "Thus, the Stage C person is not only more independent than the Stage B person, but he is also superior in processing information, that is more capable of distinguishing different elements and putting them together" (Hunt & Sullivan, 1974, p. 210).

The Conceptual Level (CL) Matching Model (Hunt & Sullivan, 1974) represents an attempt to apply conceptual level theory in an educational context and, as will be seen, is increasingly being adapted for use in researching various aspects of the counselling process.

The basic idea underlying the CL Matching Model is that optimal development and change in behavior are enhanced if the characteristics of the person are suitably matched or coordinated with characteristics of the environment (Hunt & Sullivan, 1974). In educational terms, it was hoped that pupil learning and development might be optimized by taking dimensions such as conceptual level into account in the planning of learning activities and the structuring of learning environments.

Hunt and Sullivan (1974) suggest that conceptual level can be interpreted "contemporaneously as an accessibility characteristic related to environmental degree of structure, or developmentally as a succession of stages related to long term goals for developmental progression" (p. 221).

Degree of structure is the environmental dimension most emphasized by Hunt and Sullivan (1974). In a high structure situation, the decision-making regarding how the environment will be structured is done predominantly by the training agent, with the individual

having little decision-making power. Examples of high structure approaches include teacher centered approaches and learning through lecture. In the low structure situation, the individual and the training agent share at least equally in determining how the environment will be structured. Examples of low structure approaches include student centered approaches and discovery learning. On the basis of their research findings, Hunt and Sullivan (1974) concluded that, "Low CL learners profit more from high structure and high CL learners profit more from low structure or, in some cases, are less affected by variation in structure" (p. 215). This "basic matching principle" is regarded as constituting the core of the Conceptual Level Matching Model.

Counselling Applications

With an overview of conceptual complexity theory having been provided, some attention will now be devoted to discussing its significance for counselling. The relevance of conceptual complexity as a personality and information processing variable has been explored in a variety of counselling contexts. Among these are:

Matching

Research reviewed by Posthuma and Carr (1975) indicates that both the counselling process and counselling outcome can be positively affected by matching the counsellor and the individual client or the counsellor and the members of a group on the basis of level of cognitive differentiation. They describe the rationale for differentiation matching in a group setting as follows:

When group members are of a similar level of differentiation, they would tend to conceptualize their experience to the same degree of complexity and thus be able to communicate on the same conceptual wave length. This would create less dependence on the group therapist to facilitate interaction in the group and should in turn provide a more powerful intervention than in a group of heterogeneous levels of differentiation where much of the energies of the group would be dependent on the leader's ability to facilitate understanding. (p. 41)

Posthuma and Carr (1975) emphasize, however, that more research is needed regarding the efficacy of homogeneous grouping and the

effect of the therapist's level of differentiation in a heterogeneous group setting.

Stein and Stone (1978), within the framework of Conceptual Level Matching Theory (Hunt & Sullivan, 1974), examined the relationship between client conceptual level, degree of structure provided by the counsellor, and initial interview client behavior. The results suggested that in the early stages of counselling, high conceptual level individuals probably would profit more from a relatively unstructured emphasis, as exemplified by *client-centered or existential approach*. On the other hand, low conceptual persons are probably most helped by, *find most satisfying, relatively structured formats, as exemplified by behavioral or rational-emotive approaches.*

The Conceptual Level Matching Model (Hunt & Sullivan, 1974) has also been used in the context of counsellor training. Berg and Stone (1980) examined the effects of trainee conceptual level and degree of supervision structure upon developing skills in empathy and reflection of feeling. They found that differences in degree of supervision structure did not differentially affect high and low conceptual level trainees in the learning of these skills. At the same time, however, "Low CL trainees reported a greater satisfaction with high structured supervision, perceived their supervisors as more helpful in high structured supervision, and thought that they learned more from high structured supervision than from low structured supervision" (Berg & Stone, 1980, p. 507).

Rosenthal (1977) attempted to assess the differential effects of Structured Learning Training (SLT) and a self-instruction approach upon confrontation skill acquisition in trainees varying in conceptual level. Rosenthal (1977) found that although both the structured and the self-instructional approaches were generally effective in helping trainees to develop confrontation skills, the two approaches were differentially effective for high and low conceptual level trainees. The self-instructional approach was more effective with high CL than with low CL trainees. Furthermore, the confrontation skill acquisition of low CL trainees was greater when the structured approach rather than the unstructured approach was used. Rosenthal (1977) concluded that, "Low CL trainees seem to need more guidance and support during instruction than high CL individuals who can work well

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with a more independent approach" (p. 236).

Clinical Diagnosis

Cognitive complexity appears to be an important factor in the context of accurate clinical diagnosis and hypothesis formation. Holloway and Wolleat (1980), for example, found that the hypotheses generated by counselling trainees functioning at relatively high levels of cognitive complexity were superior in overall quality and clarity of expression to those produced by individuals functioning at relatively low levels. Holloway and Wolleat (1980) suggest that counsellor educators might be more effective in training individuals in clinical hypothesis formation if they focused on the information processing dimensions of the trainee's efforts as much as they do on the actual content of the hypotheses themselves. "Thus, the trainee will have the opportunity to learn how to think about the issues of problem identification and not just what to think for a particular client in a particular situation" (Holloway & Wolleat, 1980, p. 545).

Career Exploration and Decision-Making

Increasing attention is being given to conceptual complexity in the context of career exploration and decision-making (Bodden, 1970; Harren, Kass, Tinsley, & Moreland, 1978-1979; Warner & Jepsen, 1979).

Harren *et al.* (1979) provide an example of how an understanding of conceptual complexity in a career decision-making situation might be beneficial. They studied the effects of gender, sex-role attitudes, and cognitive complexity on gender dominant career choices and found that male dominant majors tended to be selected by individuals who use a greater number of constructs in judging female dominant occupations. Furthermore, it was found that, relative to men, women tended to judge female dominant occupations in a less cognitively complex manner. Pointing to the implications of these findings, Harren *et al.* (1979) concluded:

These findings are consistent with Bodden and Klein's (1973) findings that more constructs are used in judging disliked occupations than liked occupations. They concluded that persons have more reasons, that is, use more constructs, for rejecting alternatives than they have for accepting

alternatives. Thus, one approach to expanding career options for women would be to systematically train them to use a wider range of relevant constructs to evaluate female-dominant occupations, thus providing them with a better basis for rejecting these occupations. (pp. 232-233)

There are indications that Kelly's Repertory Grid, which reflects an individual's cognitive complexity, is potentially useful in exploring career alternatives and making career decisions. The work of Cochran (1980a, 1980b) appears to be particularly promising in this regard.

Empathy and Perspective-Taking

There is considerable evidence that conceptual complexity is an important dimension of empathy and of generally being able to take the perspective of others (Adams-Webber, Schwenker, & Barbeau, 1972; Delia & Clark, 1977; Hale, 1980; Hale & Delia, 1976; Ritter, 1979; Wolfe, 1974).

In the context of counselling, conceptual complexity represents a key to better understanding the empathic communication process and the conditions under which optimal empathic communication might be achieved. There is evidence that counsellors functioning at a relatively high level of conceptual complexity are more empathic than those functioning at relatively low levels (Blaas & Heck, 1978; Goldberg, 1974; Heck & Davis, 1973; Kimberlin & Friesen, 1977). However, Heck and Davis (1973) make the observation that although counsellors differing in conceptual level have different base levels of empathy, there is, on the basis of the findings, no support for assuming that level of empathy expression remains constant across different clients. "In short, the findings suggest that while the construct of empathy may be thought of as a dispositional characteristic of the counsellor, the level at which it is expressed is affected by differences in clients" (Heck & Davis, 1973, p. 103).

Kimberlin and Friesen (1977, 1980) investigated the relationship between conceptual level and the ability to respond empathically to complex, ambivalent emotional states. It was found that high CL trainees were more empathic than low level trainees to ambivalent client affect statements. On the other hand, no such difference was found in terms of

responses to non-ambivalent statements. Kimberlin and Friesen (1977) suggest that:

The superiority of high conceptual level subjects in identifying ambivalence and in responding empathically to ambivalent statements may indicate that although empathic responses can be taught to low conceptual persons, their ability to respond is more limited. Low conceptual level persons can empathize with clear-cut emotions. Their limitations in processing complex, conflicting information, however, seem to serve as a limitation on their ability to understand and empathize with others. (p. 357)

Kimberlin and Friesen (1977) go on to suggest that although not enough is known at this time concerning the effects of low conceptual level counsellor functioning to legitimize the use of conceptual level as a screening or selection dimension, this possibility might be explored. At the same time, Kimberlin and Friesen (1977) speculate that, given the apparent relationship between conceptual level and empathic ability, it might be possible to enhance the latter by deliberately attempting to influence the former. This idea would seem to have some merit since a considerable amount is known concerning the conditions under which conceptual complexity develops (Cross, 1964, 1967, 1970; Harvey, Hunt, & Schroder, 1961) and since there are indications that its development can be influenced through planned interventions (Gardiner, 1972).

While research of the type reported represents an important contribution to unravelling the intricate dynamics involved in the empathic communication process, it should be kept in mind that the results of various studies, at this point at least, are not unequivocal. For example, Stein and Stone (1978) indicate that their findings regarding the relationship between conceptual level and client perceptions of counsellor empathy are inconsistent with those of Heck and Davis (1973).

Although the theoretical basis of the general area of conceptual complexity has been reasonably well developed, the measurement of conceptual complexity has proven to be quite problematic (Burlison, Applegate, & Neuwirth, 1981; Gardiner, 1968; Goldstein & Blackman, 1978; Miller, 1978, 1981; Miller & Wilson, 1979; Stewin & Anderson, 1974; Vannoy, 1965). Given this state of affairs, it is to be expected that problems of measure-

ment should also arise when attempts are made to explore the relevance of conceptual complexity to counselling. Because a variety of unequivocal interpretations and measures are subsumed by the concept of conceptual complexity, it should not come as a surprise that research findings are at times equivocal or contradictory.

Conclusion

An attempt has been made to provide an overview of conceptual complexity theory and to discuss its relevance in a counselling context.

This article is an example of how knowledge from various areas of psychology can be made useful to counsellors. Although conceptual complexity has been high-lighted, there are other areas presently being investigated that have direct counselling relevance, of which two appear to be particularly promising. The first area has to do with the influence of affect on cognitive processes (Bower, 1981; Hogan, 1977; Koenig, 1975; Lazarus, 1982; Lewis & Rosenblum, 1978; Zajonc, 1980), and the second is concerned with how self-concept relates to information processing and to the perception of other people (Bannister, 1977; Cohen, 1981; Greenwald, 1980; Mancuso & Ceely, 1980; Markus & Smith, 1981; Rogers, 1981). It should be noted that much of the work being done with regard to self-concept is reminiscent of, and in fact builds upon, the Psychology of Personal Constructs originated by Kelly (1955).

There is presently an encouraging trend in the direction of integrating such areas as "cognitive psychology," "personality," and "social psychology," (Glucksberg, 1981). This inter-disciplinary-integrative thrust is resulting in the generation of knowledge that is potentially very relevant to counselling theory and practice.

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