

Family Model Based on the System Approach

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Abstract. The paper presents the results of a theoretical system interdisciplinary research aiming to develop a family model on the basis of empirical data and practice of dealing with a family. The hypothesis suggests that the development of the system conceptual family model in the ontological, structural, functional, genetic and integrative epistemological views will give the opportunity to adequately represent the normative attributes and purposefulness of the social-psychological object-prototype. The development analysis of a concept about a family as a system is carried out. It is proved that the history of science is familiar with a number of concepts of the system organization of family integrity, its structure and functioning, which represent illustrative models of authors' approaches to the practice of psychotherapy. An attempt is made to propose a model of the family system organization based on the contemporary provisions of the system approach to the study of the complex psychological object. "The system research algorithm" by A.V. Karpov served as a methodological framework of this work, which proposes to single out the integrity based on its criterion and carry out further analysis in five gnoseological plans (ontological, structural, functional, genetic and integrative). *The ontological* content of family integrity is determined by micro- and macro- factors that have developed in the collective consciousness in the continuation of cultural and historical development of society. There are five levels in the model *structure*: 1) an element level of individual psychological characteristics of family members; 2) a component level is a system of family roles; 3) spousal, parent-child, child and grandparent functional subsystems; 4) a system-wide level is the integrity of family subsystems; 5) a metasystem level is presented by external regulators of an object's life activity. The *functional* quality of the family system is manifested in dynamic chronological development and regulation of the functional process in accordance with time life-cycle stages and throughout the history of family generations. *The genesis* of a family community is determined by its purpose, implemented in the process of its life activity and defined by the events of formation and developments of its subsystems. *Integrative* family qualities are formed during life together and appeared in the unity of self-awareness, collective subject qualities, cohesion and flexibility of integrity. In general, the proposed model represents the normative semantic attributes of an object-prototype, may be recognized as purposeful and used as an ontological framework in empirical studies, in particular in the research of the principles of organization of family purposefulness psychosemantic categories.

1. Introduction

In the history of science there is a strong research interest to the *family* problems, resulting from the fundamental importance for society, its specific function to meet "the public needs in physical and spiritual reproduction of the population" [1, pp. 75].

The methods of experimental psychosemantics are based on the methodological works of L.S. Vygotsky, A.N. Leontiev and A.R. Luria, semantic theory by Charles Osgood and personal construct theory by George Kelly for the study of semantic spaces of consciousness [2–15].

The relevance of the study of the family sphere psychosemantics is determined by the demand for the fundamental research results on development and dissemination of positive experience in this sphere of human life.

The purpose of this article is to attempt to develop a family conceptual model based on the contemporary methodological provisions of the system approach, empirical research of a family in human science and practice of work with a family which in the future can become a universal framework for the study of the socio-psychological object-prototype. Furthermore, the mentioned model can be used as an ontological framework in our research of the principles of organization of psychosemantic categories of family purposefulness in human consciousness (N.V. Nozikova).

The theoretical research hypothesis suggests that the development of the system conceptual family model in the ontological, structural, functional, genetic and integrative epistemological plans will give the opportunity to adequately represent the normative attributes and purposefulness of the socio-psychological object-prototype. To achieve it, the following tasks shall be performed:

first, carry out a historiographical research of the known theoretical system concepts of a family in the practice of psychological work;

second, make an attempt to propose a model of the integral organization of a family and family purposefulness as a basis for regulating the activity of a complex system object.

Development of a family system organization model can form the basis for empirical studies of a family as a socio-psychological phenomenon and effective socio-psychological practices, as well as system research of the organization of psychosemantic categories of family purposefulness.

2. System approach in studying a family

Interdisciplinary interactions between theoretical psychology and practical psychotherapeutic directions form the epistemological categories of the methodological strategy, conceptual framework, and effective methods of modern psychology (B.G. Mescheriakov, V.A. Petrovsky, B.I. Pruginin, T.G. Shchedrina, F.E. Vasilyuk, V.P. Zinchenko etc).

The practical request for effective therapeutic assistance in case of psychological problems, that a client has, led to the consistent development of the system approach methodology in family psychology [13]. On this basis the contemporary views of the family *system* organization have been formed, which is considered as a natural context of human personal growth and healing for the successful achievement of psychotherapy goals. The family system resilience is determined by its *structure* and performance of *functions*, that result in the development of individuality of each of its members and at the same time strengthen their sense of belonging to the family community (M. Bowen, E.G. Eidemiller, S. Freud, B.D. Karvasarskiy, C. Kratochvil, S. Minuchin, C.R. Rogers, V. Satir, C. Whitaker etc.).

Knowledge about key principles of the family community system organization and functioning, accumulated during psychological studies and in practice of family psychotherapy and family counselling, formed the basis for theoretical generalizations about the system organization of *family integrity* and methods of regulation of its functioning processes (M. Bowen, E.G. Eidemiller, S. Freud, A.B. Kholmogorova, C. Kratochvil, E.V. Kufiyak, S. Minuchin, E.I. Nikolaeva, C.R. Rogers, V. Satir, C. Whitaker etc.).

Thus, the analytical-system theory of family therapy by E.G. Eidemiller and N.V. Aleksandrova represents a family as a *living developing system* capable of changing its structure, microdynamics of family relationships, family history macrodynamics, hierarchical structure of the family value system. A well-*functioning* family is determined by harmonious and dynamic structure of *family roles* with alternative possibilities of their demonstration in accordance with *life-cycle* stages [16].

The concept by E.G. Eidemiller and V. Yustitskis highlights three aspects of the family system: structure, functional and dynamic characteristics. *The structure* includes family composition, number

of members, interpersonal relationships, leadership and executive roles, style of relationships, etc. *Functions* of a family are determined by the needs of its members. The system *dynamism* is resulted from the structural and functional changes in the family *life cycle* [17].

The family system model developed by A.B. Kholmogorova comprises four aspects. *The family structure* is formed by the types of interpersonal relationships, hierarchy, subsystems, coalitions, hierarchy inversions, the inner and outer borders. The family *microdynamics* is represented by flexibility and mixture of family roles, frequency of conflicts, degree of control, circulation of information, emotional style etc. The family *macrodynamics* is determined by the family history, family scenario and cycle of family development, resources for changes or resistance to them, transmission of family values. The family *ideology* covers norms, rules, values, beliefs and convictions, cultural background and gender-role stereotypes etc. [18].

In the concept by E.I. Nikolaeva *the structure* is defined by the family composition, its *cultural* and *ideological* styles. *The cultural style* comprises race and ethnic background, religious affiliation of a family, and *the ideological style* – beliefs and value-based orientations of family generations. *The family functions* are specified by functional tasks of each of the subsystems: spouses, children and parents–children. The system-wide level is determined by the genetic factors, semantic orientation of family *myths, stories* and *rituals* of many generations [19].

The family integrity, according to works of E.V. Kuftyak, is formed by: *vertical* communications with the external metasytem – transgenerational communications of family generations; *horizontal* structure comprises: a family role structure, flexibility and cohesion. The *dynamic* component of family development determines the stage of life and daily functioning. *The spatial* component is a structure of hierarchical family relationships, internal and external boundaries. The *structural-functional* and *role* characteristics of the family system determine its stability [20, 21].

However, up to these days no fundamental research has been carried out with regard to the *family integrity* as a complex social-psychological object based on the contemporary views about the system organizations of the complex objects. The synthesis of knowledge about ontology, principles of structural and functional organization, determinants of the system genesis and integrative family qualities in relation to the metasytem, represented by the factors of the closed self-organizing world demographic system, can become crucial for the theory and practice of the set of human sciences.

For the empirical study of psychosemantics of family sphere it is required to carry out a theoretical analysis of the complex social-psychological object, such as a family, based on achievements of the system knowledge methodology.

3. Family: theoretical model

The *modeling* methodology is a universal epistemological form of complex objects study. The method of modeling in the study of some natural object, including psychological studies, is based on the *similarity* theory. It allows on the basis of formalization of data on the studied object to obtain generalized theoretical knowledge about the *uncontroversial*, semantically *adequate*, *completed* in the entirety of its components system model of the object-prototype. The ideal model of the social-psychological object can be recognized as normative and purposeful in case if it represents in the formalized way certain most significant characteristics of the system object (E.F. Karavaev, V.I. Novoseltsev, A.R. Orekhov, V.P. Serkin, A.I. Uemov etc.).

A methodological strategy of the *system* approach on psychological science forms the basis for holistic comprehension of the complex object (B.G. Ananiev, P.K. Anokhin, L. Bertalanfy, A.V. Karpov, V.P. Kuzmin, A.N. Leontiev, B.F. Lomov, I. Prigogine, V.D. Shadrikov, E.G. Yudin etc.).

Systematically arranged research envisages the application of the algorithm of sequential execution of tasks related to identification of *the criterion* of qualitative definiteness of the object under consideration that determines its qualitative features and reflects its *purpose*, being a system-forming factor of *integrity*. Based on the “system research algorithm” an analysis of the object organization is

carried out, including its ontology, structure, functional dynamics, genesis and integrative qualities (A.V. Karpov).

In general scientific methodology a notion *purpose* means "... an end result of activity of an individual (or a group of people), preliminary ideal representation of which (together with the desire to achieve it) determines the choice of appropriate means and systems of specific actions to achieve it" [22, pp. 1111].

Human sciences consider *a family* based on traditional common *purposes* of its functioning and comprehension of the current trends of development in connection with the evolution of social relations (G.M. Andreeva, A.I. Antonov, S.I. Hunger, T.A. Gurko, V.M. Medkov, S.A. Sorokin, A.G. Harchev etc.).

The generalized qualitative *criterion* of the system analysis of family integrity in social science reflects its core system-forming *purpose* which is matrimony, family, birth of children and socialization in the family. The system criterion application makes it possible to distinguish the object under study and consider the system organization of integrity in ontological, structural, functional, genetic and integrative plans.

Ontological essence, structural categories, functional patterns, principles of genesis and integrative characteristics of family integrity are determined by micro- and macro- factors of the environment considered in family studies in human sciences. Symbolic forms of meanings, senses and values formed in the collective consciousness throughout cultural-historical evolution define the stability and flexibility of relationships in a family community in the relevant situation. (N. Akkerman, G.M. Andreeva, A.I. Antonov, U. Bronfenbrenner, S.I. Golod, T.A. Gurko, A.B. Kholmogorova, B.M. Livi, V.M. Medkov, E.I. Nikolaeva, G.G. Filippova, A.G. Harchev, A.G. Vishnevsky etc.).

The study of the complex object *structural* organization implies the analysis of five levels: an element level which does not have qualitative characteristics of integrity, but constitutes its necessary framework; a basic component level; a level of functional subsystems; a level of integrity and a level of the external metasystem.

The theoretical analysis on the basis of the general scientific methodology of the system approach makes it possible to propose *a family integrity structural organization model* that is based on the system-wide criterion and includes five levels: 1) *an element* level of *individual psychological* characteristics of an individual as a necessary framework for implementation of domesticity; 2) a *component* level of the basic system of social roles of the family sphere of an individual life; 3) a *subsystem* level of role behavior in emotional-communicative relations in family subsystems: spousal, parent-child, child and grandparent ones; 4) a *system-wide* level represented by the *integrity* of family subsystems; 5) a *metasystem* level is external in regard to the object which regulates structural characteristics and functional processes. Changes of the structure and nature in system relationships affect socio-psychological characteristics of the family community and quality of its functioning. *Family life events* become determinants of the origin and development of new formations and define implementation of new functional tasks. (Yu.E. Aleshina, T.V. Andreeva, E.G. Eidemiller, T.A. Gurko, V. Justickis, I.S. Kon, E.I. Nikolaeva, A.A. Rean, A.Yu. Reshetnyak, A.G. Kharchev, L.B. Schneider, G.S. Vasilchenko, A.I. Zakharov, etc.).

Functional family processes on reproduction and development of the world socio-demographic integrity within the conditions of adaptation to the impact of innovative factors of modernity determine the theoretical and practical research interest in this topic.

Based on the system approach methodology in works by V.D. Shadrikov a notion of *psychological (functional) system of activity* was developed which is applicable to each specific activity. The system-forming factor for the structure and functions of an integral object is its *purpose* as an expected future result of activity. Actualization of the psychological system of activity forms a human inner world as a subject of activity, defines a personality trait and social activity [23].

Processual quality of the functioning system object, according to A.V. Karpov's theoretical provisions, is determined by two conditions. *First*, demonstration of the object *functional systemacy* as an organized integrity with unified regulators, which in empirical studies are manifested in the

interaction of all stages of the process of achieving the system purpose. *Second*, in *chronological* organization of the object functioning process, which determines the category of special qualities of the system – *timing*, empirically detected in the integral timing dynamism of the functioning process [24, 25].

The functioning of family integrity is regulated by its system forming *purpose*, which is based on structural organization, manifested in the dynamic chronological development and regulation of the functional process in the functional family substructures and corresponds to the tasks of the time stages of the *life cycle* and throughout the *history of family generations*. The formation and functioning of mechanisms of joint regulation of family members behavior open the way to solve specific tasks at different life cycle stages and preserve *the integrity* of the family system (Y.A. Aleshina, T.V. Andreeva, A.I. Antonov, E.M. Duvall, E.G. Eidemiller, V. Justickis, C. Kratochvil, S. Minuchin etc.).

The systemogenesis of the psychological system takes place under the influence of the *purpose* and its functioning, which is a system-forming factor, and establishes the process of activity, determined by the psychological, psychophysiological, personal and subjective levels (V.D. Shadrikov).

Genetic processes are oriented to the synthesis of *ideal* in its quality psychological “world view”, “image of the world”. As a result, ideal forms are synthesized in the object capable to control the *self-regulation* of the complex system and its interaction with environment (A.V. Karpov).

Current studies refer the self-organization processes to the number of major factors of genesis and family form transformation in the closed world demographic system, maintaining its balance with resources of the planet life support system (A.G. Vishnevsky, D. Coleman, A.V. Korotaev etc.). Factors that determine the origin of marriage and family, the content of family community development stages and their social consequences cause scientific discussions giving rise to new theoretical concepts of the family community genesis and predictions of its further evolution in self-organization and self-regulation processes (F. Engels, M.M. Kovalevsky, Yu.I. Semenov etc.).

Family community *systemogenesis* is the essence of its vital activity. Central events for creation and development of family integrity is a formation of the nuclear functional subsystem of *matrimony*, and then *parent-child* and *child*, interaction with the *grandparental* subsystem. Each stage of the family system functioning solves certain socio-psychological tasks and build up systemic new formations necessary for further successful development of the family and personality of each its member (E.M. Duvall, E.G. Eidemiller, E.I. Nikolaev, V. Justickis, A.B. Kholmogorova, C. Kratochvil, Yu.I. Semenov, L.B. Schneider etc.).

The integrative analysis of the system object meets the challenge to reveal and explain its generalized properties– *system qualities*. At this stage of research the results of the previous analysis levels: ontogenetic, structural, functional and genetic are conceptually integrated (A.V. Karpov).

Integrative qualities of the family system generalize its ontogenetic, structural, functional and genetic traits and are manifested in the “We” united self-awareness phenomenon of its members; in the jointness phenomenon; in features of the family as a collective subject; in features of the family as a group; in variables of cohesion and flexibility of family integrity etc. (E.M. Dubovskaya, R.L. Krichevsky, A.G. Lidars, D.H. Olson, B.F. Porshnev, A.L. Zhuravlev etc.). Integrative qualities of the family are formed in the process of living together and determine the common system of meanings, senses and values for its members.

A *purpose* is an activity regulator of the complex object for achieving its performance result. The mechanisms of the *purpose setting* and formation of the *purposefulness* in the activity of the object define dominant categories of motivational and semantic sphere in relation to the value attitudes of the subject, social laws and features of the current social situation (D.A. Leontiev, O.K. Tikhomirov, I.A. Vasiliev, V.V. Znakov etc.).

Based on the carried out theoretical studies and empirical analysis for performance of the system research tasks of psychosemantic categories which determine family behavior (N.V. Nozikova, 2005-2018), we proposed the notion *purposefulness in families*. This notion with regard to an individual or family group characterizes the achievement of the common purpose of family behavior determined by

the meaning-formative hierarchy of purposes and motives based on the social value system and social laws – matrimony, family, birth of children and socialization in the family [9–15].

4. Conclusion

Thus, the theoretical analysis based on the general scientific system approach and interdisciplinary studies of the human sciences has allowed us to make an attempt to propose a conceptual model of the family system organization as a socio-psychological phenomenon.

The family model is based on the principle of similarity and represents consistent, semantically adequate, as a whole completed by the component composition of the attributes of the object-prototype, can be recognized as normative and purposeful and used as the ontological framework for empirical studies.

Planning of the empirical system research of psychosemantics of family purposefulness and conceptual generalization of its results is determined by the main parameters of the proposed model and is oriented to identification of psychosemantic integrity and principles of its organization.

In particular: identifying a *purpose*, *purposefulness*, giving rise to its activity and defining the specific organization of the system throughout its existence; *structural* hierarchy of integrity; principles of the psychosemantic object *functional* systemacity; *genetic* process trends and *integrative* characteristics of psychosemantic integrity.

Psychosemantic categories for the empirical study of principles of the organization of the psychosemantics of purposefulness in families shall be: *first*, the categories of the basic component level of family roles (for example, wife, husband, father, mother, child etc.); *second*, key events for formation and development of family integrity (for example, marriage, birth of a child etc.); *third*, it is necessary to carry out a characteristic variation analysis of the study object depending on the factors of individual-psychological qualities of the study participants, constituting, according to the proposed model, the elemental level of integrity; *forth*, it is required to consider the categories related to the grandparental family.

The factors of *sex* and *marital status* of the subject, manifested in absence or presence of own family depending on the age of an individual, are the leading ones for the study of ontological, structural, dynamic, genetic and integrative characteristics of family integrity.

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