# Family characteristics and functioning as moderating and mediating factors for optimal development and the enhancement of creativity in children and adolescents.

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Given the present international, political and economic developments, the Iranian nation must constructively face new challenges according to the high human standards and ideals which have been passed unto its people, generation after generation within the framework of the Islamic civilization. In this pursuit, the ability to deal with noveltly, or to be creative, should be capitalized and, as psychological studies indicate, genetic material does not produce finished traits but rather interacts with environmental experience in determining developmental outcomes. Traditionally, families have been considered the most important social institution to perform the difficult function of raising children and in the process, socialize and educate them. Two models of the family have been presented for which there exists empirical data supporting their effectiveness in promoting cognitive and emotional development in children. The first model considers family structure emphasizing two dimensions: support and stimulation . Different combinations of these dimensions produce differential psychological and behavioral effects in children and adolescents. Only complex families (families which have both dimensions) have been found to meet the requirements of a family which is able to prepare the future geniuses, scientists, and innovators of society. The second model is basically a complement of the first, and

represents an economicmodel because it addresses to family functioning as a means for mental energy savingswhich can be investedin optimal experiences leading toward creativity.

## Introduction

It has become a widely recognized fact that the progress, and indeed, the survival of a nation and of humanity for that matter, depends on the efficient utilization of natural and human resources. Presently, pograms designed to promote the wise utilization of natural resources such as water, electricity, gas and oil, as well as a myriad of other preventing and strategic programs in the fields of agriculture, industry and technology have received much attention in the Islamic Republic of Iran.

The effective utilization of human resources represents a special challenge because of the nature of human development and the cultural and social phenomena associated with it which demand investments that are economically costly and yet do not offer immediate short-term returns. In fact, even in terms of long-term returns, the investment in human capital is unsure and not predictable. Nonetheless, the wealth of nations depends on the capacity and ability of their peoples. From the standpoint of economic human capital theory (Becker,1976; Mincer, 1979) and according to recent conceptualizations of creativity as 'human capital' (Walberg, 1988), the nurturance of creativity and talent in a nation is considered the most desirable investment a nation can make toward the development of human resources in order to secure national and individual welfare.

It is the opinion of the author that much thought and effort needs to be dedicated to the empirical testing of the validity of theoretical formulations and models aimed at promoting the effective utilization of human resources ***prior*** to their utilization in policy making and their implementation in nation-wide programs. In this process of model construction, it is necessary to examine the underlying assumptions of these models regarding the nature of human abilities and how they develop, since these assumptions will define, justify and clarify the purposes of such programs. The role assigned to human abilities and capabilities in the process of a nation's development is equally determined by such underlying assumptions. It is also hoped that basic assumptions of scientific models be explicitly compared with cultural and religious beliefs that guide the indigenous conceptualization of human nature, capabilities, intelligence, creativity, and talent so that a synthesis from both sources be considered in the design and planning of programs aimed toward social and economic progress.

The present article represents an step in this direction. Two models of the family have been descrbed. The first model is a structural model and considers two natural but quite distinct and opposing forces (or dimensions) that operate in families, which seem to cancel each other out unless they are perceived as such, those of "integration" (or togetherness) and "individuation" (or differentiation ).This model addresses the role of effective family structure as a moderator variable. That is, if certain conditions are met by the family environment, it will be supportive of optimal experience increasing academic achievement and

facilitating the conditions for fostering creativity and if those conditions are not met, it can have a reverse effect.

The second model complements the first in that it deals with how the family can be a mediating factor in the effective use of human resources. It is believed that the awareness of parents and children about a family s structural forces, stated above, will contribute greatly towards the family members' better organization, communication and functioning resulting in the effective use of psychological and material resources (attention, time, energy, money) which in turn can increase their capacity for optimal cultivation of ther knowledge, skills and talents which in themselves represent the best investment an individual can make.

**The Nature of Human Development: An Ecological Orientation**

Throughout the past four decades, the systems way of thinking has been embraced in many fields of science like biology (Bertalanffy, 1968), geography (Zeeman, 1976), the neurosciences (Basar, 1990) and psychology has not been an exception (Bronfenbrenner, 1979; Magnusson, 1995; Nilsson, 1984). For example, in 1992, a Swedish cell biologist (Lindberg, 1992), used the title "***Life Is an Interaction***" for a public lecture in his discipline. 'Interaction' as used by him, is a term that applies to all life sciences to cover the essence of the life processes of living organisms.

In the human sciences, this ***systemic*** or ***ecological*** approach has also been applied, and depending of the specific field of study it has been labelled differently. In developmental psychology, it has become to be known as the "Holistic" view of human development

and functioning (Magnusson, 1995). An integrated, holistic model of human development rests on three basic propositions:

1. The individual functions and develops as a total integrated organism.

   *Development does not take place in single aspects, taken out of context.*

2. The individual functions and develops in a continuously ongoing reciprocal process of interaction with his or her environment.

3. Development is the product of a dynamic process, as follows:

   a. At each specific moment, individual functioning is determined in a process of *continuous, reciprocal interaction between mental factors, biological factors,* and behavior - on the individual side - and situational factors.

   b. The individual develops in a proces of continuous reciprocal interaction among psychological, biological, and environmental factors.

Magnusson (1995) states that it is these assumptions that will determine how the human mind is defined, what role do biological or environmental factors or the behavior of the individual will play in his/her development, what status will be assigned to the concept of interaction and its role in human develoment, etc., and these concepts would be quite different if they would be postulated from the point of view of another theoretical perspective. For instance, a cardinal theoretical principle in Bronfenbrenner's (1989) ***bioecological model*** emerging from research on theories of genetic transmission, states that genetic material does not produce finished traits but rather interacts with environmental experience in determining developmental outcomes. Enduring forms of interaction in the immediate environment are referred to as ***proximal processes*** and such mechanism is suggested to serve as a means for actualizing genetic potential for effective psychological development.

In Bronfenbrenner's (1979; 1989) bioecological theory of human development it is proposed that each human life is

embedded within several different systems. A small sample of the systems in which our lives are embedded, he believes, include family, neighborhood, region, nation, religion, ethnic background, gender and historical period, each possessing a culture of its own with an explicit or implicit ideological orientation and these systems' ideologies are conveyed either explicitly or implictly to the individual.

Conversely, this so called personal ideology is considered a biosocial construction in that one's ideological knowledge is formed through emotional (biological) experiences, yet the content of one s personal ideology is derived from the larger cultural ideologies to which one is exposed (Tomkins, 1965). According to Tomkins, it is partially through the selective incorporation and repudiation of components in these larger ideologies that personal ideology is formed and transformed over the life course.

The emphasis on systems frameworks and theories, is not meant to negate the value of other psychological approaches to the study of human nature and behavior, but only it addresses to their limitations and the fact that these limitations should be explicitly recognized when empirical findings based on such fragmented views are applied to make recommendations and conclusions for public social policies.

Likewise, the unique contributions of the systems approach is emphasized for several other reasons: 1) as a tool for the identification of major ecological goals and problem areas related to the formulation of social policies for the efficient utilization of

natural and human resources, 2) in the formulation of broad questions regarding ecological equilibrium within each problem area, 3) in the allocation of resources to the identified problem areas, and 4) as a tool for the advancement of Islamic thought in this process. Of course, this ecological way of approaching basic social as well as non-social issues will inevitably lead to profound reconceptualizations of the structural and functional aspects of national institutions. For example, in order to provide adequate scientific and technical support for resource utilization programs within ecological, systemic, and holistic frameworks, educational centers (e.g. public schools and Universities) would need to become more interdisciplinary and multidisciplinary oriented. The existing rigid boundaries and unconnectedness among the different subjects of scientific, technical, cultural, artistic, and religious study in present curricular programs become obsolete.

**The Nature of Creativity and the Role of the Family**

For the purposes of this article, creativity will be discussed at the individual level, eventhough it is the opinion of most experts (Csikszentmihaly, 1988, Harrington, 1988, Gruber, 1988, Gardner, 1988) that creative talent is basically a product of societal and cultural parameters.

More than 50 years of research in Creativity has yielded a vast amount of information in terms of the concept and nature of creativity. In its most general sense, it can be stated that creativity refers to the act of developing something new and of value for the individual and the society in which he lives. Present integrative approaches in the study of creativity (Sternberg, 1995) suggest

that several factors act jointly to produce it. These factors include: Resources within the person like, intellectual ability, knowledge, thinking/learning styles, personality, and motivation, and resources determined by forces outside the person, like social roles, cultural/social situations, values and uncontrollable factors (Sternberg & Wagner, 1994).

Consistent with the systemic (multidimensional and interactional) view of creativity, results from national-sample studies with adolescents (Schaefer & Anastasi, 1968, Walberg, 1969a, Walberg, 1988) converge in pinpointing to the association of several ecological variables with creativity as identified by teacher nominations, creativity test scores, and self reports. Creativity, specially during adolescence, has been found to be associated with (a) the stimulating qualities of the home, (b) a wide range and high level of involvement in both school and outside activites, (c) persistence and single-mindedness in following through activities despite difficulties, and (d) strong intellectual motivation, although not necessarily extremely high levels of ability.

In considering how to optimize human potential, one aspect of the interactional process that needs to become better understood refers to the individual in his/her relationship to his/her family and the context that his/her family/home environment provides for his/her development and formation. In the words of the poet John Milton (1667): "***The childhood shows the man, as morning shows the day***". Outstanding traits and conditions of childhood can be identified that foreshadow the degree and kind of eminence that

history records.

But, as the proberb states, "***rainy afternoons sometime follow sunny mornings***", the identified childhood traits and conditions are only possible clues or indications of adult eminence rather than certain predictors. Although much has been written about effects of family environment on children screativity (Albert, 1990; Bloom, 1985; Colangelo & Dettman, 1983), the conclusions are far from unanimous in terms of what are the real family influences.

**The Conditions for Optimal Experience and The Role of the Family**

A family may be defined as a group united by marriage, kinship, or adoption. They reside in the same household, maintain a common culture, and interact in role-appropriate ways within the group (Ackerman,1958).

Ackerman (1958) has defined to basic functions of the family, the first is to ensure the physical survival of the young. Physical well-being, sufficient food/clothes, and safety are characteristic of a successful family. The second function of families is to provide the framework or structure within which a person's humaneness can grow. The affectional bonds among the family members are the matrix within which personal identity, sexual identity, social responsibility, and learning potential develop. A healthy family may be defined as one that fulfills these two functions adequately.

At the individual level, a healthy individual is characterized by the presence of what has been called "Optimal" (or "flow") experience by Professor Csikszentmihaly (1975). It refers to a tendency or capacity of the individual to become immersed in an

activity, let it be play in the young child, reading in the older adolescent or work in the adult. The criteria for optimal experience include: egolessness, merged action and awarenss, high concentration, clear feedback, control, and enjoyment of the activity for its own sake (Csikszentmihaly, 1975). Dewey (1913, 1934/1980) discusses these experiences where every successive part flows freely as "emotionalized thinking", or deep interest. Similarly, Izard (1977) describes the intrinsically motivated state of interest as being maked by increased concentration, alertness, positive affect, self-control, and self satisfaction. The ability to enjoy work for its own sake can be further split into two seemingly opposite personality traits. The first of these is persistence, endurance, or driving absorption. The second is a quality variously called curiosity, openness,intense interest, intrinsic motivation or the ability to maintain an attitude of wonder in discovering the world of nature that is forever new and mysterious. Both characteristics represent the most often mentioned motivational prerequisites for creativity and distinguish the creative genius.

It is important to understand the contextual conditions that facilitate optimal experience, because such experiential states are vital for active and healthy development. Interest enables sustained involvement with complex stimuli, and thus has been seen as perhaps the most important factor in learning and development (Tomkins, 1962). The basic attitudes of perseverance, curiosity and openness will enable the individual to remain intellectually active until old age, continuously updating his knowledge and skills, in a long life learning process. Thus,it

appears that the motivational and emotional factors of an individual are more important or as important in determining how successful such individual may be as a scientist, as a manager, or as an artist rather than his/her level of intelligence as measured by standard IQ tests. The scientific community so far remains mute to the role of spiritual assets of the individual in relation to creative accomplishments.

What is then the role of the family and of the family environment, in promoting creative motivation and lasting personal fulfilment?

***Model 1: An Empirically Tested Model of Family Structure as Moderator of Optimal Experience, Academic Achievement and Creative disposiontion.***

Theoretical works and empirical findings (Bakan, 1966; Bowen, 1978; Csikzentmihalyi, 1993) suggest two main dimensions of family structure as it relates to mental health and the development of talent and creativity. The first family dimension is parental '***stimulation***', which has been found to be linked to the fostering of differentiation, individuation, curiosity, interest and willingness to take on challenges among family members, specially adolescents (Csikzentmihalyi, 1993).

'Individuation'(or differentiation) in the context of the family allows individuals to develop well defined identities and therefore enhances the tendency to pursue idiosyncratic goals; thus, enabling the necessary antecedent conditions for the possibility of novel experience (Bowen, 1978). It also maintains the intellectual and the emotional systems functioning separately so that a balanced use of reason and emotion becomes possible (Bowen,

1978). This dimension is conceptually similar to Bakan s (1966) concept of***agency*** which is associated with autonomous achievement.

The second family dimension is parental ***'support'***, a warm emotional acceptance, which in turn is expected to result in integration (or union and commitment among family members), self-confidence, inner harmony, endurance and the development of skills. This second dimension fosters a sense of togetherness or what Bakan (1966) labels***communion*** associated with connectedness and attachment, and is an instance of an opposite natural and innately determined force to differentiation. While in differentiation there is a tendency toward individuality, togetherness refers to the natural tendency of humans to enjoy the company of others, work in cooperation with others and provide services to others.

An equilibrium between these two forces is desirable since extreme tendencies in either direction have been associated with psychological pathology. For example, the family pattern of schizophrenic boys has been found to be characterized by highly emotional content, high levels of anxiety and low use of reason, among other factors (Bowen, 1978).

Families according to this model can be classified into four categories: 1)***complex families***, or families possessing both qualities, 2)***differentiated families***, characterized mainly by individuaiton forces, 3)***integrated families***, characterized mainly by support forces, and 4)***simple families***, or families possessing neither of the parameters.

The functioning of complex families can be assumed to represent an optimal level of functioning which in principle should be associated with behavioral, attitudinal, motivational and cognitive patterns that optimize the use of an individual's psychological resources like attention and mental energy. Thus, the second model considered addresses precisely to the mechanisms by which these, so called, economic aspects of psychological functioning, are realized.

***Model 2: The Economics of Family Functioning and Individual Role Quality.***

An intriguing approach to conceptualizing role quality is that of Stewart and Malley (1987). Based on Bakan s(1966) theoretical formulations, they argue that a balance between the two modes of individual functioning, agentic and communal, either within or accross roles, is central to well-being.

Applying this notion to the level of the family, it is suggested that once a family learns to function keeping a balance of these two natural but opposing forces (or maintain an***autotelic*** context, (auto = self, telos = goal), the environment within which such family operates is characterized by certain contextual factors: clarity of rules and warm interpersonal commitments that foster family integration, and opportunity for individual choice and challenge which foster family differentiation.

The presence of ***clarity, commitment, choice, and challenge*** in a family has been proposed to be the mechanism by which "economic" benefits for family members are secured, specially in terms of cognitive-attentional resources. If a family context subtly directs attention through its backgroundstructure, then the benefit of an autotelic context would lie in its helping family members to steer clear of excessive redundancy and novelty, and thus avoid the wasteful extremes of boredom and anxiety. Since attention is a valuable and limited resource, too much time spent in such inefficient states wastes resources that could be diverted to growth-related activities.

The presence of support, and its outcome integration, in a

family would save attentional resources by virtue of the security and consistency it provides. For example, a child would feel loved and understood (commitment), and not have to use his/her energy for defensive purposes. S/he would know what the rules are, and what to expect from other family members (clarity), thus allowing a smoother coordination of actions and less unnecessary conflict. Likewise, the presence of stimulation, and its outcome individuation or differentiation, would then facilitate the investment of the saved attention into productive and self-determined activities. Family members would be pursuing high ideals and goals with seriousness and intensity (challenge), thus providing outlets or channels into which family members could apply themselves. Their privacy and right to choose activities for themselves would be respected (choice), thus allowing them the control needed for tailoring activites to their own timing and needs, and not exclusively to some externally imposed agenda. This combination of savingsand investment are jointly referred to as the economy of attention provided by those families in which an equilibrium between the two opposing modes of family functioning, differentiation and integration, is carefully kept.

**Family Functioning, the Development of Autoletic Personality and the Nurturance of Creativity and Talent in Children and Adolescents: Empirical evidence.**

The balanced tension in an stimulating and supporting family may be internalized by the child, affecting him or her in new contexts of experience. In other words, the child raised in an environment with differentiated and integrated parents will incorporate those traits into his/her personality (Csikszentmihalyi & Csikszentmihalyi, 1991). Over the course of years families that are integrated and differentiated would have provided the backdrop for innumerable childhood experiences in which there were secure and clear guideline for behavior, as well as outlets for challenging personal experimentation.

For instance, one notable similarity among gifted adolescents and young adults refers to their more differentiated and earlier-developed sense of oneself as creative. This heightened sense of identity is usually linked with a high degree of

self-esteem, self-sufficiency, and passion for autonomy and involvement in those decisions most clearly related to one's career. As a consequence, these young people have been found to make more valid and better-fitting career choices suiting their identities as they experience them (Albert, 1978). The more personalized career choices young people make, the greater their perseverance in performance (Brockner, 1988).

Also, personality consistencies of eminent people appear regularly in the literature regardless of the specific methodology used. One such consistency refers to the individual control over the type and degree of stimulation, ambiguity or uncertainty, familiarity, and novelty they experience, for how long and, more important, for what purposes. These are also the characteristics that would allow a growing child/adolecent to gain some control over his/her arousal level; that is, the ability to raise or lower challenges in order to find the balance tension which produces optimal experience. For instance, this ability could be manifested by children from complex (or autotelic) homes at school, in ways that draw on habits acquired at home: being able to trust the teacher (from home commitment); having a willingmness to ask questions and clarify assignments (from home clarity); operating at an intensity that resists distractions (from home challenge); and having the potential to takechances with personal initiative (from home choice).

Another personality characteristic consistently found among talented and creative individuals has to do with the individual s style of interpersonal coping: The eminent seem to protect themselves from the distractions and intrusions that social and work involvement and intimacy family relations may bring into their life, by psychologically distancing themselves. This is not the same as a schizoid or repressive personality; it is a style of coping that is remarkably selective and allows the individual to work alone, an important ability that characterizes many highly creative persons (Albert, 1978).

When the two -- control and distancing -- work well together, they support a third, more cognitively based consistency, that of ***'problem sensitivity'***. This cognitive characteristic shows in a heightened sensitivity for errors, inconsistencies, intellectual gaps,

and unsolved or poorly solved problems in their fields of interest. The developmental antecedents of this cognitive ability can be traced to the type of family and explained through socialization. Background conditions in the family develop a child s habitual ways of paying attention to the self and to the environment (Berger & Luckmann, 1967; Reiss, 1971, 1981). Even implicit contextual influences, through repetition, can become internalized in structures of attention, the same way that any often repeated stimulus comes to elicit an automatic attentional response (Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977). There is some empirical evidence that a complex or autotelic family pattern positively affects the flexibility of family members cognitive processes, that is, their ability to organize information and bring closure to problems, and their ability to remain open torelevant new information (Reiss, 1971, 1981).

More specifically, in addressing the mediating and moderating roles of family functioning in the development of talent and creativity, we can ask the following questions:

1. Does family type and the pattern of family interaction make a difference in the happiness of the child? The answer is Yes. Adolescents from complex families reported being the happiest no matter what they were doing, followed by adolescents from intergrated, simple, and lastly differentiated families (Csikzentmihalyi, 1993).

2. Does family context make a difference to how alert talented children are when involved in different activities? Again, children from complexfamilies report being significantly more alert when studying, but not when engaged in leisure activities, than children from the other three family-type groups (Csikzentmihalyi, 1993).

3. Does the difference in the quality of experience provided by the four types of families translate into greater motivation and achievement? Talented children from complex families held the highest class rank and their peers from simple families, the lowest (Csikzentmihalyi, 1993).

## SUMMARY AND CONCLUSION

Two empirically tested models of family structure and functioning have been presented. One focused on the healthy intellectual and emotional functioning of families which translates in practice into two family characteristics: stimulationand support. The balance between these two key opposing forces are believed to foster healthy emotional, social and cognitive development of children and adolescents. The second model pinpointed to the economicadvantages of complex families in terms of savings and investments ofattentional cognitive resources.

Empirical support has been discussed for the affirmation that the family can act as a mediating and moderating variable in the enhancement and cultivation of human potential and talent. The type of family in terms of family structure (emotional ties among family members as well as the agentic experiences a family may provide to children) and family dynamics (the provision of autoletic environmental contexts) represent two different constructs through which the optimal utilization of individuals' cognitive, motivational and emotional resources can be envisaged.

Although the theoretical basis upon which both of these models are conceptualized is quite solid and there exists acceptable empirical support for both models, the ecological validity of these remains to be tested in the Iranian context before they can be considered in social and educational policies and subsequently implemented through cultural and educational programs for Iranian families.

As far as suggestions for social policy and future research on

this topic is concerned, two points need to be emphasized. First, the empirical research reviewed in the present article indicates that the conditions of support and stimulation are crucial in the fostering of optimal development and creativity and as researchers (Csikszentmihalyi & Csikszentmihalyi, 1991) have pointed out, these conditions are hard to meet. Second, early family influence seems to be of critical importance for optimal development. The effects of the family have been found to be direct as in the case of family structure increasing the probability of mental health and creativity as well as indirect as in the case of facilitating an autotelicpersonality which represents one important variable in the optimal utilization of cognitive resources. It is deemed necessary then that, public welfare programs focus on disseminating relevant information on the critical role of the family in fostering optimal development and creativity and provide instructional materials on the characteristics and dynamics of effective families.

Future research may be directed at disclosing different demographic variables that might be related to family structure and functioning style. Special attention should be given to existing population trends in this country. For instance, many years of an imposed war and massive migration to urban centers has originated a great number of single-parent households, an increased number of children who are being raised by governmental institutions and the gradual extinction of the traditional extended family. According to the models of the family presented here, these sectors of the population should be

considered populations at risk, and are in need of special attention.

Similarly, research needs to be performed to assess the effects of maternal employment on family well-being. Parental practice variables like parent involvement with the instruction of their children at home and parent involvement in school activities, which have been found to be associated with children's learning and motivation in school (Waltkins, 1997) might be considered as well.

The role of the teacher and the school should not be minimized. Teacher communication has been found to be very effective in forstering parent involvement, parent mastery orientation (a trait of autoletic personality) and is correlated with parent education level (Waltkins, 1997).

Finally, an issue related to the ecological validity of family models, concerns the necessity to formulate models of the family taking into consideration cultural and religious contexts. Information transfered to the community needs to be meaningful and it is at this point in the process where knowledge about contextual aspects of human development would most useful.

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Book Review

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