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TOWARD AN ECOLOGY OF CAREER DEVELOPMENT*

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Abstract

In this article, a case is made for the application of the ecological metaphor to career development. The argument is framed in response to two diverse trends having evolved in career development theory and research, one psychological and the other sociological. The ecological approach is described, and several applications to career development are made. Ecology is found to focus specifically on the interaction between the developing person and the environment. It also represents a special application of general systems theory. Contrasts between an ecological perspective and more traditional approaches to career development are provided. In the final section of the paper the implications of this perspective for research and practice are discussed.

Résumé

L'auteur de cet article propose d'appliquer la métaphore écologique au développement vocationnel. Son argumentation se situe en réponse à deux courants distincts qui ont marqué l'évolution de la théorie et de la recherche sur le développement vocationnel: l'un est de nature psychologique et l'autre d'inspiration sociologique. L'auteur décrit l'approche écologique et suggère plusieurs applications en termes de développement vocationnel. L'écologie est spécifiquement orientée vers l'interaction de la personne en croissance avec son environnement. Elle représente aussi une application particulière de la théorie générale des systèmes. L'auteur fait état des contrastes entre une perspective écologique et des approches plus traditionnelles du développement vocationnel. Enfin, on trouve une discussion des implications de cette perspective écologique au plan de la recherche et de la pratique.

Recently, career development researchers (Gottfredson, 1982; Law, 1981b; Super, 1980; Vondracek & Lerner, 1982) have called for greater importance to be given to environmental influences on vocational choice and development. Even among the earliest career developmental theorists, the interaction between the person and the social and cultural

environment was recognized. Super's early formulation (Super, Crites, Hummel, Moser, Overstreet, & Warnath, 1957) for example, included the concept of person-situation interaction.

Rather than a unified approach, however, two perspectives in career development have evolved — one psychological, which placed the emphasis on personal variables (Holland, 1973; Krumboltz, 1979; Super, Starishevsky, Matlin, & Jordaan, 1963); the other sociological, which examined career development from a larger perspective (Roberts, 1974, 1981; Sewell & Hauser, 1975). Usually practitioners,

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by virtue of their work with individuals, have aligned themselves with the former. As well, much of the research has been on personal variables, a representative review of which is provided by Holland, Magoon and Spokane (1981). The tension within career development is a contradiction felt within social science generally, and in virtually all varieties of Western thought (Plummer, 1983). It is the pull between the subjective creative human being acting upon the world and the objectively given social structure constraining him or her.

In response to this dichotomous development, efforts have been made to account for environmental influences and to understand the contexts in which development occurs. Krumboltz (1979) involved environmental factors in a social learning model of career decision making. Gottfredson (1981) proposed a developmental theory of occupational aspirations which suggests, and justifies from an examination of the literature, that development of occupational aspirations is highly conditioned by both cognitive development and one's social environment. Vondracek and Lerner (1982) discuss the nature of adolescent vocational role development from an interactional perspective which involves the convergence of data sets from several disciplines – evolutionary biology, cultural anthropology, family sociology, and developmental psychology.

Law (1981b) attempted to resolve the lively debate in Britain between psychological and sociological approaches to career by proposing a "mid-range" theory based on community interaction. Essentially, this approach is based on Roberts' (1980, 1983) view that career development is a process of construing a series of representations of self and situation. These constructions are based on the interaction one has, not with a nebulous and impersonal "society", but with individuals in one's community. Community interaction processes not only transmit the effects of larger sociological processes, they also modify these effects.

Young (1984) used Bronfenbrenner's (1979) ecological model of human development to examine the research on the career development of adolescents. Bronfenbrenner's model was found useful because it provides a framework to understand the embeddedness of the individual in contexts ranging from dyads to broad cultural factors. It was evident that many studies beyond the immediate systems in which the individual interacts were not

conceived in a psychological perspective. The use of the ecological metaphor signals a shift in career development conceptualizations because it allows, as Bronfenbrenner (1979) noted:

. . . for the study of progressive mutual accommodation between an active growing human being and the changing properties of the immediate settings in which the developing person is affected, by relations between settings, and by the larger contexts in which settings are embedded. (p. 21)

The ecological metaphor, interpersonal in perspective, has been used elsewhere in psychology (Belesky, 1980; Shotter, 1982; Shotter & Newson, 1982) and in counselling psychology (Blocher, 1982; Friesen, 1983).

The purpose of this paper is to examine further the utility of the ecological metaphor in career development. Metaphor is an important attribute of theory for it serves to guide and stimulate research. Indeed, the use of this metaphor represents a shift from earlier epistemologies, and as McIntosh (1980) has indicated, "a profound revolution in science". Career development can benefit from the use of the ecological metaphor in providing the framework in which to integrate diverse perspectives. It also helps us to focus on what is manageable in the practice of career guidance and counselling.

In this paper, I shall address first what it means to be ecological. Subsequently, this approach will be applied to career development and contrasts between ecological and traditional approaches to career development will be made. Special attention will be given to research and practice.

On Being Ecological

1. Ecology provides us with perspective. As a natural science, it links several disciplines in a holistic perspective. In contrast, atomistic sciences deal with the fewest, simplest, most consistent and most general laws in nature. Strong (1980) has characterized an ecological perspective as one that attempts to account for a multiplicity of continuously varying characteristics. Ecology looks for uniqueness rather than sameness, and as McIntosh (1980) noted, it does not clearly use "theories", "hypotheses", and "laws".

2. Ecology directs our attention to the interaction between the developing person and

the environment. It emphasizes their dynamic interaction. It is not sufficient to ask about the effect of various contexts on the career development of individuals nor can we consider careers as developing independently of what is in the person's world at any given moment. To the extent that there is a dynamic interaction between the organism and the environment, it permits one to frame the question about the individual as producer of his or her own development (Lerner & Busch-Rossnagel, 1981). The possibility of conceiving of career development from this perspective is hopeful in a world in which many of the degrees of freedom in one's life course seem to have vanished.

3. Ecology is seen as a special instance of general systems theory, at a lower level of abstraction, and, therefore, closer to human phenomena (Germain, 1978). McIntosh (1980) suggests that the new systems ecology, which represents a major portion of ecology, amounts to a profound revolution in science, "a revolution that will transform human thought as did earlier ones of Galileo and Newton". Systems analysis was appropriated by ecologists to deal with the extreme complexity of ecological systems. The ecosystem model has been used in the social sciences (Bateson, 1972; Ellen, 1982; Ophuls, 1977), in family therapy (Hoffman, 1981), and in counselling psychology (Friesen, 1983).

General systems theory will prove useful to career development as long as it is used in an ecological framework, for it is ecology that adapts it to living systems. As well, it needs to employ an "open system" model in order to incorporate change initiated by individuals in the system.

4. Ecology offers the concept of niche, which addresses the way in which an organism lives in a given environment, rather than habitat which is where an organism lives. Niche is a useful concept because it defines the life space of the person, the unique reciprocal interaction between the person and the environment. Gibson's (1979) application of the ecological metaphor to visual perception provides us with the notion of *Umwelt* and "affordances". The *Umwelt* is the special environment that exists uniquely for any person. Shotter and Newson (1982) have described the person's effective environment as the world that fits for that person, the world that he or she is at home in and knows how to operate in because it was made by that person. To paraphrase Shotter and Newson, the person acts not

only in response to that world, and in conjunction with what that world offers, demands, rejects, invites, enables, or constrains — in short affords. The person exists as an open system in mutual relationship with his or her effective environment. The way we can begin to frame the large questions of influence and interaction in career is to describe "niche" and determine the unique "affordances" of that niche. It is in this way, as Law (1981b) noted, that ecology provides an acceptable meaning and range of focus for career development.

Applications to Career Development

At first glance the counsellor may shrink away from an ecological perspective. Ecology accounts for many variables that have not previously been accounted for, and these variables seem to constrain the amount of individual freedom and responsibility that we perceived the individual to have had. Moreover, many of the variables that have been introduced are not properly speaking psychological and are thus outside the realm of the counsellor's interventions. The counsellor has good reason to be cautious because the ecological approach represents a shift in our thinking in career development. But it is not for the reasons enunciated above that the counsellor should be wary. Rather, the ecological perspective will increase the potency that counselling has and the potency that the individual has in this system.

Ecologically, I am proposing that career development is not best understood as a group of attitudes and behaviours that develop independently within the person. At the center of the ecological approach is the individual engaged in a reciprocal relationship with the environment. In an earlier paper (Young, 1984) I used the definition of career development as the growing capacity of the individual to understand and act on the career environment. This definition focuses on the individual and yet is ecological because the term *act on* addresses the individual's actions vis-a-vis an external system. In this context, human action is differentiated from behaviour. Action implies intention, that is, toward what are the individuals directing their actions and toward what do the actions lead. "A central assumption is that actions are initiated and/or guided by agents, by people themselves" (Shotter, 1980, p. 47). The task of career development theory and research is to specify the nature of the person's embeddedness in the career environment and the nature of the

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individual's actions in interacting with that environment.

The dimensions of the differences between an ecological approach and non-ecological approaches are detailed in Table 1. This set of contrasting poles is used to highlight the range of differences. It is not offered to have the

transcends the usual humanistic versus positivistic dichotomies.

A circular epistemology is central to an ecological perspective. The person's actions are seen as part of many circular loops arising from interaction with a variety of subsystems. Hoffman (1981) used the example of the

Table 1

Contrasting Poles for Ecological and Non-ecological Approaches

Dimensions	Ecological pole	Non-ecological pole
Discipline	Multidisciplinary	Single discipline – either psychology <i>or</i> sociology <i>or</i> economics
Epistemology	Circular; interfittedness of things important	Linear; casual connections important
Developmental bases	Development as a continuous interdependency of person and environment	Development as epigenetic e.g. Gesell, Freud <i>or</i> as social transmission
	Career development as increasing maturity, complexity, diversity, richness, quality	Career development as linear and uniform, ending in decline <i>or</i> career development as disorderly
Developmental stages	Vocational stages are unique to the individual, must be understood in context	Vocational stages are generalizable
Change	Change is a result of inner dialectics <i>and</i> outer dialectics (Riegel, 1975)	Change is a result of inner dialectics, e.g. Rogers, Piaget <i>or</i> outer dialectics
Research methods	Biographical/hermeneutical – making sense of the life in the context in which it is lived	Empirical/operational
Counsellor's interventions	Focus on how the individual constructs his/her reality and meaning in the environment of which he/she is a part	Coaching <i>or</i> introspection

reader abandon one set of poles in favour of the other, but to emphasize the perspective ecology brings to career development. The non-ecological pole includes quite diverse formulations of development and thus occasionally lists two or more constructs in contrast to the ecological pole. Indeed, the very fact that there are two or more non-ecological constructs for many dimensions illustrates the integrative nature of the ecological perspective. As well, the ecological approach

billiard ball to illustrate linear causality. In contrast, the idea of circularity is depicted by the difference between kicking a stone and kicking a dog. Kicking the stone will make the stone move a certain distance, which can be predicted by the heaviness of the stone, etc. The kick administered to the dog may have a very different result because the dog has its own energy source. The response of the dog adds new information to the relationship between the dog and the person. Because

career actions, like other actions, are initiated by persons who also have their own energy source, these actions can make a difference to the system in which they occur. Wilden (1980) pointed out that epistemology is determined by where one draws the line. Our conventional model of reality draws the line between organism and environment. Epistemology is also determined by whether that line is straight or circular.

Career development is based on the continuous interaction of the person and the environment. This ecological dimension allows for continuity of development as well as change in development because of the interaction between the person and the environment. In contrast, the epigenetic view, represented in career development by Bordin and his colleagues (Bordin, Nachmann, & Segal, 1963), regards development as a gradual unfolding of what is inherent and latent in the person. Other career theorists (e.g. Super et al., 1957), while according some role to the interaction between the developing person and the environment, invest in the continuity hypothesis in as much as they assess development by predetermined capabilities. Jordaan and Heyde (1979), for example, use the dimensions of vocational maturity – planfulness, exploration, future orientation, information seeking, knowledge of the world of work, decision making – as indices of the adolescent's capability of meeting the demands of society. Another example of continuity in the career realm is Hogan's (1983) socioanalytic interpretation of Holland's (1973) theory of vocational choice. Holland's theory focuses on continuity of individual and cultural development through the significant influence of role expectations and early developmental indices. In these views of career development, the individual meets the demands of society.

Alternatively, discontinuity in development is produced through positive feedback in the ecosystem. In ecosystem terms, positive feedback enables individuals to change their operations in response to environmental change and allows the change or innovation to survive and to reproduce itself. This type of development is particularly useful in periods of rapid social change because it allows for new, more adaptive responses to emerge. Here, the individual is seen as the producer of his/her own development because as new responses are reinforced, they restructure the system and eventually are fed back to the person. Recently, Bandura (1982) pointed out that socialization theories which view life patterns as the product

of childhood socialization, and stage theories which portray development in terms of an invariant succession of distinct stages, do not give sufficient attention to the impact of chance events. Such events not only limit predictability but may have a radical effect on life's course. Hoffman (1981) cites Platt's (1970) idea that sudden changes such as falling in love, or acts of creation or revolution, are among the most startling features of living systems. Moreover, those changes can take place with incredible suddenness, but usually in a context in which the previous system has begun to work badly.

Another principle of ecology put to service in career development theory is represented by Law's (1981a) conceptualization of autonomy as a third dimension of career development that had not previously been incorporated into the psychological-sociological nor the developmental-differential dichotomies. Autonomy suggests that individuals are not caused to act by events outside of themselves, but are originators of their own actions. Germain (1978) indicated that, in ecological terms, autonomy can be understood as the application of the principle of equifinality, which, in human beings, suggests that there is a certain amount of freedom from either genetic or environmental determinism (Dobzhansky, 1976). It is possible for an organic system to reach an end state independent of its starting position.

This principle allows us to link the substantial psychological literature on autonomy with more recent sociological perspectives. For example, autonomy and the active role of human agency are central to cultural reproduction in schools, which has implications for early career development. Giroux (1983) cites Willis' (1977) study about the career and educational development of working class "lads" as a good demonstration of the active role of experience, intentionality, consciousness and the meaning of common sense as mediating links between structural determinants and lived effects.

Research and Practice

People's lives are the concrete details we have to study and the actuality in which we attempt to intervene. It may be unusual to discuss research and practice together, but an ecological approach encourages us to do so. The ecologist's primary datum is the unique organism-environment interaction, which mutually defines both organism and environ-

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ment. Both research and practice need to refocus on that unique interaction.

Ecological research is typified as biographical/hermeneutical, that is to say, research that seeks to turn the individual's general life recounting and planning into well-articulated accounts. Originally, hermeneutics denoted the science of the elucidation of texts. As applied to career development, the task of hermeneutics is to interpret or elucidate the meaning of human action. Gauld and Shotter (1977) proposed hermeneutical methods for psychology and for human action in particular. The method allows us to get at the very human phenomena of which careers and lives are made – the continuous flow of contextually situated lived actions. In addition, hermeneutics implies the development of frameworks to understand these actions. In this way, biographical/hermeneutical methodology is not intended to replace traditional empirical/operational methods but at least to precede them in providing meaningful conceptual frameworks for career development research.

Biography provides a link between research and practice. Roberts (1983) contends that the counsellor should attend to how the individual constructs his or her reality and meaning in the environment of which he or she is a part. The way to autonomous individual action is for the individual to understand the niche and its unique "affordances" and to construct his or her own most effective environment. The counsellor promotes intentional human action based on that understanding and construction.

Ecological interventions are neither coaching nor introspection nor the sum of the two. I use the term "coaching" to typify those interventions whose basic premise is that life is a game for which the rules are already made. Under this premise, counselling assists the client to learn and adopt behaviour appropriate to these rules. But individuals are rule makers as well as rule followers. Introspection is another method that cannot stand alone, because it singles out the rules we make ourselves, for ourselves, without engaging in the dialectic with the environment.

The ecological perspective invites the application of some specific counselling methods to career development. Social networks have already been used to identify and maintain contacts for job finding and career mobility. However, social networks are much more sophisticated, rich and complex in the

development of individuals. As has been previously mentioned, Law (1981b) developed a model in which the elements of the network for adolescents were identified: extended family, neighbourhood contacts, peer group, teachers at school, and ethnic group. To form a matrix with these elements, he has also identified the functions that these elements might provide: expectations, feedback, support, modelling, and information. This model approaches the crucial issues of functions of the various networks. Others (Cochran & Brassard, 1979; Lewis, 1982; Lewis & Feiring, 1979) have specified the functions of other networks which may point to additional functions of career development networks.

The ecological perspective also directs our intervention efforts to the interrelationships among networks – what Bronfenbrenner (1979) termed the mesosystem. Although much vocational guidance practice developed out of a concern for individuals at transition points in their lives which often entail a movement between settings, well-designed interventions in this area remain as yet virtually unexplored, except for the transition from school to work.

Conclusion

Ecology can never be an autonomous discipline. But for whatever else it may or may not do, ecology does stress integration. For this reason, the ecological metaphor has been applied to the area of career development and, when applied, it provides articulation between several fields of knowledge and skills. These separate disciplines will continue to ask and seek answers to important questions in career development. Nevertheless, ecology provides a framework in which these diverse disciplines can cease to be regarded as unconnected. Moreover, an ecological perspective is useful to practice because it is in practice that a human and interconnected base is required.

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