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AUTHOR Keller, Monika; Hoppe-Graff, Siegfried
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ABSTRACT

In his conceptualization of the developmental course of interpersonal understanding, Selman (1980) specifies a set of issues which are central to the concept. For each issue, he assumes that development proceeds through an ordered sequence of ontogenetic levels and that developmental progress has a high degree of inter-issue consistency. In contrast to the explicit assumptions about changes at the issue level, his empirical presentation relates mainly to the general course of development and does not systematically analyze issue-specific, intra-individual patterns of development. Reported here are data from a longitudinal study involving 73 children who were given a friendship interview when they were 9, 12, and 15 years of age. The interviews were analyzed separately for six friendship issues in order to establish the degree of consistency and variability between both individuals and issues. A number of results contradict or supplement Selman's statements. It is concluded that descriptions of "the general course of development" may lead to biased accounts of developmental changes. (Author/RH)

The development of the friendship concept: Focusing on individual and issue-specific patterns

Monika Keller

Max Planck Institute for Human Development and Education

Berlin

Siegfried Hoppe-Graff

University of Heidelberg

Federal Republic of Germany

Running head: FRIENDSHIP CONCEPT

Abstract

In conceptualizing the developmental course of interpersonal understanding, Selman (1980) specifies a set of issues which are central to the concept in question. For each of the issues he assumes that development proceeds through an ordered sequence of ontogenetic levels and that developmental progress has a high degree of inter-issue consistency. Contrary to the explicit assumptions about changes at the issue level his empirical presentation relates mainly to the general course of development and does not systematically analyze issue-specific intraindividual patterns of development. We report data from a longitudinal study with N=73 children who were given a friendship interview when they were 9, 12, and 15 years old. The interviews were analyzed separately for six friendship issues in order to establish the degree of consistency and variability between both individuals and issues. A number of results contradict or supplement Selman's statemer... We conclude that descriptions of "the general course of development" may lead to biased accounts of developmental changes.

The development of the friendship concept.

Focusing on individual and issue-specific patterns

Among the approaches to social-cognitive development, Selman's (1980) model of "the growth of interpersonal understanding" is one of the most elaborate. It has both a structural and a content component. It is based on the structural assumption that the ontogenesis of interpersonal conceptions is a function of qualitatively different developmental levels of perspective-taking. Perspective-taking is the process by which the child comes to understand the way psychological points of view of self and other are coordinated. The content component of the model relates to four different domains of interpersonal understanding: the individual (relations within the self), close friendship, peer group, and parent-child relations. Within each domain a set of more specific issues is specified. Combining the structure and content dimensions results in a level-by-issue model of interpersonal understanding: for each issue development is hypothesized to proceed through these levels in an ordered sequence (see table 1).

Though Selman and his coworkers have presented data from several longitudinal and cross-sectional studies to empirically validate the model (e.g. Selman, 1980; Selman & Jaquette, 1977; Gurucharri & Selman, 1982; Gurucharri, Phelps, & Selman, 1984), three important questions have to be addressed. These are:

1. the assumption of stages as "structured wholes",

2. the degree of interindividual uniformity and diversity of the developmental progressions, and

3. the predictability of further social-cognitive growth on the basis of a person's initial developmental level.

The present study purports to contribute to the clarification of these topics.

Statement of problem

(1) Is there support for the assumption of structured wholeness?

In formulating his stage model, Selman in line with Kohlberg (1969) adapted the assumption of structured wholeness ("structure d'ensemble"):

> Each stage of social understanding represents a structured whole across a range of concepts. A given response represents not merely factors specific to that situation, but an underlying logic which characterizes thought at that stage across a variety of social processes. (1980, p. 77)

There has been much controversy in the literature about the aspects or kinds of data patterns that are relevant to empirical tests of such an assumption (e.g. Wohlwill, 1973, chap. 9; Flavell, 1977, chap. 7; Brainerd, 1978). Selman states that

> there remains, of course, some uncertainty as to which methods and analyses will allow conclusions as to the degree of synchrony attained and as to what degree constitutes enough "togetherness" to demonstrate structured wholeness or

> find it a useful idea. . . . In general . . . the rule that greater synchrony means greater structured wholeness is a generally accepted working guide (1980, p. 177).

Selman stresses the necessity of empirically demonstrating structured wholeness by observing developmental patterns across many contexts or modes of functioning, but the studies presented as empirical evidence yield non-conclusive results (e.g. Cooney, 1978; Selman, 1980, chap. 8). Recently, Pellegrini (1986) adduced evidence of a surprisingly high amount of issue-specific variation in development within a single domain of interpersonal understanding, friendship. These results are even more surprising since, if the assumption of structured wholeness holds true for the whole area of interpersonal understanding, it should be particularly in evidence within a subdomain.

Contrary to the assumption of structured wholeness Damon (1983) and Turiel (1983) have argued against the general interrelatedness of domains of reasoning and urged researchers to explore the specifics of each domain and subdomain of development and to make their interrelationship a question of empirical research. The present study will follow up on these contradictions by exploring the structure/content distinction more closely.

(2) Interindividual uniformity or diversity of issue-specific developmental patterns?

In the past years scholars have come up with a number of new concepts by which to characterize fundamental features of

ontogenetic processes. Among them are the constructs of developmental plasticity (e.g. Gollin, 1981), and developmental constraints (Keil, 1981). This conceptual framework has led to a renewed interest in the degree of uniformity or homogeneity vs. diversity or heterogeneity of developmental patterns. The assumption of invariant sequence central to stage theories is only one aspect of uniformity. Another aspect relates to the extent of developmental progress within an age interval or developmental period: Are there substantive interindividual differences in the "rate" of development such that we can observe stagnation as well as strong progression? Selman (1980, chap. 7) and Gurucharri and Selman (1982) conclude from their longitudinal data that (a) there are significant individual differences in the extent of progression within a five-year-interval, and that (b) stagnation of social cognitive understanding is the exception to the rule.

These data are not conclusive because of two methodological shortcomings: (1) The authors report only global trends and do not analyze domain- or issue-specific patterns of development. (2) The authors use a quantitative overall score - a procedure which basically contradicts Selman's (1980, chap. 4) assumption of qualitative differences between stages of interpersonal understanding:

> These differences are viewed as qualitative because they represent and require when going from one stage to the next a fundamental restructuring in the way an individual views

societal relations and not simply a quantitative (italics added) addition of new social data. (p. 76)

(3) Can we predict later development of the friendship concept on the basis of initial developmental levels?

Based on data from a longitudinal study which included repeated measurements after two and five years, Gurucharri and Selman (1982) looked for relationships between developmental changes in the first (t2-t1) and in the second (t3-t2) measurement interval. For the global quantitative measure of interpersonal understanding (IMS score) as the only indicator of interpersonal reasoning they found a moderate but statistically significant correlation (PHI=.43; p=.018) between measurement occasions. These results are interpreted as evidence for at least some predictability of individual changes in interpersonal understanding.

There are two problems with this argument: (a) The authors' restriction of the analysis to the global IMS score may mask differences in predictability for specific domains and issues. (b) The use of change scores has variously been criticized for statistical inadequacy (see Bereiter, 1963; Stelzl, 1982).

The empirical study presented below on the three questions discussed above:

1. Expanding Selman's approach, the structure/content distinction will be further explored by analyzing the degree of developmental synchrony or asynchrony at the level of the issues

of the friendship concept.

2. The study will systematically analyze the extent of ontogenetic change at the "microdevelopmental level" using issue-specific level scores instead of mean scores.

3. A further aim of our study is to determine the degree of predictability of developmental levels - not change rates - at ages 12 and 15 in each of the six specific friendship issues.

The results will not only "cross-validate" the Gurucharri & Selman study but will also contribute another facet to the picture of uniformity versus diversity of social-cognitive development mentioned above.

Method

Sample

Subjects are part of a sample of a longitudinal study of cognitive, social cognitive and personality development. 121 subjects (60 male/61 female) from a variety of social backgrounds of an urban area in Iceland (Edelstein 1984) are assessed longitudinally. 73 subjects (41 male/32 female) with full friendship data sets at all of three measurement occasions at ages 9, 12, and 15 are included in this analysis.

Tasks

Concepts of friendship (see Table 1) are assessed in a semi-structured interview. The procedure was modeled according to Selman (1980), with the difference that questions focus on children's own friendships exclusively instead of presenting

subjects with a hypothetical friendship dilemma. Each content aspects (issues) was probed with several questions.

Insert table 1 about here

Scoring

Issues were scored according to a scoring manual by Selman and Jaquette (1977), which was elaborated on the basis of the present data (v. Essen, Keller, & Mönnig, 1986). Level scores were assigned as pure level (e.g. 1) or major/minor level (e.g. 1(2) or 2(1)). Data were scored by two raters, one of them trained in the context of Selman's "Harvard Social Reasoning Project". Exact agreement of raters for issues is minimally 84%; mean agreement for the age groups 9, 12, and 15 is 94%, 88% and 90%, respectively. For the purpose of the present analysis only full stage distinctions are taken into account. For example, stage 1 represents level 1(0), 1, 1(2) of the full scoring system.

Results

1. Structured wholeness

As shown in Table 2, in each age group the developmental levels achieved vary across the friendship issues: For example, two thirds of the 9-year-olds score at level 2 when reasoning about the issue of trust, but only one third reach this level when reasoning about the issue of mechanism. At age 15, the largest difference between issues occurs between closeness and conflict

resolution: Only 20% of the children achieve level 3 for the closeness issue, but more than 50% reason at this level about the issue of corflict resolution.

Insert table 2 about here

The 'inter-issue'-correlation is shown in Table 3. Only the data for the 9 and 15 year olds are given as they represent the extreme correlations. Only at age 15, PHI-coefficients differ significantly from zero. But even in this age-group the maximum common variance does not exceed 25%.

Insert table 3 about here

An age-related trend in inter-issue synchrony is also reflected by the significant increase (KRUSKAL-WALLIS-H = 22.24, $p<.001$; df=2) of the average intercorrelations at the three age levels 9, 12, and 15 years: Reasoning about different friendship issues becomes more homogeneous or synchronous with age.

Table 4 presents the intraindividual variation across friendship levels for the different issues. The results show that at age 9 59% of the subjects differ from the modal reasoning level in either two or three issues . At the age of 12 and 15 years 34% and 39% respectively evidence such variability.

Insert table 4 about here

2. Uniformity versus diversity of individual developmental patterns.

Table 5 shows the intraindividual patterns of development across three measurement points. The six most frequently occuring patterns are presented. Although progression is the modal trend in the interval from 9 to 15, a substantive proportion of children obtains whose concepts do not develop across measurement occasions. Thus, some children evidence level 2 conceptions of friendships at age 9, and still reason at this level when they are 15 years old (see Table 5). This type of stagnation is evidenced most often when reasoning about the issues of closeness or trust: More than one third of the children do not change in these issues. Conversely, stagnation is relatively rare in reasoning about the issue of mechanism.

Insert table 5 about here

This result has to be seen in relation to the distributions of friendship reasoning at different ages (see Table 1) . Children who do not progress between ages 9 and 12 tend to have already achieved level 2 conceptions at age 9; while those who progress tend to have achieved only level 1 reasoning at the age of 9

years.

Only a small proportion of the sample progresses across two levels. Such development occurs only in a subset of the six issues (ideal friend, motivation, trust) and in the maximum level (defined as the highest score subjects achieve across the six issues).

3. Predictability

Table 6 presents the bivariate correlation coefficients between age groups for each of the issues and for the individual average and maximum level of friendship reasoning. In spite of the variation between the PHI-coefficients in Table 6 only 3 out of 21 coefficients (or 4 out of 27 when means and maximum scores are included) are significant. No more than about 12% of the variance can be explained by the preceding developmental level.

Insert table 6 about here

Discussion

We will restrict our discussion to the three topics outlined in the theoretical section.

1. With regard to the assumption of stages as structured wholes, the results of this study evidence rather low synchrony of developmental paths in different content domains of friendship reasoning. Although we agree with Selman (1980) that it is not at all clear how much synchrony is needed to demonstrate structured

wholeness empirically, the converging evidence from all three sets of data presented (Table 2 - 4) leads to the conclusion that within the friendship domain the extent of issue specificity in development tends to contradict the hypothesis of structured wholeness.

At all three ages there is more asynchrony than would be expected on theoretical grounds in terms of the structuralist model. On the other hand the three data sets mentioned above also converge in demonstrating an ontogenetic trend from lower to higher synchrony. This trend cannot be due to a ceiling effect, because development of the friendship concept does not end with level 3. The reasons for the trend towards higher synchrony and/or the homogenizing (synchronizing) factors are not clear; one might speculate that it fits with the general assumption that higher stages are more integrated than lower stages (Kohlberg, 1969) or with the Piagetian hypothesis that cognitive structures in adolescents are more independent of context and more generally applicable than children's (see Inhelder & Piaget, 1958, Part III).

But this aspect of development has received little attention in social cognitive research with a structuralist orientation. Rather, the focus has either been on the assumption of general interrelatedness of substructures (Selman, 1980) or on the independent development of domains in the sense of partial structures (Damon, 1983; Turiel, 1983). The amount of content

specificity evidenced within one domain (Keller & Wood, 1987) certainly needs further empirical clarification. Presently we can only speculate why some issues are easier than others. With regard to the difference between the issues of trust and mechanism one hypothesis might be that trust refers to a more central aspect of friendship - the representation of intimacy - while mechanism refers to a more abstract representation of strategies for making friends. The representation of such strategies may be less tightly linked to concrete friendship experiences and thus involve more abstract reasoning processes. Such "subtask" specificity may be one reason for the asynchrony in reasoning about different friendship issues.

2. With regard to uniformity or diversity of individual developmental patterns, the results caution against drawing conclusions about the nature of developmental processes from changes at the level of aggregated scores. The diversity of developmental patterns within a specified age interval can easily be overlooked, thus leading to false inferences about interindividual uniformity in patterns of growth.

When comparing the group progressions in Table 2 with the distribution of individual patterns in Table 5, the shortcomings of "aggregate information" become evident:

(a) There is considerable discrepancy between the relatively stable growth pattern evidenced for the group and the relatively high proportion of children who with regard to single issues

maintain the same developmental level over the age span of six years. Stagnation constitutes a very frequent developmental pattern. It holds true, in particular, for issues in which children at the age of 9 years have reached a high developmental level relative to the age group.

(b) The high percentage of "stagnation" is even more impressive when compared to the relatively low proportion of "rapid progression".

(c) The combination of progression and stagnation across the three measurement occasions is the most frequent pattern of growth. Subjects typically progress one stage which, depending on the "difficulty" of the issue takes place either between 9 and 12 years or between 12 and 15 years.

These results point to internal restrictions or constraints on developmental change, which are consistent with predictions from Piaget's (1975/85) equilibration theory. Development appears to impose limits on domain-specific change which can only be overcome when the entire system of cognitive functioning changes.

3. Compared to the Gurucharri and Selman (1982) study, our results provide a more complete picture of predictability in the friendship domain since we obtained correlation coefficients for each of the issues. The results show that there is a sort of ongoing "equalizing of chances" in this domain of social-cognitive growth: Thus, it does not matter whether the child's friendship concepts at age 9 are subjective (level 1) or reciprocal (level 2)

- in both cases there is a similar chance to achieve level 2 friendship reasoning at age 12 (or level 3 intimacy reasoning at age 15). The pattern of correlations as a whole is interpreted as evidence against the possibility of differentially predicting later development in friendship reasoning on the basis of information about the developmental level at a given age. With regard to this aspect, there is no difference between the issues: The few significant correlations between ages have to be evaluated against the background of non-significant correlations for the other age comparisons. Moreover, considering the low amount of "variance explained", statistical significance in theses cases does not warrant predictability.

The lack of differential predictability does not imply that it is impossible to predict development of the friendship concept. As demonstrated by Hart and Damon (1985) and Snyder and Feldman (1984), the degree of developmental variation ("mixture") within a concept or domain may be a more valid predictor than level of development. Our data did not permit this kind of "prediction analysis" since we could not compute reliable measures of variation on the basis of six issues only.

However, it is important to make a clear distinction between differential predictions (using correlation or regression coefficients in the sense referred to above) and "prediction" of the general course of development.

The frequency distributions in Table 1 can also be used to

"predict" development: For example, it is possible to "predict" that nearly every 9-year-old's social-cognitive competence is at level 2, and that hardly anyone of this age group has a level 3 understanding of friendship in any of the issues. Or we can predict that two thirds of these children will have a reasoning "competence" of level 3 when they are 15 years old. Conversely, none of the 15 year olds reasons at level 1 in any of the issues.

This distinction between "differential" and "general" prediction finally permits to add one further comment concerning the issue of uniformity versus diversity of development. As mentioned, our data show a high degree of uniformity, for example in the competence level of reasoning at different ages. Simultaneously, the data evidence great diversity of developmental patterns. Thus, the broad picture of social-cognitive development is characterized by homogeneity as well as heterogeneity.

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Table 1: Friendship Interview

Levels of friendship conceptions (according to Selman, 1980)

Level 0: Momentary physical playmate
Level 1: One-way assistance
Level 2: Fair-weather cooperation
Level 3: Intimate/mutually shared friendship
Level 4: Autonomous/interdependent friendships

Content domains (issues) of friendship

MOTIVE (why friendship is important)
MECHANISM (how friendships were established)
CLOSENESS (how friends are close and intimate)
IDEAL FRIEND (what makes a good friend)
TRUST (meaning/importance of commitment and trust)
CONFLICT RESOLUTION (meaning/solution of conflicts)

Table 2

Issue-specific frequencies of friendship levels at ages 9, 12, and 15 (relative frequencies)

	9 years			12 years			15 years		
	Level								
	1	2	3	1	2	3	1	2	3
Issue									
Motive	.57	.43	-	.21	.69	.10	-	.76	.24
Mechanismen	.67	.32	-	.36	.63	.1	-	.73	.27
Closeness	.53	.46	.1	.15	.73	.11	-	.80	.20
Ideal friend	.52	.48	-	.21	.75	.4	.3	.64	.33
Trust	.31	.68	.1	.5	.87	.8	-	.64	.36
Conflict	.43	.56	.1	.10	.80	.10	-	.45	.55

Table 3 : Correlations (phi) between friendship reasoning about different issues at ages 9 and 15*

	MOTIV	MECHA	CLOSE	IDFRE	TRUST	CONRE
MOTIV		.41**	.38**	.47***	.33*	.46***
MECHA	.18		.31*	.47***	.32*	.25
CLOSE	.07	.01		.34*	.44**	.47***
IDFRE	.18	.30*	.21		.32*	.39**
TRUST	.10	.16	.01	.24		.35**
CONRE	.28*	.28	.20	.31*	.08	

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

* The table presents the PHI-coefficients (phi) for the 9-year-olds (below the diagonal) and the 15-year-olds (above the diagonal). Mean intercorrelations for the three age groups are $\bar{X}_{(phi)} = .17$ (9 years); $\bar{X}_{(phi)} = .30$ (12 years); $\bar{X}_{(phi)} = .38$ (15 years).

Table 4: Extent of intraindividual developmental variability across the six issues (relative frequencies)

Extent of consistency/ variability	Age group		
	9 years	12 years	15 years
All issues consistent/ No variability	.11	.34	.40
1 issue differs	.30	.32	.22
2 issues differ	.44	.21	.29
3 issues differ	.15	.13	.10

Table 5

Intraindividual patterns of development for issues (relative frequencies)*

Developmental Level at ages			Issue						Competence
9	12	15	MOTIVE	MECHA-NISM	CLOSE-NESS	IDEAL FRIEND	TRUST	CON-FLICT	Level
1	1	2	.9	.25	.13	.9	-	.4	-
1	2	2	.37	.33	.25.	.24	.22	.18	.3
1	2	3	.6	.9	.12	.3	.7	.16	.4
2	2	2	.17	.12	.35	.26	.36	.18	.30
2	2	3	.9	.8	.1	.19	.22	.27	.48
2	3	3	.5	-	.6	-	.6	.4	.14
Other pattern			.17	.13	.8	.19	.7	.13	.1
Total			100	100	100	100	100	100	100

* Underlined numbers indicate most frequently occurring patterns. "Mean level" refers to the intraindividual means (across the six issues); "Competence level" refers to the individual maximum across the issues.

Table 6: Predictability of development of the friendship concept*

Issue	Correlations		
	9 × 12 yrs.	12 × 15 yrs.	9 × 15 yrs.
MOTIV	.05	.03	.18
MECHA	.19	.15	.23
CLOSE	.24	.34*	−.12
IDFRE	.25	.03	.17
TRUST	.06	.30	.15
CONRE	.37**	.06	.13
$\overline{X}_{Issues}$	.19	.15	.12
X max (Competence Level)	.19	.32*	.13

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

* The table shows the PHI-correlations (phi) for each of the issues and for the individual maximum level (across all issues). $\overline{X}_{Issues}$ refers to the average of the six issue-specific correlations.