

A CRITICAL REFLECTION OF BRONFENBRENNER 'S DEVELOPMENT ECOLOGY MODEL

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Abstract

This analysis is a theory based reflection out of the development ecology. When studying an organisation, transformation and spheres of influence of professions and in education, the Development Ecology model provides a tool for understanding the encounter between societal, organisational and individual dimensions, a continual meeting point where phenomena and actors occur on different levels, including those of the organisation and society at large. However, the theory of development ecology may be questioned for how it looks at the individual's role in relation to other actors in order to define and understand the forces underlying the professional development. The focus on the individual might prevent the understanding of group wise development. Resilience capacity on a mental, intra level and an entrepreneurial way of building, developing and keeping networks gives the different levels in the Development Ecology model a broader understanding of what stimulates learning processes. Factors relating to both the inside of the individual and social ties between individuals in a group context in relation to global factors need to be discussed.

Key words: development ecology, organisation, resilience, science education, social ties.

Introduction

The starting point of this work is an analysis and introduction by Bronfenbrenner's Development Ecology model. Thereafter some central issues in order to critically discuss that model are raised. This model is discussed within a theoretical framework because the model needs to be further developed. Which individual levels and ties need to be further understood in the Development Ecology model? How can the individual be seen in a group and network context? Can entrepreneurship enrich the way we look at the individual's potential in a learning process and hence can its addition to the Development Ecology model be regarded as improving it?

Defining your own values is often difficult as they are deep inside yourself. Your selective perception is an unaware consequence of the variety of information which characterises our surrounding environment. A frame of theories and methods as well as empirical observations chosen when looking at specific objects is highly dependent on the result of the selective process which every human being undergoes in his or her upbringing, working life, education etc. We see limited parts of reality, partly what we want to see and observe. Some problems are chosen and others ignored. A recognition of the strengths of some conditions and other conditions are ignored. The purpose of this study is obviously influenced by how things are viewed by the author. Bronfenbrenner's (1979) Development Ecology theory identifies four environmental systems:

The Microsystem: This is the setting in which the individual lives. These contexts include a person's family, peers, school and neighbourhood. It is in the microsystem that the

most direct interactions with social agents take place, such as with parents, peers and teachers. The individual is not a passive recipient of experiences in these settings, but someone who helps to construct the settings.

The Mesosystem: This refers to relations between microsystems or connections between contexts. Examples are the relationship of family experiences to school experiences, school experiences to church experiences, and family experiences to peer experiences. For example, children whose parents have rejected them may have difficulty developing positive relationships with teachers.

The Exosystem: This involves links between a social setting in which the individual does not have an active role and the individual's immediate context. For example, a husband's or child's experience at home may be influenced by the mother's experiences at work. The mother might receive a promotion that requires more travel, which could increase conflict with the husband and change patterns of interaction with the child.

The Macrosystem: This describes the overall societal culture in which individuals live. Cultural contexts include developing and industrialised countries, socioeconomic status, poverty and ethnicity. The boundary is defined by national and cultural borders, laws and rules.

Development Ecology should be seen as a general system theory and that in itself makes it possible to understand a general context and complexity from a holistic approach. In a general theory it is often the problem that many times requires a need to be supplemented with additional theories. The Development Ecology can be applied to different species ages, domains and grains of analysis. But it is also a specific theory of how humans gain knowledge from their everyday actions (Thelen & Smith, 1994). However, the theory has flaws that need to be critically elucidated. This study makes a contribution to the understanding of the limitations of Bronfenbrenner's Development Ecology, however it adds improvements of the same.

A Critical Approach

There are many different theories of human development. To a large extent, they involve the study of child development because the most significant changes take place from infancy through adolescence. Some of the most influential theories are Sigmund Freud's (1856–1939) Psychodynamic Theory (2008), including such concepts as the Oedipus Complex and Freud's five stages of psycho-sexual development. Although now widely disputed, Freudian thinking is deeply imbedded in Western culture and constantly influences the view of human nature. Erik Erikson's (1902–1994) Psycho-Social Theory (1950) gave rise to the term 'identity crisis'. Erikson (1950) was one of the first to propose that the 'stages' of human development span our entire lives, not just childhood. His ideas heavily influenced the study of personality development, especially in adolescence and adulthood. Piaget's (1896–1980) Cognitive and Affective Development Theory (Wadsworth, 2004) created a revolution in human development theory. He proposed the existence of four major stages, or 'periods', during which children and adolescents master the ability to use symbols and to reason in abstract ways. Finally, there is Lev Vygotsky's (1896–1934) Cognitive-Mediation Theory (1978). Alone among the major theorists, Vygotsky believed that learning came first, and caused development. He theorised that learning is a social process in which teachers, adults and other children form a supportive 'scaffolding' on which each child can gradually master new skills. Vygotsky's views have had a large impact on educators and the individual has been seen as a driving force. Vygotsky views all factors as being of equal significance for the individual. This is the reason I chose not to base my theoretical standpoint on Vygotsky. Bronfenbrenner focuses on the individual's drive and ability to influence relative to their specific environment and not so strongly on the individual's sphere of influence. In order to better understand the complex inter-relationship between the individual and society, Bronfenbrenner developed his model of Development Ecology which consists of four systems, each of which operate at different levels: from the micro (the most specific) the meso, the exo to the macro (the most general). Andersson (1986) states that

what distinguishes development ecology from, for instance, socialpsychology, sociology or anthropology is that development ecology focuses on development within a context. In order to understand the individual, it is not enough just to describe them in the context of their family (the micro context); we must also take into account how the various systems interact with the individual and with each other (the meso context). The macro system is then crucial for placing this analysis within the context of daily living. In addition to the four system levels, time is another important factor in the developmental ecological perspective. Both the individual and the environment change over time and Bronfenbrenner maintains that these changes are crucial to our understanding of how the different systems more or less explicitly influence the individual and his or her development. In Bronfenbrenner's theory, everything is interrelated and interacts with each other, but to varying degrees and at different times. His theory focuses on relationships, both between people and between the different systems, which constitute our lives and our world. Bronfenbrenner's ecological theory of development has proven to be beneficial in providing an insight into all the factors that play a role in the growth and development of individuals. It also shows how all the factors are related to each other and impact on the development cycle. Bronfenbrenner does not discuss the factors explicitly as such, but presents a theoretical and analytical framework. Bronfenbrenner pursues a method for psychological study that is both experimental and descriptive. Specifically, Bronfenbrenner studies (and reads studies about) scenes of early childhood development (ages 3–5): home, pre-school, day care, the playground etc. Between the offset list items, Bronfenbrenner explains and gives readings of selected studies. In the "Interpersonal Structures" chapter (1979) he introduces basic terms and concepts for what he calls social networks; interpersonal structures as contexts of human development. The dyad (a person-person tie) is further characterised in the following classes: observational dyad, joint activity dyad, and primary dyad (see Fig. 1). The model below has been slightly modified as it originally spoke about individuals as buyers and sellers instead of takers and givers.

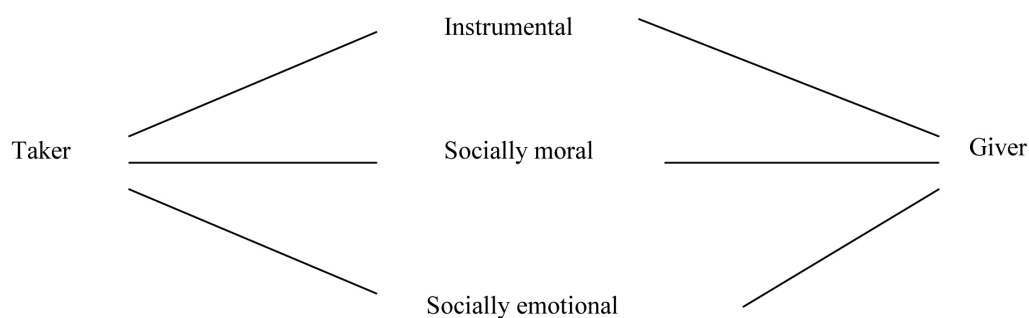


Figure 1: Social Exchange Networks and Organisational Analysis – A taxonomic approach (modified from Johannisson, 1987).

When studying social-personal networks Johannisson (1987) believes that ties between individuals can be both beneficial and social at the same time. His starting point is the entrepreneur/innovator. An entrepreneur is defined as someone with the ability to focus on needs and the resources needed to fulfil these needs (ibid). A network in Johannisson's research is a range of dyads which are related to each other i.e. connections in pairs between individuals. The advantage when describing and analysing the exchange between individuals in terms of social networks is that you have to go around the instrumental or rational exchange (where only the benefit is important). Another argument is that you can connect technical, ideological and emotional aspects of information. Interaction between individuals is also seen as the main source of learning (Johannisson & Gustafsson, 1984). By using Bronfenbrenner's model together with aspects of dyads, it becomes easier to see that we as a society together

are influencing the lives of all people in the way we interact. Bronfenbrenner maintains that the individual always develops within a context. The theory covers the whole of this context, even though this standpoint has been criticised by Paquette & Ryan (2001). They think that the individual needs to be seen for their individual conditions. The ability of individuals to influence their success should be even more in the centre of attention. There should be a greater focus on this, before studying the surrounding context and its levels which simultaneously act upon and interact with the individual and influence their development. Bronfenbrenner's model does not feature what can be interpreted as an international level, an important factor with reference to the all-pervasive force of globalisation and, as a result, Drakenberg's (2004) study is important in that she complements Bronfenbrenner's model with a fifth level, an ex-macro level, arguing that the patterning of environmental events and transitions over the life course, as well as socio-historical circumstances, influences the individual. We could speak of a macro-environment in which political, economic, social, technological and environmental factors depend on each other and influence everyday life in a way which has been stressed, not the least by globalisation and information technology where knowledge processes among individuals have become more diversified. In my opinion, we are living in a global village and the interplay between the different levels in a society has narrowed in which the connection between local and global has strengthened.

Another dimension not included in Bronfenbrenner's theory is resilience. It should have been integrated into his theory (Engler, 2007) because resiliency helps us better understand an individual's capacity. Resilience is manifested in having a sense of purpose and a belief in a bright future, including goal direction, educational aspirations, achievement motivation, persistence, hopefulness, optimism and spiritual charisma (Benard, 1995, as cited in Engler, 2007). Miller (2008) states that it is the ability to be resilient that helps us bounce back from the edge, helps us find our strength in adverse circumstances, for example an individual's capacity to withstand stressors. We are all born with conditions for resilience, which includes social competence, problem-solving skills, a critical consciousness, autonomy, and a sense of purpose (Benard, 1995, as cited in Engler, 2007). Resilience is the idea that certain people have the capacity to overcome any obstacle and this capacity is shown through positive-thinking, goal-orientation, educational aspirations, achievement motivation, persistence, hopefulness and optimism (Engler, 2007). One can speak about the so-called 7 Cs; competence, confidence, connection, character, contribution, coping and control. Adding resiliency to Bronfenbrenner's model gives us a broader understanding of why people deal with their professions in certain ways. Engler (2007) argues that adding resilience to Bronfenbrenner's theory can help us explain some of the unexplainable ways in which people have overcome travesties and traumas in their lives. Bronfenbrenner's theory virtually describes only the negative effects of how an individual will develop if exposed to adversity and travesty. The theory is lacking as it does not have a way to explain how an individual brought up in a negative environment survives and becomes successful.

The individual and the organisation: Every kind of organisation is built upon individuals where the individuals together make efforts in order to serve, assist and offer different kinds of services; you give and you receive. It does not matter if the individual is called a child, family member, professional worker or a citizen. Every individual has a relationship with other individuals both within their own family or organisational context and with other individuals or organisations. As an individual, you have these ties for two main reasons (Johannisson, 1987); beneficial and social. With beneficial reasons, we are speaking about long-term relations, whereas social reasons are more based on personal factors such as emotionality. Long-term relationships based on mutual benefits can be very well developed into a relatively strong social relationship, which does not primarily focus on the benefit of the relationship. It is optimal if both the beneficial and social aspects in the relationship are closely connected. In order to stimulate the individual to act, it is not enough to just show them appreciation, the organisation also needs to show them such confidence that lets them see and create new

possibilities, whereby they are allowed to act both within their own interest and in the interest of the organisation. That is why it is essential in a society to recognise each other as a resource and let an individual develop him or herself and a network of vertical and horizontal relations. This means encouraging and stimulating every individual and giving them as much freedom of activity as possible. By saying this, there is a lack of connection in the development ecological model in how groups of individuals might strengthen each other through the interplay between the group as a collective and the individual in itself.

“The individual needs to be seen as a complete human being. Only then, it is possible to take his or her potential, including the affective one, into consideration in a serious way. Only then, individual and collective actions can be really understood” (Johannisson, 1987, p. 10).

Aldrich (1987, p. 37) contends that a social network is important for an entrepreneur because: a) entrepreneurs succeed due to their ability to identify possibilities and adapt to the possibilities given in the surrounding environment; and b) resources are given through exchange relations between entrepreneurs and their social networks. Johannisson (1987) describes three different types of commitment (see Fig. 1). The model is idealised in the sense that ties based on instrumentality (beneficial), emotionality and morality (family ties) are combined. The model thereby shows that the exchange in the network is never either beneficial or emotional. The strength between these three kinds of relation can depend on geographical, psychological, social and cultural distances. This categorisation into instrumental, affective and moral ties (or commitment) is based on the “idealisation of communal life” (Kanter, 1972). Even in relationships between individuals, these three types of connections can be mixed.

Discussion

The Development Ecology model developed by Bronfenbrenner makes a substantial contribution to our understanding of the individual's role and behaviour in relation to the context surrounding them on different levels. When discussing professional development and/or the constitution of subjects the model is a significant tool for analysing and explaining the forces underlying those developments. Even though other models confront and argue against the Development Ecology model, for example Paquette and Ryan (2001), the model gives a relatively theoretical framework when the starting point is the individual and the belief that development cannot exist without the participation of individual influence and willingness to change. Through the development of, for instance, information technology and access to information, the individual will be given more freedom regarding their space of activity and independence, but also less freedom and space of activity because individuals behave in different ways when acting. Some individuals, to a very high extent, see possibilities while some individuals primarily see difficulties and obstacles. The surrounding environment related to a societal framework (local, national and international) and/or organisational context (family, friends, personal network, workplace) in relation to the individual's capacity plays a key role in development as a whole. Just adding resilience to the Ecology model, like Engler does, is not enough. An understanding of the entrepreneurial aspects of how an individual acts on the micro and macro levels is also needed. Therefore, it is a belief in me that resilience coupled with both entrepreneurial conditions and Bronfenbrenner's Development Ecology model provides a valuable explanation of why freedom of activity and transformation processes are defined and estimated by individuals in various ways. Bronfenbrenner's model lacks these aspects of intra-level understanding and entrepreneurial factors since it does not see the individual as an independent actor. Hence, it needs to be completed on an intra-level (see Fig. 2) which describes the individual's resilience and entrepreneurial skills in a social context. On all levels above the micro level there are different kinds of relations vis-à-vis the individual. This is very obvious in the Development Ecology model. What is not that obvious is the encounter

concerning the individual's beneficial willingness to create, implement and take risks in order to fulfil the need to satisfy themselves and others. In my opinion, this is the basic fundament of the welfare state; entrepreneurship. Therefore, adding resilience and entrepreneurship to Bronfenbrenner's Development Ecology model provides us with a wider understanding of the individual's development and knowledge-based process. Individuals with a resilience capacity and entrepreneurial skills define their own space of activity, regardless of their organisational context. They have the capacity to reflect on the interplay between different levels in their surrounding world in relation to their own professional development. By saying this, a modified model of Bronfenbrenner's Development Ecology to which an intra level (the individual micro level) and social networks have been added can be seen:

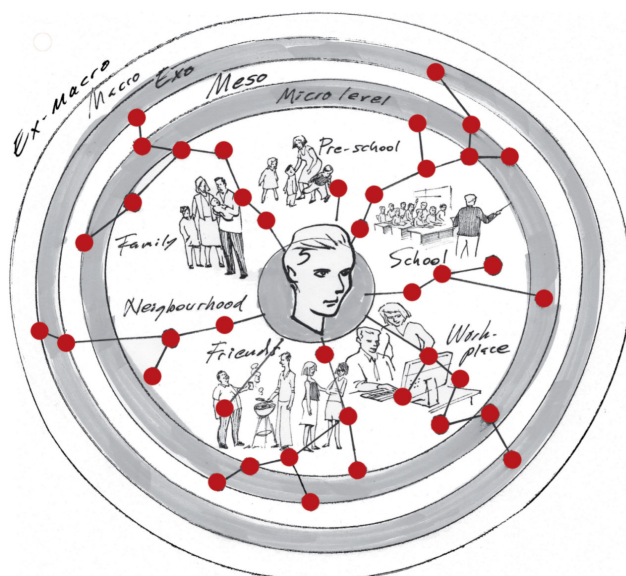


Figure 2: A modified model of Bronfenbrenner's Development Ecology (Christensen, 2010).

Conclusions

Organisational conditions in which the individual acts must be considered in order to encounter changes and transformation processes. How reality is looked at and how, in a collective way, reality is defined on different levels – family, organisation and society – will affect our capability of acting. If, for instance, a company's mission, values and core idea are clearly defined in the workplace, they will have a positive impact on its human resources, management and, in the long run, the health of its employees. How is resistance to, for example, organisational changes handled at the workplace? Is the rejection of changes always purely negative? Or does it hold the potential for a very knowledgeable, substantial and constructive contribution for developing the individual and their organisation? Resilience capacity on a mental, intra level (see in the middle of Fig. 2) and an entrepreneurial way of building, developing and keeping networks gives the different levels in the Development Ecology model a broader understanding of what stimulates learning processes. However, the global factors such as political, economic, social and environmental factors on the ex-macro level in relation to the individual level need to be further understood and the following two questions could be raised: How do we understand education and the profession in a welfare context? Can transformation in a welfare context be understood from both an individual perspective and a social one?

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