

Principles of an Educational Theory of Interest

by

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1. Introduction

A constant process of exchange between individual and environment takes place in the life of human beings. The interaction with social partners, the occupation with objects, facts and ideas, every engagement with other people or objects is the foundation of subjective experience and individual development. The sciences which are principally concerned with human experience and behavior, in particular psychology and educational science have conducted research, on this process of exchange, under many different perspectives. Research and theories, of social interaction, of learning, of motivation and cognition, perception models, and many other sector theories have each investigated single, analytically definable factors and processes of the person-environment-relationship. What has become apparent is that both psychology and educational science have frequently and intensively had as their subject, the processes of exchange that involves the relationship between people and the social environment. However, the behavior sciences provide much less information, regarding the structuralization and evaluation of the objective environment or the description and explanation of the person-environment-relationship.

This is even more surprising when one considers that an essential *if* not major portion of human action and development is concerned with an engagement with facts, things, and objects of the environment. In the same way as the persons' development of social relationships contributes to their individual experience and behavior, and leaves its mark upon the persons' personality and identity, the "objective relationships have a considerable influence on personality development.

There is no denying this fact, however, from a scientific point of view up to this time only a little effort has been given, in trying to comprehend more differentially this

problem field. If one, for example, asks the questions: Why do people as a rule choose from such a wide variety of interaction and occupational possibilities only a small sector? Why do they concentrate their energy on only a few objective fields? Or, why are some particular individuals able to work intensively and with perseverance on a matter and despite all the exertion that may be necessary feel, within a framework of this engagement, a deep inner satisfaction, that sometimes reaches the feeling of having experienced a "fulfilled life"? One finds comparably little information regarding these topics in scientific papers (especially in current literature).

In everyday understanding of the equivalent phenomena we do not have any problems in explanation: Given the hint that specific typical interests for this individual or for that group exist, then the selectivity of the environment engagement or the varying degrees of willingness in activation and exertion from person to person is easily understood. Naive theories on the origins, markings, and functions of interest have had a major impact on the interpretation of daily individual-object-engagement. There has been no comparable pendant within the behavior sciences. There are of course, theories of interest and also diagnostic methods for the recording of interest but they are almost always confined to a single objective field (cf. TODT 1978), or they receive at the present time little attention based on methodological reasons. Also, in the prevalent theories of emotion, the problem of individual interests is hardly mentioned (SCHIEFELE 1978, HECKHAUSEN 1980).

On the other hand it can be shown that the preoccupation with the phenomenon of "interest" has never actually stopped. The concept of interest has been given many different variations in meanings as well as specifications depending upon its use within a context of science or in everyday

language. The semantic development in everyday language is presented in SCHMID(1980), (cf. SCHIEFELE et al. 1979, P. 9). NEUENDORF (1973), and many essays contained in the collection edited by MASSING & REICHEL (1977), examine concepts of interest within a framework of sociological, judicial, and other social science theories. The considerations of these authors has been beneficial for the formulation of pedagogical questions. First, they shed light upon the background in the variations of concepts pertaining to interest in everyday language. Second, they may make more understandable the origins of co-existing (metatheoretical) concepts of interest in the educational sciences (e.g. "interest in knowledge-Erkenntnisinteresse" ace. to HABERMAS 1971). In this connection, is also a retrospective review of corresponding pedagogical and philosophical systematizations useful (cf. LUNK 1926/27). SCHIEFELE et al. (1979, P. 9) point out the fact that already for example, in the works of ROUSSEAU, KANT, and HERBART, conceptual definitions of interest can be found, which could even lay the foundation upon which a modern pedagogical theory of interest could stand. Also the pedagogical orientated conceptions of W. JAMES (1908) and J. DEWY (1913) are worth mentioning in this connection.

Special attention is deserved by traditional psychological theories in which the concept of interest has been scientifically developed and systematically integrated. One can separate these theories into 4 groups. They will not be dealt with in detail at this point, but simply listed at the present time, including relevant authors of each group.

(a) Phenomenologically orientated (holistic)personality theories (KLAGES 1966; LERSCH 1962; RUBINSTEIN 1977).

(b) Differential Psychology Trait Theories (GUILFORD 1971; CATTELL 1973; TODT 1978).

(c) Motivation Theories (HECKHAUSEN 1980; HECKHAUSEN & RHEIN-BERG 1980; BERLYNE 1960, 1967; HUNT 1965).

(d) General developmental Theories (PIAGET 1974).

Irrespective of the rather peripheral nature of the intensity of psychological research in the field of interest it is noticeable that this aspect of human behavior has a special meaning within a pedagogical perspective. After all, within an interest orientated engagement with objective fields, learning takes place and experiences are gathered which are especially important for each individual. The following text presents the first steps in an attempt to develop an useful theory of interest within a pedagogical framework.

2. Outline of a General Theory of Interest

What is common among other things to existing theories is a tendency to define interest as an individual related trait. What we are here suggesting as an alternative is a ("pedagogic") theory of interest that interprets the construct interest as a specific person-object-relationship. Thus, a basic theoretical conception would be established that from the very beginnings would allow simultaneous analyses from varying perspectives of proven relationships between person and object, from the course of action and the result of action. Therefore, it seems obvious to fall back on different models of action theory (cf. PRENZEL 1980; KRAPP, EINSIEDLER, KASTEN & PRENZEL 1979). Additionally, because of the educational orientation of interest theory a special accent will be placed upon developmental aspects.

Based on metatheoretical considerations, we will first attempt to determine more exactly the status that a pedagogical theory of interest has within a framework of different forms of educational-psychological theories and to examine more closely its structure and organization. The aim is to establish

a theory that can make statements about interests/ its causes and effects. The theory can be described as a "general theory of interest" and can be thus contrasted to "specialized theories of interest" (e.g. a theory of music interest) which have an interest that has a fixed content. One could expect to find constellations of interests and causes with a large amount of common structural attributes across the specialized interests. Thus, a general theory of interest takes priority in significance. It is the foundation and starting point of theories of specialized interests.

In the center of the general theory of interest stands the basic definition of the construct, which specifies on the theoretical level, what is meant by interest. A few basic assumption will be placed in front of the theoretical definition. These supply the necessary characteristics of interest. However, the basic assumptions are so general in nature that they also could apply for other constructs. Thus, the actual delimiting definition of interest lies in the center of the general theory of interests.

2.1. Metatheoretical Considerations

The intended educational orientation of the theory of interest requires a discussion of educational goal-setting. It assumes that a model of "educational" theory exists. An ideal typical differentiation of types of educational science theories was undertaken (HEILAND & PRENZEL 1979, cf. KLAUER 1973), based on a foundation of scientific theoretical analysis of objective- and task fields of educational theories and the problematic from the Norm-Theory-Relation. The prerequisite for every theoretical formation on a metatheoretical level is the recognition of the leading goals of education (e.g. Self-determination, social equality, individual rights).

The first step in the theory development is foreseen as the

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working out of a descriptive theory of interest. Namely/ the general theory of interest. With the goal of a description and explanation of different forms of interest, including their development. Along with the center, the general theory of interest contains sections or parts that lay down the directions of particular questions. These will be labelled sector-theories.

A differential sector-theory describes different forms of the concept of interest that establish the center of the general theory; an actual genetic sector-theory is concerned with the description and explanation of the course of actions of interest; an ontogenetic sector-theory would like finally to describe and explain the formation of individual interests and interest structures, in the course of the ontogenesis. All the aforementioned sector-theories are descriptively orientated and will be briefly discussed later on in this paper. At a later date, when the descriptive assumptions for them have been worked out, there will be added to them a prescriptive-technological theory. Such a prescriptive-technological theory of interest does not result by a simple transformation of descriptive statements into prescriptive technological ones/ but requires special theoretical considerations and research to test models of action (BUNGE 1967).

2.2. Basic Assumptions and Basic Concepts of the General Theory of Interest

The theoretical determination of the construct "interest" is a consequence of a background of some general psychological assumptions and concepts.

(a) Interest as an Person-Object-Relationship

A first major assumption is likewise the basis of other theoretical concepts, for instance the developmental theory

of PIAGET (1967, 1976), or the more modern ecological-psychological position (cf. BRONFENBRENNER 1978; ITTELSON et al. 1977): Human activity and human development is only analyzable and understandable in the interaction and engagement of Man and Environment. A more exact determination of this interaction requires the division of the general concept into smaller units as well as a more exact definition of terms. When in the following a "person" is discussed it should be understood that at each time a certain, identifiable person with special characteristics is meant, who is confronted with his own environment. Environment can refer to either the objective "ecological" environment, or to the subjectively perceived "psychological" environment (cf. BARKER 1968, ENDLER & MAGNUSSON 1976). The ecological as well as the psychological environment can be subdivided into two fields, which are ideal types for the goals of analytical differentiation. These can be labelled social and objective environment. The social environment includes as elements other people; the objective environment is the non-personal environment, and it encompasses the realm of concrete objects to abstract cultural values and ideas.

The ecological-objective environment can be considered as possessing a certain structure; it is not an amorphous mass but shows ("objective") units which are distinguished by certain characteristics. The defined facts in the structuring of the environment are called "environment units". The psychological viewpoints conceives of the environment also as a structural system. We will label as objects those environmental fields which the individual can distinguish as different units. In the experience of individuals such objects can be defined and removed from the background of other environmental phenomena; they become "represented" in their environment, (cf. in the form of cognitive representations)

With the just developed conceptions, we can make the first attempt to define interest as a special form of "Human-

Environment-Engagement. Namely, as the engagement of a person with objects, that originate in their ecological environment and that are psychically represented in them. In order to define more closely the interaction of person and object we must first discuss many possible relations between person and an object. To begin with, by using the definition of object which we have just developed it necessarily follows that a "relationship" exists between the two. The person must be in each case in contact with the underlying environment unity. The person must be able to separate the object from the environment and from other objects by use of (cognitive) perceptive processes. A person-object-relationship is always constituted by an actual execution of action, that is based on an object, that is to say, it is involved with it. Action also encompasses mental operations i.e. inner activities of the individual, that viewed from outside do not show any visible behavior correlates.

(b) Action Theoretical Foundations of the Concept of Interests

We have now reached a second important assumption: In principle, a competence in action is attributed to the human being, i.e. the ability to control rationally and intentionally what we do. That in this manner an action theoretical frame conception is placed underneath the concept of interest does not indicate that man acts in general rationally and intentionally. However, it appears that the engagement of persons with objects is more comprehensible on an action theoretical foundation as compared to a behavioral one. Because behavior theories have mainly as their object the relationship between stimulus conditions, i.e. the situation and the behavior response of the individual. Besides which, the intentional object-relationship can only be ascertained with great difficulty by using a stimulus-response theory, and has considerable subsequent problems (e.g. one is in need of

stimulus-selection theories which themselves require elements of cognition-, emotion- and motivation-intention). Also arguments on a metatheoretical level support the view that the foundation for a theory of interest should be laid on an action theoretical basis. For example, the decision for an adequate "subject model" (cf. GROEBEN & SCHEELE 1977).

As a result of connecting the concept of interest to the action theoretical position there is provided for further consequences, in the choice and definition, of basic conceptions and fundamental ideas. Although, there is no homogenous action theoretical terminology (the models exist in far too diverse fields of study, e.g. decision theory or the philosophy of language) nevertheless, relatively corresponding components of action can be ascertained. Action is made up of e.g. value orientation, consciousness, intent, decisiveness, active operation (cf. LANTERMANN 1980; WERBIK 1978). In the center of action theory stands the concept of intention (especially in connection with "intentional explanations"), which also plays an important role in the definition of interest.

Three aspects of the concept of action will be emphasized in the following:

- (a) Cognition; Action requires comprehension of situations and expectation, of oncoming events, of consequences, of measures, and demands a choice between alternatives;
- (b) Affect: Situations, expected or possible events appear to be touched with feelings; such qualities of experience of the action performance;
- (c) Value orientation; The decision to get involved with objects of interest and the choice of alternatives of action are based on the persons value structures and take into account possible results and consequences.

These three (psychological) aspects of action are not only activated in the course of action but are simultaneously

fundamental pre-requisites for the processes of action. Along with the given objective room of action the possible actions that a person faces in a situation are dependent on the inherent conditions present in the person, their cognitive apparatus, affective state, and systems of value. Reversely, the experience a person gains through his actions effect his structural condition, as they are represented in the person's cognitive, effective and value systems and are partly stored in the individuals' memory system.

At this point it *is* possible to connect the action viewpoint with the above described basic conception of interest as a person-object-relationship. As the person makes contact with his respective environment field and acts accordingly, a personal-object-relationship is automatically created. Thereby, the person does not interact with the objects without having present inner pre-conditions, but they possess specific characteristics, markings, cognitive and affective accentuated structures, in regard to these objects, i.e. they possess knowledge about them, have attitudes regarding them, and experience them with certain affective states and, place a value on them. These personal-structural pre-conditions are important factors in the choice of objects (out of the set of actual existing and available objects or environment units), to which relationships will be set up, either by a single or a series of actions. Every single action can lead to a change within the person, at least to the extent that with the performance of an action, an experience is made that is represented in the person and contributes to a change in the psychic phenomena. However, the objects too, can go through a change (this is e.g. the thought in activity theory that LEONTJEW labels "Objectivations").

What then is the effect of both of these basic assumptions? There are four important viewpoints here.

(1) The definition of interest as a (specific) person-object-relationship that is understood here as the axiomatic foundation of the theoretical formulation makes sure that a psychological analysis of interest does not proceed based on innerpsychic processes alone, but in connection with the external environment or object constellations. Thus, it examines too, the orientation of its content. For both parts of this relationship, i.e. the person and the object (resp. environmental unit), can not only be determined the structural pre-condition for the interest action, but also the change in the person (resp. object), can be ascertained, after the action has been completed.

(2) In addition, the action theoretical basic assumption permits in principle, more closer specification and definition of the character of the interest-thematic person-object-relationship. It establishes for example, the niveau upon which the person-object-engagement is to be examined, and in the end makes possible a comprehension of the current processes of this relationship.

(3) Beginning with the fact that the person is able to represent the experience that is made in action in a person-object-relationship, it can be likewise assumed that a lasting-relation between the object and the person is established that leaves a structural effect on the person. With the concept person-object-relation is meant, the latent relationship of a person to an object that is tied structurally to the cognitive, affective and value system. This repeated actual person-object-relationship can be understood as a "crystallized precipitate"¹ The person-object-relation is an important condition for the active begin in actual person-object-relationships, which itself can in each case accentuate, elaborate and change anew the structural relation.

(4) The basic assumptions also provide reference for the methodological and methodical orientation of the related

research. The more heavily process orientated component "action", and the more heavily structural component "person-object-relation"¹¹ permit in their interrelationship both structural and process orientated analysis, and do not localize interest one sidely, in individual disposition or in kinds of reactions.

The basic assumptions do not yet serve in the narrow sense to determine the construct "interest". Far more, a general psychological position and thus a scientific analytic perspective is outlined, that sets the boundaries in the sense of a higher conceptual frame for both the direction of future research, as well as the objective field, of the theory of interest.

2.3. The Center of the General Theory of Interest:

Central Characteristics of the Theoretical Construct "Interest"

The establishing of interest as a person-object-relationship, and the action theoretical orientation are the starting points for the theoretical definition of interest. The construct interest can be given a more delimiting and differentiating definition by a more narrow and precise determination of these basic assumptions.

With strong emphasis placed on the process characteristic of interest special characteristics of an action of interest can be determined. A more structurally orientated perspective emphasizes contrarily the "lasting" characteristic of a specific interest person-object-relation.

2.3.1 Interest as an Individual-Object-Relationship (Action of Interest)

The action of interest is in regard to an object, i.e. a relationship is established between person and object in an

actual situation. The particularities of the object of interest will be discussed later, here we will just mention that for the most part the object (resp. environment unit) is of "interest" to the person depending on his certain kind of conception about the object.

In the interest orientated action performance the individual has an effect upon the object, does something with it, changes it, etc. As previously mentioned, we are making use of a comparatively broadly defined concept of action, that includes mental operations such as imagining, phantasizing, and thinking. For a more precise characterization of an interest orientated action a few different characteristics can be named, that involve cognitive, affective, and value aspects. The separating of cognitive, affective, and value aspects is purely analytic in intention. One can expect interaction as well as overlapping between each single aspect. The concept of action always has the function of integrating the single components (see LANTERMANN 1983).

(a) Cognitive Marking;

The action is based on a cognitive comprehension of the object of interest, which contains a relatively high level of cognitive complexity (i.e. differentiation and integration: Cf» SCHRODER, DRIVER & STREUFERT 1967, 1975; MANDL & HUBER 1978). The action of interest itself leads - at least has a tendency - to an increasing of cognitive complexity. The action of interest has in the terminology of PIAGET (e.g. 1976) an assimilative and accomodative character; and through it development takes place.

(b) Affective Coloring;

Altogether a positive object conception is postulated for the action of interest in regard to the emotional aspect. The action process resp. performance of action is (at least in sum total) accompanied by positive feelings. In the terminology of modern theories of emotion (e.g. AVERILL 1980, LAZARUS et al. 1980; MANDLER 1980, PRIBAM 1980) a slight increase in arousal can be expected in regard to

both the preparation and carrying out of an action. The individual who is confronted with a high degree of control and accomplishment expectations tends to experience this arousal as lying somewhere between "effort" and "comfort" with a tendency in the direction of "comfort". The localization between "effort" and "comfort" makes it apparent that the interest actions do not only represent fun and "pure joy", but include as well, a serious, concentrated, and exhausting occupation with objects, (c) Value Aspects;

Objects of interest do not have a neutral value; they appear in some manner valuable to an individual. This can mean that the occupation with a certain object is preferred to that of another. The performance of an action itself is considered necessary, resp. can be considered itself of having a value. This is an important aspect in the present theoretical draft. At the bottom of every action lies an intention. With it, a person attempts to reach certain results, purposes or goals. Actions can be exclusively "instrumental", to be used as a means of accomplishing purposes, whereby the choice of action is strictly dependent on its practicality. The demand that the action of interest will be brought into relation with the objective fields can now under this aspect be more exactly formulated: Actions based on interest, in regards to a certain objective field, can not - at least not primarily and exclusively - contribute to the achievement of purposes lying outside this field. In this case, the intentions would be only mediate, the purpose of the action only a means to the real purpose. The action of interest aims at results, that lie in the field of the objects of interest, what for example can mean that a change in the objective fields of interest can be aspired to, or that one can strive for the performance of actions with the object of interest.

What is demanded from actions of interest is that they are

"self-intentional". The concept of self intentionality is the negation of instrumentality. One could also say: A characteristic of actions of interest is that they are "non-instrumental". However, it must be emphasized that we are characterizing an ideal type and in reality and in everyday life single actions are often related to many goals and purposes. Therefore, it is not impossible that a self-intentional action is related to other purposes that do not belong to the objective field of the interest. However, at this point we must stress that an action can not be described as an action of interest when no self-intentionality is present.

2.3.2 Person-Object-Relation

The concept of person-object-relation applies to the structural latent relation between a person and an object, in a manner of speaking the generalized lasting basis of interest that receives its specific markings through repeated actions of interest. The concept of relations describes (just as the concept of relationship for the actual relationship) a relation whose particularities can only be grasped by the markings on both sides (points) which are theoretically interrelated to each other in the relationship. The relationship cannot be comprehended as an abstract relation. The particularities of the relation between an object of interest and an interested person are both fixed to the person and the objects. The attempt to remove the characteristic markings of a certain person-object-relation from the condition or characteristics of an object meets up with great difficulties, In the first place, the determination of the object is essentially dependent on the person, who subjectively accentuates, defines and interprets the environment units. Secondly, the knowledge of the environment units upon which the subjective definition of the object refers

is only qualitatively informative, since solely the manifest results of action in the form of change can be observed and this provides little information about the kind of action. The object can give no information pertaining to the quality of the relation between person and object; thus for the point of departure in the determination of this quality the person comes into question. With that is said, that for the determination of the particular interest qualities of a person-object-relation, in the first place, a person's subjective representation of the object, i.e. his conception of the object must be taken into account. The personal representation systems can once again be studied under various aspects. Corresponding to the division that was previously done three groups will be separated i.e. the cognitive, affective and value aspects.

Cognitive Markings; Above all, it exists in different degrees of object specific complexity. The person is equipped with a more or less differentiated conceptual system, in regard to the objective field of interest. Besides which, this system is structured, i.e. has an order (in the terminology of theories of cognitive complexity it is "differentiated" and "integrated"; see e.g. SCHRODER et al. 1967, 1975). This object specific differentiated and integrated conceptual system is the precipitate of earlier engagements and experiences made with the object, and permits a differentiated perception of the objective fields to take place. The representation of the objects of interest occur as a rule with a rather high level of complexity and take correspondingly, a special position in the total cognitive system of a person. However, based on this special position it is not isolated, but on the contrary, is closely interrelated to other cognitive sector structures of the personality. The cognitive complexity is not only expressed in the extensive knowledge

about the object but also in the competence in dealing with objects of interest (e.g. in an extensive repertoire of different action schematas). Thus, the special cognitive marking is also expressed in the object specific competence of action.

Affective coloring; Is in the interest orientated object relation closely interrelated with the cognitive representation of the object. We are not dealing with "cold", i.e. neutral cognitive representations, the representations are far more "hot", i.e. emotionally accentuated, and that is on the "positive" (pleasurable) side of the emotional spectrum; at least that is true for the sum total of the experienced qualities of emotions. The large amount of positive emotional experiences in dealing with the objects of interest have found their precipitate in the positive emotional coloring of the conception of the objects. Interrelated with the cognitive complexity of the conception of the objects, a differentiated emotional accentuation is present. A consequence of the positive emotional coloring of the object is the strong tendency to repeatedly look for the object of interest with the goal of an interest related action. Thus, this builds an essential sector of the dynamic potential of interest. The positive emotional cathexis of the objective field is an important condition for self-intentionality.

Value Relation; The cognitive conception and the emotional accentuation of the object are closely interrelated to the value orientation of the person. Interests, its objects and actions have a special value for the person. Within a person's value hierarchy they claim a prominent position. The value orientations of a person show varying strengths of differentiation. In part, the degree of differentiation is dependent upon the developmental stage of the individual, i.e. in general with increasing age the value orientation of an individual tends to reach a higher degree of refinement

and structure. Proceeding with the assumption, that it is possible to ascertain the value structure of a person in an intra- and/or interindividual comparison and to differentiate the levels or niveaus of his value orientation (cf., e.g. OERTER's valence concept 1978), one could then assign the interests that a person has to this structure and classify and delimit it regarding to the "extent" of its value estimation. Highly developed resp. individually meaningful interests are distinguished among other things by the fact that they are embedded in the individuals value structure as a result on the basis of rational and reflective considerations. Thus is implied that the choice of interest orientations is a result on the basis of value decisions (resp. or can be the result on it). In addition, such interests are relevant for a person's identity. They are important for self-assessment and self-evaluation of a person. This is by the way a viewpoint that played an important role in earlier conceptions of interest (cf. LUNK 1926; BERLYNE 1949, 1979; RUBINSTEIN 1977).

2.3.3 The Correlation of Actions of Interest and Interest Specific Person-Object-Relation

The statements regarding both actions of interest and interest specific person-object-relation have each led to particular features of determination which are characteristic for interest. Interest i.e. the action as well as the relation is distinguished, by special cognitive markings (essentially an extensive cognitive complexity), through special emotional colorings (in the positive emotional field), and through a particular value orientation (self intentionality; identity relevance). The interest specific person-object-relation is concerned with the latent existing structurally anchored interests of the person. This structurally existing interest enters

the action as an important condition, it describes essential pre-conditions for action in the person. These conditions effect e.g. the search for situations, the choice of actions within a situation specific supply of objects, or they determine the means and ways one reacts with objects. The type of action of interest is however, also dependent on other conditions, e.g. the supply of objects, the demands that are necessary for mastering a given situation, or for social constellations and relationships (e.g. partner for actions of interest). The concrete action of interest has itself an effect upon the conception of the object and thus on the person-object-relation, in which new experiences are collected, new competences are attained, new connections are made etc. The split, but integrated conception of interest as action and as person-object-relation offers the possibility of a simultaneous process and structural orientated analysis of interest.

2.4. The Sector Theory of the General Theory of Interest

The center of the general theory of interest contains only general (higher) definition characteristics resp. (temporary) characterizations of the construct "interest". More exact statements about the sector components of the concept of interest, specific questions, problems and hypothesis as well as operational considerations and empirical testing are contained in the various sector theories of the general theory of interest.

(1) The differential sector theory examines primarily the various forms of markings of interest;

(2) The task of the actual genetic sector theory is the analysis of actual occurring actions of interest and their

(3) The ontogenetic sector-theory investigates the origin and change of interest in connection with the life history of the person.

These sector theories in a sense build upon each other. The ontogenetic sector theory for example assumes a knowledge of the actual-genesis, and both sector theories are reliant on the differential theory of interest; in order to determine short or long term changes the knowledge of various interest markings is necessary.

2.4.1 The Analysis of Interest Within a Framework of a Differential Sector-Theory

The differential sector theory is concerned with individual differences in the markings of interest and with the possibilities of recording these individual differences with the help of the appropriate methods. It is also concerned with the differentiation of objective fields to which the individual interests refer. Therefore, the differential questions are predominately concerned with the treatment of the problems of empirical determination (operationalization) of the interest construct, which is fixed theoretically to the central sector.

(a) Differentiation of the Interest Markings

The characterization features that were named in the central sector of the general theory of interest are in part relatively demanding. They assess so highly the interest characteristics that a large amount of actions which one would intuitively call "interested", by a corresponding operationalization no longer can be recorded under this theoretical concept.

This becomes especially problematical if one thinks of the task-positions of an ontogenetic sector-theory, which is

especially meaningful for educational change orientated questions. Under such rigid restrictions earlier phases of the development of interest that referred to the general theoretic definition and which perhaps could be described as a pre-forms of interest, or research on encouraging or hindering conditions in this phase, could no longer be worked upon interest theoretically. For these reasons it appears reasonable in the theoretical stipulation and operationalization of interest to make minimal demands -resp. to define minimal characteristics that must be satisfied. At the same time this would indicate that there are different levels of interest orientated actions (in the sense of a more or less attendance of interest). In order to determine the different markings of interest, the theoretical characterization features must be differentiated - resp. become gradated. That creates the possibility that simple forms of interest markings can be described with weakened characterization determinants.

Based on the general stipulations, the demands are unavoidable that a specific relation exists between person and object, and that in principle an object related action is realizable. The object related activities are not in need of exacting action theoretical models, however, they should not be placed on a level of simple stimulus-response association. Even at the lowest level of interest a cognitive representation of the object is presumed to exist that is related to the specific characterization features and that allows the person to describe the "object of interest" and to distinguish it from other objects (e.g. somebody who is only slightly interested in chess is able to give an account of the rules and purpose of the game; a person who is only minimally interested in a certain form of music can distinguish it from other music forms). On the cognitive level an existence of concepts which describe and distinguish the object from

other objects is assumed to precede the minimal interest. On the emotional level it is necessary that the object related activity has an emotional positive coloring to it, i.e. that the activity associated with the object of interest is "gladly" done. Viewed under the aspect of value orientation the demand must be made that a certain degree of non-instrumental intentions be present, i.e. a certain amount of self-intentionality must exist.

Beginning with the concept of "minimal interest" one can determine the different levels of the interest markings by a progressive increase in the single components and characterizations of interest. The cognitive representation reaches a higher level of complexity by having additional experiences along with their corresponding concept enrichment and, through more exact differentiation capabilities; the emotional experiences become more differentiated; the object would be brought more often into association with overlapping and reflected value orientations.

At the highest level of this continuous hierarchy gradient of interest markings would stand the expanded "ideal interest". In addition to the general theoretical characterization features it is characterized by the fact that the person critically and reflectively judges the interest orientated subject-object-relations (i.e. from a meta-position).

This form of interest is distinguished by a high complexity of object representation in regard to the cognitive aspect. In comparison to other objective fields the person possesses here a highly differentiated cognitive structure. In addition, the person is conscious of the particular object specific cognitive focal point setting, i.e. they have at their command the corresponding metacognitive estimations.

The emotional coloring of the action and the object relation is characterized by a unique variety of emotional experiences

in regard to very "high" interests. Whereby, this form of emotionality is integrated in other systems of the personality, e.g. in the sense of an increased reflexive pleasure capability.

Likewise it is assumed that the person can reflexively judge the relevance that the object has for his personal identity as well as the meaning that the interest has for his personal value system - resp. that the preceding decision processes have been correspondingly judged.

With the simple separation of minimal and expanded interests, as well as the others that lie in between and the here only implied gradients, there is presented the possibility of formal inter- and intraindividual differentiation. Inter-individual can e.g. be studied by comparing how people with different interests react in regard to the same objects - resp. similar objects. On the intraindividual level a single person can be studied involving his markings of various interests or the change of interest over a period of time and in different situations. These could then be described and if necessary explained.

Along with the formal class of individual differences a content class of differences could naturally be also determined. Such as the differences of the interest structures of people in a certain category. In addition, the content and formal differences could be combined as well as analysed on either the inter- or intra-individual basis.

(b) Operationalization of Interest

A necessary requirement for an empirical measurement of individual differences is the operationalization of the theoretically formulated characterizations of the marking of the interests. However, the operationalization efforts must fall within the boundaries of what can be considered as methodological implications from the stipulations in

the central sector of the theory of interest (see below pt. 3).

If one considers the above-mentioned characterization features (cognitive marking, affective coloring, value aspect) of the center of the theory of interest on the present explication niveau, it becomes clear, that considerable theoretical and empirical concretizations are still necessary, till the theoretical characterizations for empirical investigations can be appropriately operationalized. However, it must also be stated that the theoretical characterization features are not entirely new or in any sense original, that they were not only now and exclusively created for the purposes of a theory of interest. The large amount of theoretical work pertaining to cognition (especially to cognitive complexity), to emotion, to valueformation or to the question regarding the origin of individual identity, have all been already highly concretize[^] and empirically functionalized, and has made easier the operationalization work. Nevertheless, we cannot simply fall back upon "finished" and tested measurement procedures without testing their usefulness in interest theoretical purposes.

2.4.2 Interest Analyses within a Framework of the Actualgenetic Sector-Theory

What we are concerned with here is the systematic reconstruction of the course and conditions of an actual action of interest. What is striven for, is the description and explanation of the first constitution of a specific interest person-object-relationship as well as the actualization of an already constituted object relation. The goal of the actualgenetic analyses is thus the breaking down of the situation dependent and individual determinants that describe and explain the origin (i.e. initiation or activation) and concrete realization, of an actual action of interest. Actualgenetic analyses are,

its true, predominately process orientated but they also must be concerned with aspects of structure, e.g. the person and object specific cognitive complexity or the individual structure "latent" interests.

The differentiation of phases of action, e.g. planning, beginning, realizing and ending - resp. the phase of subsequent preparations - are of fundamental action theoretical concerns for subsequent (cf. e.g. BOESCH 1976, P. 19 ff.; CRANACH et al. 1980, P. 35 ff.) theoretical differentiations and empirical measurements of courses of action. Taking into account the subjective processes of a person who is involved in an action with regard to the manifest, i.e. observable interest guided activities and the material-ecological as well as social institutional constituents of the object of interest, such phases of action could be rather clearly separated from one another (cf. KASTEN 1983). In reference to the planning and initiation phases (resp. beginning phase) it would be purposeful to differentiate between external and internal conditions of actual actions of interest. The field of external conditions can be further subdivided into non-personal external conditions (e.g. material-ecological "stimuluses") and personal external conditions ("incentives"), whereby, a discrimination between explicit personal incentives (e.g. verbal suggestions) and implicit personal incentives (e.g. non-intentional model behavior) can be made. The field of the internal conditions or releaser can be subdivided in structural releasers, that correspond to the knowledge of possible actions in interest specific objective fields ("epistemological structure" cf. DOERNER 1976, P. 37 ff.), and functional releaser, i.e. in spontaneous activities of a person, that corresponds to the actual "heuristic" for carrying out new actions (cf. DOERNER 1976, P. 38-43).

2.4.3 Analyses of Interests within a Framework of Ontogenetic Sector Theory

Within a framework of the ontogenetic sector theory we are concerned with the systematic longitudinal reconstruction of the origin and change of an interest orientated person-object-relation. The analysis of the corresponding responsible development conditions should clarify how the constitutionalization and resulting "habitualization" of interest occurs. This indicates that the ontogenetic analyses pursues both process and structure orientated problems.

Ontogenetic analysis rests on a foundation of differential and actualgenetic analyses. It encompasses these and orders them in a biographical connection, i.e. within the context of the life history of the individual. It is attempted for instance to make comprehensible actions of interest (and interest specific person-object-relations) in their continuity across different points of time, in principle , it is concerned with the registering of longitudinal effective and interpersonal determination of interests, including their interdependencies.

What could be characteristic for the origin of a person-object-relation is that for example, the subject-internal representation that belongs to the object of interest fills under a rather frequent completion of object related actions of interest an expanding cognitive space (and is itself more differentiated and more integrated). What is also thinkable is developmentalprocesses in which external but also internal conditions have a "disturbing" effect, for example, the time related continuity and stability of the person-object-relation could be impaired, interrupted or in the sense of an improvement accelerated.

It appears to make sense to divide the ontogenetic course of interests into three ideal type phases, in order to make

the first descriptive approach on the course of the genesis of interest:

(1) The phase of the first onset (or the "constituting") of interests, during which the first initiation and realization of an action of interest takes place;

(2) The phase of the further development of the interest. Here can occur processes of expansion, differentiation, integration, stabilization, etc. as well as opposing trends, e.g. setbacks, turning points, - resp. part phases of latent and/or inactivity with subsequent reappearances;

(3) The end phase of the ontogenetic course of interest stretches across the time period of 'giving-up' - resp. a long-term disappearance of the person-object-relations; the ending of an interest can occur rather autonomously and be a self-decision, or it can also tend to be induced through external influences of through force.

If one should want to reconstruct, in a differentiated manner, a multivariate determined, individual course of development, one must keep in mind especially all changes in the material-ecological setting of the person and their social-interpersonal milieu. Changes that are subjectively experienced as important within these conditional settings can also influence the development of interests. The fundamental theoretical concepts and data from the "critical-life-event" research (cf. e.g. BRONFENBRENNER 1976, FILIPP 1981) are important in this connection. Because one can presume that major changes in the life circumstances of an individual can influence both the continuity and development of interests. The child who attends kindergarten for the first time and is thus removed from his pure family up-bringing belongs essentially to this category as does the child who goes from kindergarten to school. These developmental fields are for example the object of a pilot study which the authors have conducted. Other important life events for the development are presumably entering college,

entering a career, the entering or breaking up of a partnership, a change in employment, unemployment (ULICH/HAUSSER et al. 1983), or the end of a working life and the beginning of retirement.

3. The Question of an Appropriate Methodology of Research

Considerations involving the choice of an appropriate research method for interest theory must take into account research models, data-collecting procedures, and evaluation procedures.

3.1. Research Models

The research models can be divided according to orientation of the research (descriptive, explanative, change orientated), or to the intended direction of interpretation of the results of the researches (exemplary/heuristic vs. generalized) These divisional aspects, along with the type of interest orientated fundamental questions, provide references for the choice of an appropriate research model.

Because the interest theory at the present time is descriptively orientated, the descriptive research models are of primary relevance. The descriptive survey research and correlation studies seem to be appropriate models of research for the fundamental differential questions, which tend to be descriptive and generalized. The descriptive single case studies can be applied to the fundamental heuristic questions.

The fundamental actual genetic questions which aim at a description of the characteristics of the phaselike course of the actions of interest, can be applied under the aspect of a generalization of group related longitudinal studies, in the case of a exemplary heuristic proceedings

the single case-longitudinal study. Thereby, one can connect many such single case studies to another.

This also applies to the working through of fundamental ontogenetic questions, in which a description of habitualization of interests is dealt with. The investigations over a long period of time can make cross-sectional studies necessary.

3.2. Measurement Procedures

Measurement procedures can be divided inter alia: according to the degree of standardization (degree in which the measurement assessment is standardized for all subjects); according to the degree of structuralization (amount and variety of the given stimulus as well as the response -resp. coding possibilities); according to the reactivity (the amount of the provoked reactions which are aimed for by the researcher through the procedure).

Because the constituting characteristics of interest represent subject-internal processes that cannot be immediately observed in a person's behavior and that many fields of actions of interest because of their "non-public" quality are not accessible for a participating observer (e.g. reading), especially those measurement procedures must be applied that make possible the recording of subjective conditions, evaluations, estimations etc. There belongs to this group for example, semi-standardized and weakly structured rating scales and questionnaires, as well as verbalization methods. With the help of non-. reactive methods (e.g. document analysis of diaries) complementary information can be gathered. The presently most important measurement method appears to be the semi-standardized interview, that presents the possibility of asking questions and responding to the individual

subject.

Concerning the actualgenetic fundamental questions the semi-standard interview records especially those constituted characteristics of an action of interest that occurs either post- or pre-actional, i.e. the cognition before and after an action of interest (cf. HUBER & MANDL 1982) . Through the method of thinking out loud, in which the person says whatever goes through his head in a given situation (FLAHERTY 1974, WEIDLE & WAGNER 1982), as well as the more specialized method of random sample of thought (cf. HUBER & MANDL 1982 b, CACIOPPO & PETTY 1980) the peri-actional characteristics that occur during an action can be recorded.

However, the insertion of such verbalization methods brings with it a number of problems. What remain unsolved are for example the following questions: To what extent altogether are subject-internal processes (-resp. characteristics such as value-aspects and affective coloring), or within the framework of actualgenesis of actions of interests, specific action preferences and patterns of decision accessible to the acting person himself? (NISBETT & WILSON 1977, NISBETT & ROSS 1980).

Which special cognitive competences and verbal abilities must the acting person have at his command, in order to grasp such subject-internal processes and characteristics, and to make a verbal comment about them?

Which conditions must the measurement situation meet, in order that the "grasp" and verbal expression are correct?

To test the major criterion of validity under these circumstances it may be necessary to incorporate new considerations and methods. One could e.g. use the information won by using a semi-standardized interview which

represents an analytic perspective of the acting person (or the information won by thinking out loud or random sample of thoughts) and compare it to the information gained from interaction partners who are taking part in the action of interest, or with an outside observer. By means of the so called communicative validation (cf. LECHLER 1982), one can test to make sure that the researchers ascertained or reconstructed internal processes and structures corresponds with the self-cognition of the active person. Within a framework of an action-validation (cf. WAHL 1982) one can investigate under the application of interest theoretical assumptions, whether *the* expeted actions of interest (based on the stipulated interest characteristics).

3.3. Evaluation Methods

Because *the* verbalization methods such as semi-standardized interviews, thinking out loud, and random sample of thought, are very important procedures for gathering data in the empirical investigation of the interest theoretical fundamental questions, a qualitative (resp. quantitative) content analysis for the evaluation of such investigations is also an important procedure. This applies at least for the first steps of the empirical analysis. Which statistical analyses and scaling techniques will be applied in the later steps depends on the respective research "models and fundamental questions. On the general methodological level can only be said that it may be advisable to use the so called non-parametric statistics and non-metric scaling techniques because these proceed on weaker assumptions than the parametric statistical methods or the metrical scaling methods.

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