Moral Cognition or Affect or Both?
Test and Educational Implications of Piaget's Parallelism Theory[1]

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Introduction

Mainstream psychology and education frame its questions in a *component* model of moral behavior, impacting not only research methodology but also educational practice. There is a controversy about the greater importance, if not reality, of either *moral cognition (*and *competence)* or *moral affect (*and *emotion)*[3], and whether moral and character education should address the development of moral *cognition* or of moral *affect* as if both were separable components of behavior and as if both represented different faculties of the human organism, the brain and the heart, the mind and the body. Some describe their model explicitly as a component model, singling out cognitive, affective and other components of moral behavior. This theorizing in terms of separate components, deeply entrenched in our educational institutions, entails different types of moral measurement (preference tests versus ability tests) and moral classroom practices (indoctrination versus stimulation).

In contrast, Piaget states that moral *cognition* and moral *affect* are distinct yet inseparable aspects of one and the same reality. Thus Piaget renders the question which is more important or more real as meaningless, and the controversy about this question as obsolete. While both are aspects of the same behavior, affect and cognition are as clearly distinguished from each other as the redness of a ball can be distinguished from its roundness and its weight. While Piaget makes this statement in regard to all human behavior, it, of course, applies also to moral behavior. Hence, we can never assess moral

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[3] **For the sake of simplicity, we will use cognition and competence synonymously, as we will use affect and emotions meaning similar things. This accords to the general usage of these words in every-day life and academia as well, and the point we are making is not invalidated through the variations in meaning between them.**

cognition and moral affect without assessing the other aspect, and we can never teach moral cognition and emotion without affecting the other, respectively.

Moreover, Piaget hypothesized that both aspects interact in a predictable way, namely that moral affects energize moral behavior, while moral cognition directs and structures it in a particular situation (we call this hypothesis *correlational parallelism*) as well as in the course of moral development (*developmental parallelism*).

With the implications of Piaget's distinct-yet-not-separable aspects model for the theory and measurement of moral dispositions deals Lind, who has taken up Kohlberg's (1958, 1964; Kohlberg et al., 1984) definition of moral judgment competence and designed an experimental approach to assessing it, the *Moral Judgment Test* (Lind, 1978, 1985, 2002, in press; Lind & Wakenhut, 1985). This paper will put the hypothesis of correlational parallelism to test. Do moral affect and moral cognition relate in such a way that *people will prefer more adequate moral orientations, and reject inadequate moral orientations, the higher their ability to make moral judgments*? In concluding, the paper will address the implications of Piaget's conceptualization and our empirical findings for moral education.

Piaget's Concept of Affect and Cognition as Distinct-Yet-Inseparable Aspects

Piaget has stated his concept of affect and cognition as distinct-yet-inseparable aspects in many places (Piaget, 1951; 1965 a; 1965 b; 1976; 1981; 1985; Piaget & Inhelder, 1969; see also Lourenco & Machado, 1996; DeVries, 1997). For example, Piaget and Inhelder (1969) explain: "Affectivity constitutes the energetics of a behavior pattern whose cognitive aspect refers to the structures alone. There is no behavior pattern, however intellectual, which does not involve affective factors as motives; but, reciprocally, there can be no affective states without the intervention of perceptions or comprehension which constitute their cognitive structure. Behavior is therefore of a piece, even if the structures do not explain its energetics and if, vice versa, its energetics do not account for its structures. *The two aspects, affective and cognitive, are at the same time inseparable and irreducible*" (p. 158; emphasis added, GL).

Applying this distinct-yet-not-separate aspects concept of cognition and affect,

Kohlberg (1958) notes that "a systematic general observation of moral behavior, attitudes, or concepts in terms of such set of formal criteria of morality [. . .] crosscut the usual neat distinctions between moral knowledge and beliefs on the one hand and moral behavior or motivation on the other, since *a moral act or attitude cannot be defined either by purely cognitive or by purely motivational criteria*" (p. 16; emphasis added, GL).

Piaget and Kohlberg's conceptualization of cognition and affect as *aspects* or properties of moral behavior is rooted in the epistemologies of William of Occam (1285 - 1349) and Baruch Spinoza (1632 - 1677). Occam stated that *universals* – like attitudes and competencies – are merely categories for describing humans but are no substances or entities which exist by themselves, as Plato and the so-called *Realists* believe. He thus argued against *Realism*, that is, against the believe that properties (or universals) exist by themselves like substances or entities.[4] He maintained that all properties exist not in the world but only in our minds as means to describe and understand the world around us. In that sense, Occam was a constructivist.[5] Moral dilemmas, for example, do not exist in the world apart from us but are in the eyes of the beholder (Lind, 2006). Similarly, Spinoza (1674), opposing René Descartes' separation of mind from the body, insists that mind and body, cognition and affect etc. are only different constructs of our minds with which we describe different properties of the human organism but are not some essences.[6] This idea of a body-mind unity is supported by modern neurological research as summarized by Damasio (1994), who also rejects Descartes' notion of a separation of body and mind. As he says, we think with our fingertips, and we feel with our brain.

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[4] **"I maintain" William of Occam wrote, "that a universal is not something real that exists in a subject ... but that it has a being only as a thought-object in the mind [objectivum in anima]." [...] Accordingly, he wrote, there is no reason to believe that there is an entity called "humanity" that resides inside Socrates. Nothing is explained by that."**
(Wikipedia,http://en.wikipedia.org/wiki/Problem_of_universals; Febr. 28, 2006).

[5] **Occam's razor must be seen together with his nominalist (or constructivist) philosophy. If taken by itself it would mean simplicity and reductionism to be virtues by themselves. This misunderstanding has possibly informed the reductionist movement of psychological behaviorism.**

[6] **"Axioms ... 4: Two or more things are made distinct from one another either by a difference in their attributes or by a difference in their states. Whatever exists is either in itself or in something else (by A1), which is to say (by D3 and D5) that outside the intellect there is nothing except substances and their states. So there is nothing outside the intellect through which things can be distinguished from one another except substances (which is to say (by D4) their attributes) and their states." (Spinoza, 1674; Part I).**

Palmer (1994): "An attribute, for Descartes, is a characteristic that is the essence of a substance [i.e., which is essential to it.] For Spinoza, an attribute is a characteristic that to the human intellect seems to be an essence." (p. 155).

Piaget's conceptualization of affect and cognition as distinct yet inseparable *aspects* has been taken up by several scholars (e.g., Kohlberg, 1958; 1964; 1984; Higgins, 1995; Montada, 1993; Sprinthall et al., 1993).[7] It provided the grounds for Lind's *Dual-Aspect-Theory* of moral behavior and development (Lind, 1985 a; 2002), and for his *Moral Judgement Test* (MJT), through which it has become possible to submit Piaget's parallelism hypotheses to *adequate* experimental testing (Lind, 1978; in press).

The Hypothesis of Correlational Parallelism

Piaget clearly states that affective and cognitive aspects of human behavior should correlate highly, yet he does not give clear examples of behavior to which this general hypothesis would apply. In general, he notes, "affective life, similar to intellectual life, is continuous adaptation, and both of these adaptations are not only parallel but interdependent, since sentiments express the interests and values of actions of intelligence constitutes the structure" (Piaget, 1951, p. 220)[8] Applications of Piaget's parallelism hypothesis can be found in the works of Kohlberg and Rest. Kohlberg (1958), whose "research deals with the interrelated development of basic moral concepts and attitudes" (p. 1), sees a clear parallelism between moral cognition and moral affect. For him "it seemed to be a fact that quantitative consistency in the type [of moral orientation] was associated with qualitative extremeness in expressing its underlying 'principle' [. . .]" (p. 94).

Even more elaborated is Rest's formulation of the parallelism hypothesis: "[T]here is evidence that higher moral judgment scores reflect greater capacity and are not merely

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[7] Kurt Lewin, influenced by Gestalt Psychology, has held a similar view as Piaget. "Lewin makes the structure of the total field the object of his topological psychology and divides it into two inseparable but different aspects. One aspect is the structure of the field. .... The other aspect is the field's dynamics and is affective" (Piaget, 1981, p. 8)

[8] Piaget seems not to be immune against confusing the aspect model with the component model, at least implicitly. Talking of "affective life" as distinct from "intellectual life" could be easily mistaken as implying separate components of life. Or read this: "We have assumed that affective decentering is a correlative of cognitive decentering, not because one dominates the other, but because both occur as a result of a single integrated process" (Piaget & Inhelder, 1969, p. 26) Using the term "affective decentering" implies that affects are substances that can spread out, and using the term "cognitive decentering" could mean that decentering and cognition are something different. They are not. Decentering, as Piaget says elsewhere, *is* a way of describing cognitive properties of the human mind.

differences in preference. Studies of moral comprehension indicate that those subjects with higher moral judgement scores also have higher moral comprehension scores, and that subjects with lower moral judgment scores have lower comprehension" (Rest, 1988, p. 188). In this statement, the cognitive aspect is defined as *comprehension* of moral arguments made by others, and the affective aspect is defined as the *preference* for postconventional moral reasoning. Similarly, Montada (1993) believes there is a functional link between both aspects by hypothesizing that moral emotions presuppose perceptions or 'cognitions' of situations. "These cognitions do not need to be reflected or objectively true, nor do they need to be verbalized or conscious. Nonetheless, they are functional for the arousal of [moral] emotions." (p. 272).

According to Lind's *Dual Aspect Theory*, cognitive-affective parallelism implies the hypothesis that *people will prefer higher moral orientations, and reject lower moral orientations, the higher their ability to make moral judgments*, (Lind, 1978; 1985; 2002; in press) whereas this ability is defined, according to Kohlberg (1964) as "the capacity to make decisions and judgments which are moral (i.e., based on internal principles) and to act in accordance with such judgments" (p. 425). In other words, this hypothesis states, that the more people have developed the capacity to judge arguments by their *moral* quality (moral comprehension) rather than by non-moral qualities like opinion-agreement, they will prefer the higher or more adequate moral orientations over the less adequate ones.

Piaget not only thought that the two aspects are functionally related but also that they are developmentally parallel. "We shall be able to put intellectual structures and the levels of affective development in parallel, stage by stage" (Piaget, 1981).[9] What developmental parallelism would mean in concrete, is much debated in research literature. Kuhn et al. (1977) argue that both threads of development are parallel but that cognitive (logical) development always precedes moral development. On the basis of her studies, Nunner-Winkler (1989) suggests to discard Piaget's notion of parallelism, while

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[9] **"Affective life, similar to intellectual life, is continuous adaptation, and both of these adaptations are not only parallel but interdependent, since sentiments express the interests and values of actions of which intelligence constitutes the structure." (Piaget, 1951, p. 220)**

"When behavior is studied in its cognitive aspect, we are concerned with its structures; when behavior is considered in its affective aspect, we are concerned with its energetics (or 'economics' ...). While these two aspects cannot be reduced to a single aspect, they are nevertheless inseparable and complementary. For this reason we ... find a marked parallelism in their respective evolutions" (Piaget & Inhelder, 1969, p. 21)

Lind (2002) strongly defends Piaget's assumption, with the modification, however, that, in contrast to Kuhn et al.'s theory, we should assume development to be circular: First, the child needs to develop a strong, yet cognitively undifferentiated moral sense that guides and energizes the development of his moral-cognitive structures, which then in turn helps the child to develop a more rational, yet emotionally anchored moral orientation (Lind, 1989; 2002). Yet, in this paper we will have to limit ourselves to the hypothesis of correlations parallelism.

Method

To test Piaget's hypothesis of affective-cognitive parallelism (that is, our more precise reformulation of this hypothesis), we analyze findings from studies using Lind's Moral Judgment Test (MJT; see Lind, 1978; in press).[10] In line with Piaget's concept of distinct-but-not-separable aspects, the MJT lets us measure both aspects simultaneously yet producing distinct scores for each aspect. Like in Piaget and Kohlberg's clinical moral judgment interviews, the MJT confronts the participant with a short story about a person in a dilemma situation. In the standard version of the MJT, two stories are used, the Doctor dilemma and the Workers dilemma (see Lind, 2006). The participant is to give her or his opinion on whether the actor's solution of the dilemma was wrong or right on a scale from -3 to +3. This sets the stage for the moral task the participant is confronted with.[11]

The task for the participant consists of rating arguments, six arguments pro and six arguments contra the participant's opinion on the solution presented in each story. Each argument represents one of Kohlberg's six stages of moral orientation. The 9-point rating scale stretches from -4 ("I strongly reject") to +4 (I strongly agree"). For people at the lowest level of moral judgment competence, even the requirement to deal with

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[10] A preliminary draft of Lind (in press) can be downloaded from: http://www.uni-konstanz.de/ag-moral/pdf/Lind-2004_meaning-and-measurement.pdf

[11] The common distinction between so-called 'preference' and 'production'-tests does not apply here. The MJT could be called a preference test as any competence test could be called that way which asks the participant to 'prefer' the correct answer. The more substantial difference is between attitude tests, which contain no difficult task, and competences tests, like the MJT, which contain a difficult task.

arguments at all represents a very difficult task; they refuse to rate any of the arguments ("Why do I have to answer these questions after I did say my opinion on the issue"). Participants at a somewhat more advanced level strongly agree with all arguments that agree with their opinion, and strongly reject all arguments disagreeing with their opinion. They find it difficult to dissociate themselves from bad, yet supportive arguments, and even more difficult to even slightly accept arguments which oppose their opinion.

Thus, the cognitive aspect or *moral judgment competence* can be measured by looking at the pattern of moral judgment behavior. As this competence develops, people start to rate arguments more and more in regard to their moral quality rather than in regard to their opinion-agreement, and the whole pattern becomes more consistent in regard to moral orientations and more differentiated in regard to one's own opinion. These cognitive properties of moral judgment behavior are reflected in the C-score, whereby the "C" stands for *c*ompetence and *c*ognitive aspect (for more details, see Lind, in press; also http://www.uni-konstanz.de/ag-moral/).

The affective aspect (the preferences for the six stages of moral orientations) is simply measured, like in attitude measurement, by averaging the participants' ratings of each stage.

The analysis of Piaget's parallelism hypothesis is based on MJT studies in Germany as well as on secondary analysis of MJT studies in 17 countries, out of together 27 countries in which the MJT has been adapted and validated (Australia, Brazil, China, Colombia, Czech Republic, France, Germany, Hungary, Iran, Israel, Italy, Lithuania, Macedonia, Mexico, Morocco, Netherlands, Philippines, Poland, Portugal, Romania, Russia, Spain, Sri Lanka, Taiwan, Thailand, Turkey, the US, and many more).[12]

To test the hypothesis of affective-cognitive parallelism, the coefficient of correlation is calculated for each combination of stage attitude and the C-index, resulting in a certain profile of six correlation coefficients. For obtaining estimates for effect size we looked at the moral preference ratings of groups with various level of moral judgment competence, analyzing polynomial contrasts for the preference profiles, and then converting the *F*-values to the effect size index *r* by the following formula, whereas df_j

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[12] **If not stated otherwise, the findings quoted here are published as informal papers on the internet:**
http://www.uni-konstanz.de/ag-moral/mut/mjt-certification.htm#certified_versions . I wish to thank all authors of these studies for their permission to use their data for testing Piaget's parallelism hypothesis.

designates the number of categories minus 1, and df_i the number of cases minus 1, and r_{xy} the (nonlinear) correlation coefficient (Cooper & Hedges, 1994).

$$r_{xy} = \sqrt{\frac{df_j * F}{df_j * F + df_i}}$$

It should be noted that the *a priori* probability of such a combined prediction is very small and, therefore, the falsifiability (Popper, 1968) and information value of this hypothesis is very high. There can be 720 possible outcomes, because there are six stages and the correlations with them can be ordered in 7! = 720 different ways. Thus, the probability of a predicted order of correlations is 1 divided by 720, that is, $p = 0.0014$. Because this hypothesis is formulated as a universal prediction, the probability of accidental corroboration is extremely small and, therefore, its information value is extremely high.

Findings

Piaget's hypothesis implies that the cognitive aspect (represented by the C-index) and the affective aspect (represented by six attitude scales) correlate such that the higher the moral competence, the more are lower stages of moral reasoning rejected and the more are higher (post-conventional) stages accepted.

Early findings in Germany, where the first studies were done with the MJT, fully supported Piaget's parallelism theory. *Figure 1* shows, while all participants prefer higher to lower stages of moral orientations as cognitive-developmental theory predicts (Kohlberg, 1984; Rest, 1969), their *preference* for the *higher* stages (and the *rejection* of the lower stages) of moral orientation is stronger the higher their moral judgment competence

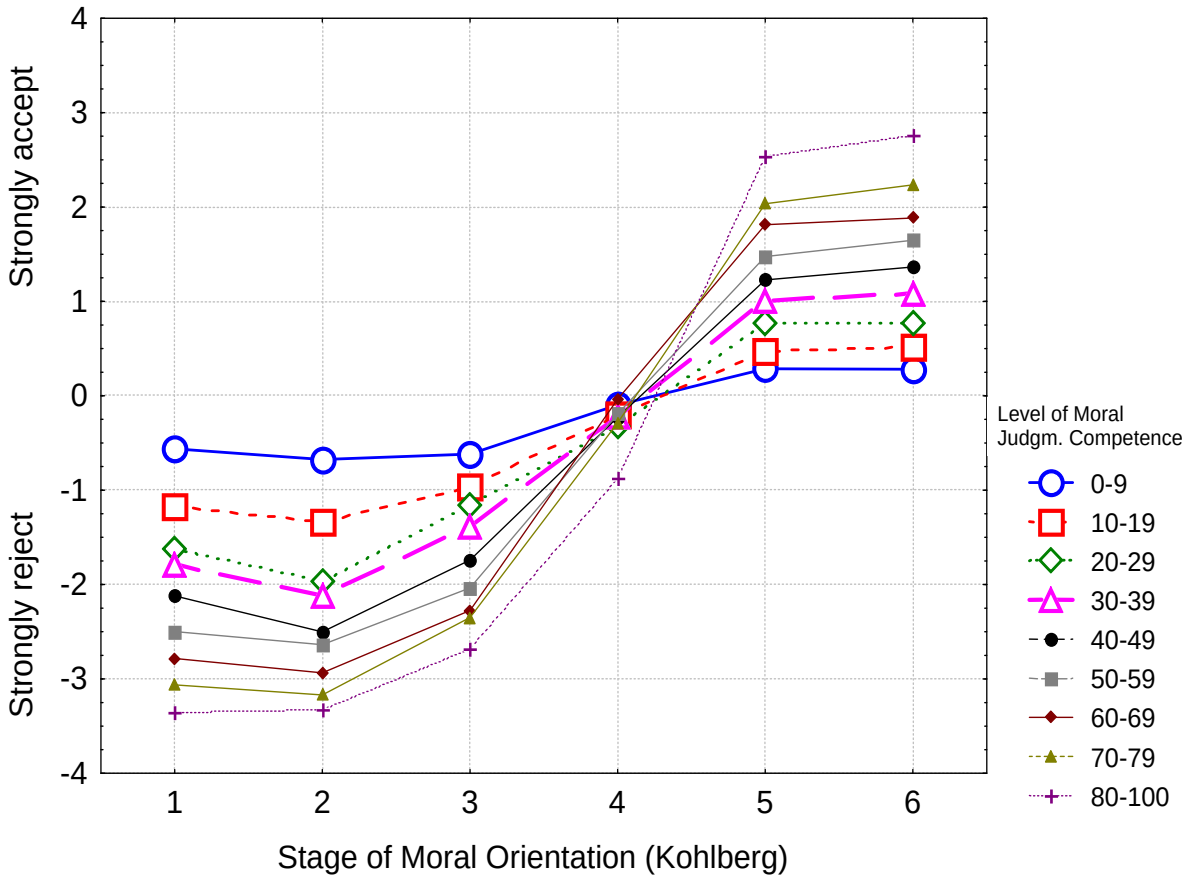

Figure 1 ***Correlational parallelism*** **between moral affect and cognition: Preference of each of the six Kohlbergian stages of moral orientations as a function of participants' C-score, MJT (index of moral judgment competence), in a sample of 1st semester German university students. Source: FORM-Project, 1977-1984 (see Lind, 2002). Interaction effect of Orientation-Stage and Competence-Level: *F*(40,9830)=92,43; *p*<0,000; N = 2098; effect size *r* = 0,52.**

is. It should also be noted that preference and rejection are graded as a direct function of the stage of orientation, and that the relationship is linear and without any exception. This is an unusually strong support for an unusually risky hypothesis, and we can regard Piaget's parallelism hypothesis as a well-founded cornerstone of moral development research.

This judgment is further corroborated by many findings with very different samples in Germany and in many other countries. Studying University students and juvenile delinquents alike revealed the same pattern of correlations as predicted from the theory (Lind, 2002). As predicted, the correlations are very marked and their gradation is fully in line with the hypothesis. They are mostly below *r* = -0.50 for the lowest stage, and above *r* = +0.50 for the highest stage, and of intermediate size for the intermediate stages (*Figure 2*).

Studies of university students in four other European countries (Austria, the Netherlands, Poland and Yugoslavia) also revealed the same, invariant affective-cognitive parallelism (Lind, 2002). Because of this extreme stability of findings, the parallelism is now used as a validation criterion for new sub-tests for the MJT as well as for validating

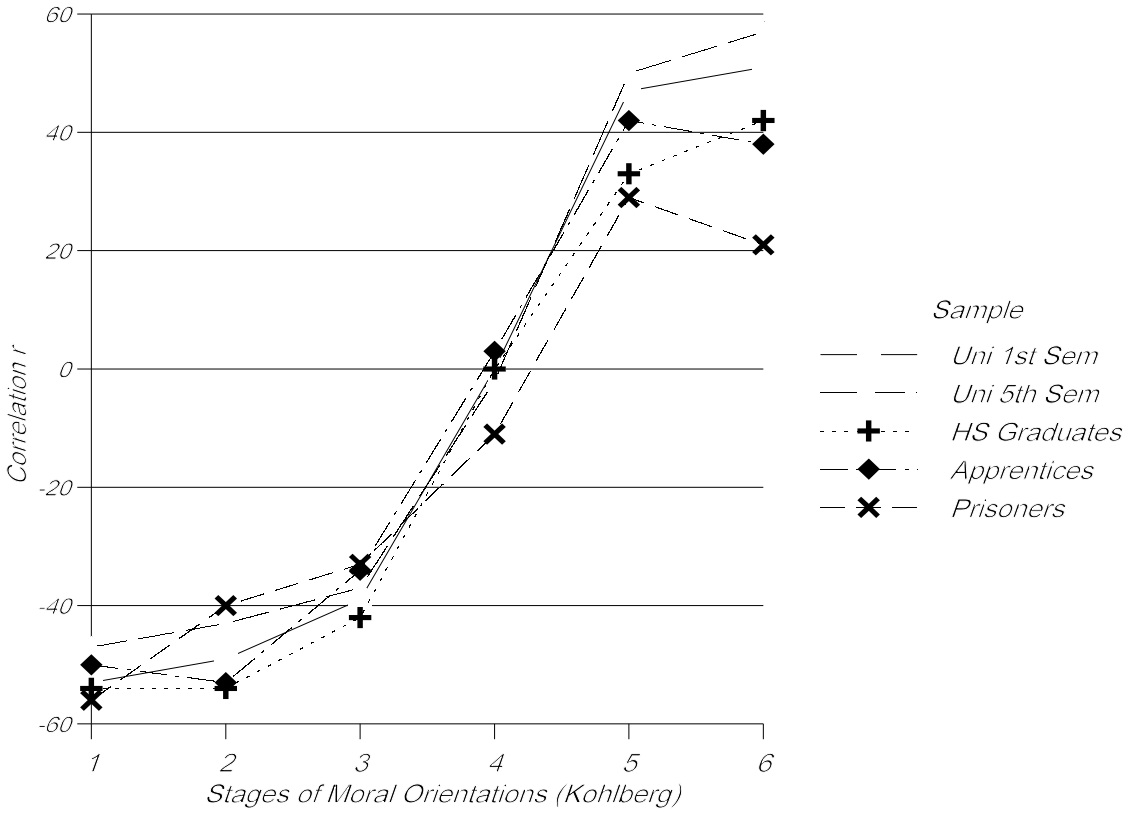

Figure 2 *Correlational parallelism* between moral affect and cognition in five different samples: Profiles of correlations between participants' preferences of the six Kohlbergian stages of moral orientation on the one side (affective aspect) and the C-score (MJT) on the other (cognitive aspect), in samples of 1st semester university students (N=2098), 5th semester university students (N = 812; both FORM-project), high school graduates (N=516; also FORM; Lind, 1978), Swiss apprentices (N=579; HASMU-project by Oser et al., see Lind, 2002), and juvenile prisoners (N=58; Wischka, 1980).

translations of the MJT. All new versions of the MJT have to fulfill this criterion (and two more criteria) in order to be certified as valid, which ensures that all versions are not only semantically but also pragmatically equivalent (Lind, *in press*).

In the meantime, the MJT has been translated into 27 other languages, and all these versions have been validated using, amongst others, the parallelism criterion as validation standard. For the present study, findings from 17 validation studies were available. All studies, without any exception, support Piaget's parallelism theory.

Figures, see Appendix

Implications for Education

Clearly, Piaget's paradigm of distinct-yet-not-separate aspects sheds light in the different ways of how we organize our educational systems and how we design the school curriculum regarding moral education and more. In the past, the separation of cognition and affect as different *substances* or *components* had a great impact on the organization of our educational system, on curriculum construction and on educational assessment and evaluation. The organization of our educational system reflects the component model and leaves little room for an integrative administration as implied by the aspect model. Not only are all subjects divided according to the various components of human behavior, but so are also most educational organizations. Each component, it seems, "has" its own department of administration in the college of education, and in the educational publishing house. Everyone trying to implement an integrative, affective-cognitive approach of moral education in our classrooms, can tell painful stories about the misfit of our institutions for such an approach. Representatives of the various component-departments shake their heads and refer us to some colleague, who, as they believe, has some sympathy for people who seem to be not quite clear in their head. It hardly occurs to them that, in order to become effective in everyday practice, moral education needs to be

organized as an integral part of the whole educational system and that morality is as much a cognitive competence as it is an affective disposition.

In the same vein, curriculum development and classroom teaching (including teacher education), if it is to be effective, must overcome conventional thinking that affect and cognition are separate components that can be taught in separate subjects. As Piaget has taught us, and our research confirms, without affective and emotional arousal there is little learning and hardly a lasting effect of learning. And without taking the cognitive aspects of moral affects into account, there is no moral development from black-and-white moral thinking (which is always associated with a high probability to resort to violence as a means to "promote" the good) to more integrated and differentiated moral judgment facilitating nonviolent ways of conflict resolution like moral discourse, mediation and peaceful negotiation.

The findings from the studies cited here support cognitive-developmental approaches to moral education (Higgins, 1995; Kohlberg, 1964; Piaget, 1965 b; Power et al., 1989; Lind, 2005), We can safely assume that fostering moral judgment competence also strengthens principled moral reasoning and behavior. The more it is developed, the more clearly adolescents (and adults) discern the inadequacy of low stage reasoning, and the more strongly they adhere to moral principles in their reflection on moral decisions. Secondly, ability to apply moral principles to one's judgment behavior also leads to better decision-making. Participants with high ability clearly make a decision (in one or the other direction) yet they refrain mostly from taking too extreme stances on an issue. Whereas participants with low judgment competence tend either to taking an extreme stance (in either direction) or no stance at all. In other words, constructivist moral education based on Piaget's parallelism theory of moral behavior and development eventually strengthens students' decision-making capacity without pushing them into one direction or the other (as indoctrination would do). Thus this educational approach is also compatible with the tenets of democratic values and its strong emphasis on free will and moral autonomy of the individual.

However, more research is still needed to test other psychological assumptions of constructivist moral education. Can we presuppose that students already possess moral ideals when they enter school or whether some sort of moral indoctrination is still needed in school? What methods of teaching are the most effective? Which kind of training is

needed for teachers to teach moral judgment competencies, which seems to be a more difficult task than to 'teach' moral affects?

Conclusions

Piaget's concepts and hypotheses have laid ground for a new paradigm of research and practice in education, which, it seems, has not yet been taken full advantage of. Piaget's aspect concept overcomes the problems implied by the component model, rooted in the conceptual realism of Plato and Descartes. It has helped to design new methods of measurements which allow simultaneous assessment of cognitive and affective aspects of moral behavior (and of other behaviors as well, of course).

Methodologically, the present study supports both the fruitfulness of Piaget's aspect model and the empirical validity of his parallelism hypothesis. Neither a purely 'cognitive' nor a purely 'affective' approach to the measurement of moral judgment behavior is warranted. Neither aspect can be adequately assessed without reference to the other. There is no *pure structure* of human behavior irrespective of content or direction and energy. When we talk about behavioral consistency, we always have to define consistency (or inconsistency) *in regard* to some behavioral standard, norm or principle. In contrast to chemistry, in psychology there is no *consistency per se*. Otherwise we could not distinguish principled judgment from rigid judgment, nor could we tell apart situated judgments from amoral, erratic judgments (Eyferth, 1959). Neither is there *pure affect* or attitude irrespective of the cognitive processing of the situation which triggers the behavior. Therefore, Scott (1968) argued, attitude measurement produces ambiguous indices. Indices in the middle spectrum of a scale, where most values amass, do not let us decide whether a particular index value signifies a) a certain degree of the attitude in question, or b) an absence of that attitude, or c) a highly differentiated attitudinal structure. Assessing both aspects simultaneously allows us a) to clearly distinguish moral consistency from rigidity of opinion, and b) it also lets us clearly determine if a participant's pattern of behavior exhibits clearly structured moral orientations, or no moral orientation at all, or a highly differentiated moral judgment.

Hence, studies on the parallelism hypothesis which are based on a component model of moral behavior are bound to provide unclear, if not misleading results. In these

studies affect and cognition are conceived of as separable components (Rest 1984; Rest et al., 1999; see also Beck, 1995, p. 117; Edelstein, 1986, p. 331; Gibbs & Schnell, 1985, p. 1078) and are placed into separate *domains* of educational objectives (Bloom et al., 1956; Krathwohl et al., 1964; Tomlinson-Keasey & Eisert, 1981). In some studies, moral cognition and affect have been not only separated (which is not possible, as we have seen) but have even been opposed to each other as to which is the more important or more *real* component (Emler et al., 1983; Hogan & Emler, 1995; Haidt, 2001; Greene & Haidt, 2002; Zajonc, 1980).

Interestingly, the authors of these studies not only place morality into the affective domain and confine its assessment to attitude measurement (Emler et al., 1983; Zajonc, 1980) and to neurological imaging of emotional processes (Haidt, 2001; Greene & Haidt, 2002), but they also show blatant disregard for the methodological paradigm shift triggered by Piaget's aspect model. Tomlinson-Keasey & Eisert (1981) believe that "there is no way to measure cognitive organization or affective organization directly" (p. 9), and Hogan et al. (1977) assume that "using tests entails no particular theoretical commitment" (p. 257). Yet, as Scott (1968) and others have shown, such a believe accounts for the stagnation of attitude measurement.[13]

The negative consequences of the adherence to the component model for educational research and educational practice have been pointed out by Sprinthall, Sprinthall and Oja (1994) who note that Bloom et al.'s taxonomy of educational objectives artificially separates affect and cognition into different domains of behavior and such undermines an integrative approach to teaching and learning. Higgins (1995) points out that Kohlberg's vision of moral education is incompatible with component models.[14] "In the separation between the social and the cognitive," noted the former AERA president Alan Schoenfeld (1999), "some fundamentally important issues such as affect and motivation have fallen between the cracks. We need to build new frameworks and

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[13] **"Most attitude measurement, as currently practiced by psychologists, goes on without much attention to formal models of measurement. Yet the various current procedures are in some sense derived from conceptions about measurement that were developed earlier, in a formal or informal way. Perhaps the most influential, and certainly the best developed source is psychometric theory, or the *theory of mental tests* (for example, Gulliksen, 1950). Though currently under fire for its inadequacies . . ., it at least has the virtue of explicitness, which renders its inadequacies obvious" (p. 208).**

[14] **"However, one should note that there are cognitive aspects to all of Rest's components, and Kohlberg's idea of a stage as a structured whole or a world view cuts across Rest's component model." (Higgins, 1995, p. 53)**

perspectives that do justice to all of these. And we need new methods to inform the work done within those perspectives" (p. 5).

Our study, based on the Dual-Aspect-Theory by Lind (1978; 2002), was to test a more precise reformulation Piaget's hypothesis of correlational parallelism. It uses the Moral Judgment Test as an instrument for assessing both aspects simultaneously. The findings show that there is indeed a very strong correlational parallelism of moral cognition and moral affect: *People prefer higher moral orientations, and reject lower moral orientations, the higher their ability to make moral judgments*.

There is a caveat to this hypotheses. We expect moral cognition and affect to be parallel only if the testing situation is not 'high stakes' for the tested person. If the testing situation is of high stakes, the hypothesized parallelism may break down. If participants sense that their answers to the test will trigger a gratification or a negative sanction, they will, as much research has shown, try to do, what they believe the test administrator (or his commissioner) expects of them. For example, if the test of moral judgment behavior is used for deciding on the admission to an educational program, or as a tool for evaluating a course of moral instruction, the participants will have a strong incentive to fake the scores "upward." Because this is much more easily done on measures of moral preferences (affective aspect) than on measures of moral judgment competence (cognitive aspect), the correlations may be lowered or even disappear.

The dissolution of cognitive-affective parallelism becomes evident in the classical study by Emler et al. (1983), in which participants are instructed to simulate the moral preferences of other people. This study demonstrated that people can simulate almost any moral preference, while we have strong evidence that they cannot simulate other people's moral judgment competence, if this is higher than their own (Lind, 2002). Second, the parallelism breaks down when moral development regresses. Research reported by Lind (2002) shows that *real* regression affects the cognitive but not the affective aspect. When the support through schooling ceases in a too early phase of moral development, moral orientations remain mostly intact, yet the ability to apply these orientations in everyday life erodes dramatically.[15]

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[15] In the case of *pseudo*-regression, the opposite phenomenon may occur. Pseudo-regression (or the *Raskolnikov syndrom* as Kohlberg named it after the character in Dostojewski's novel *Crime and Punishment*) means that people start to prefer lower moral orientations than they have acquired but retain their judgment competencies. This has been observed in adolescents during their transition from

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highschool to college, when they free themselves from the normative context of family life (see Lind, 1985 b).

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Appendix: Parallelism in Cross-cultural Studies with the MJT

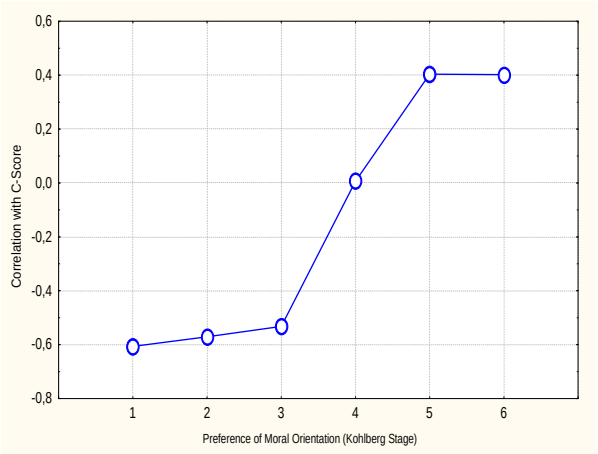

Figure 5 Study by Bart Duriez, 1997, Belgium, N = 183.

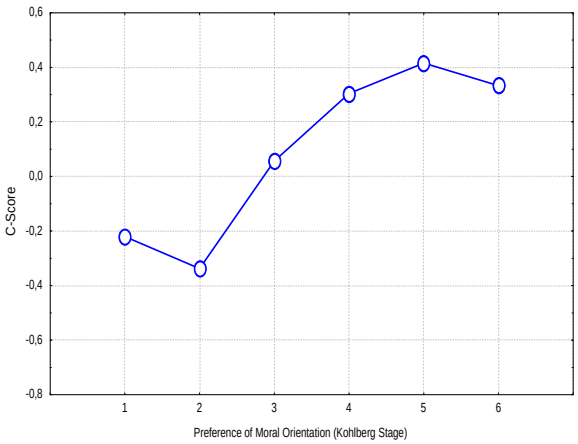

Figure 6 Study by Zhanqiang Zhao, 2003, China, N = 141.

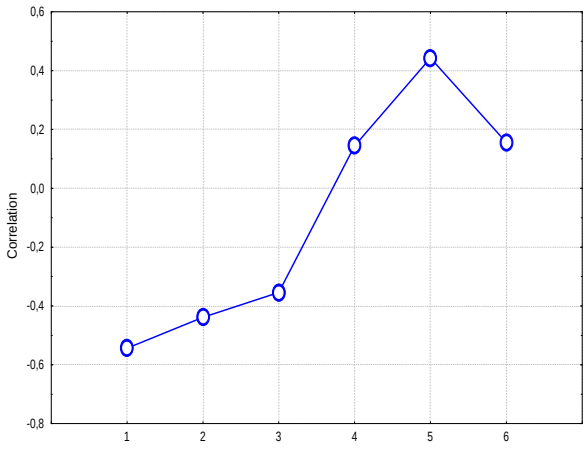

Figure 3 Lee Chi-Ming, 2004, Taiwan, N = 134.

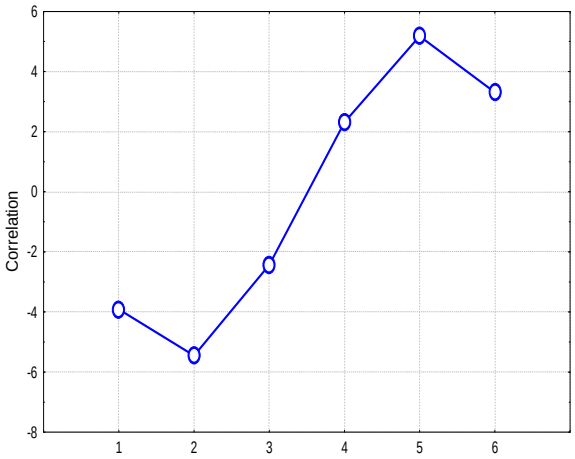

Figure 4 Matti Ylén, 1999, Finland, N = 198

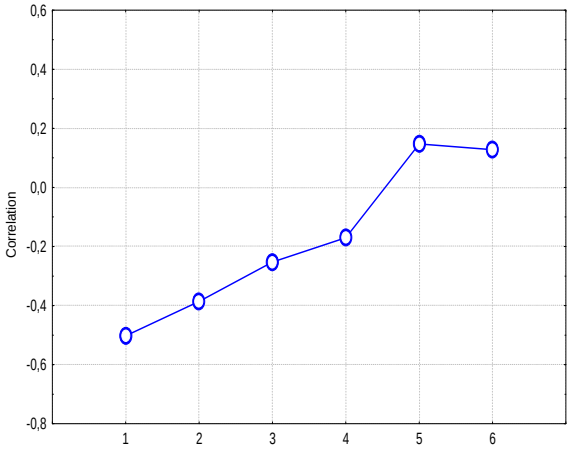

Figure 7 Gints Malzubris, 2002, Latvia, N = 117

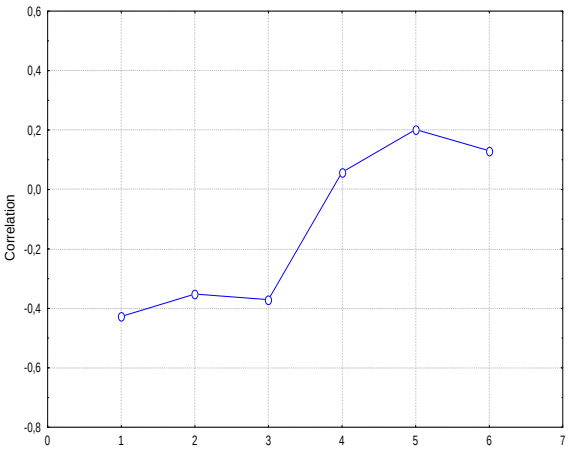

Figure 8 Patricia Bataglia, 1998, Brazil, N = 60

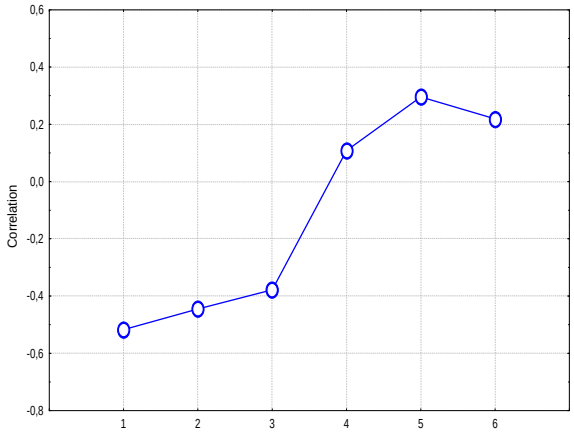

Figure 9 Anna Laura Comunian, 2002, Italy, N = 166

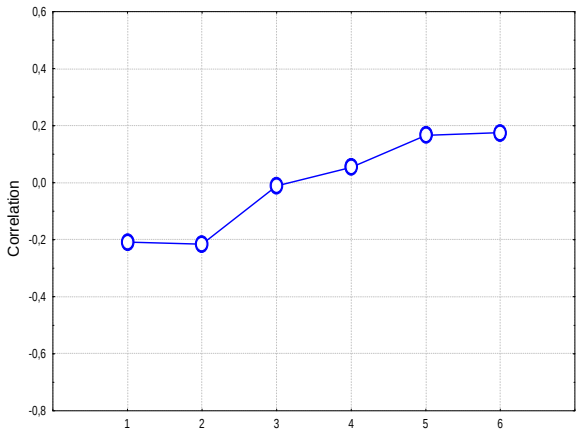

Figure 10 Secretario de Educación of the District of Bogotá, 2003, Colombia, N = 6697

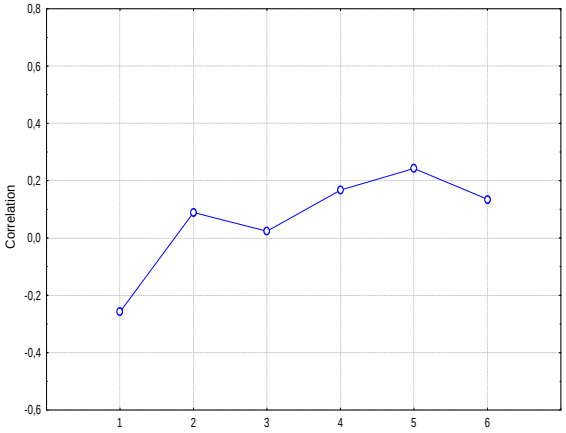

Figure 11 Ahmed Aghbal, 2004, Morocco, N = 367

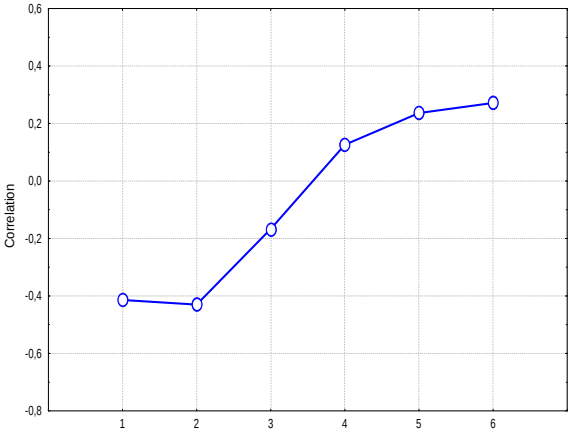

Figure 12 Marijana Handziska, 2003, Mazedonia, N = 198

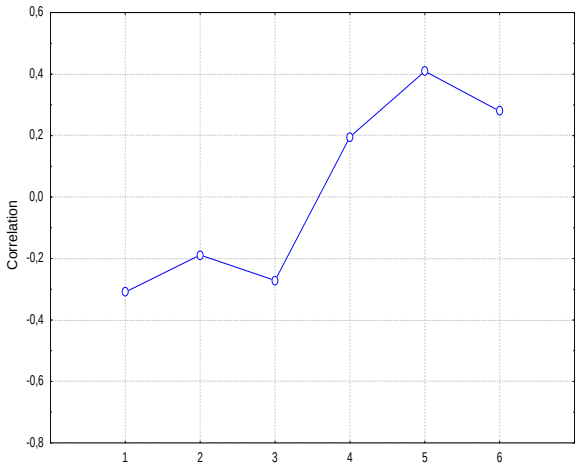

Figure 14 Cristina Moreno, 1995, Mexico, N = 95

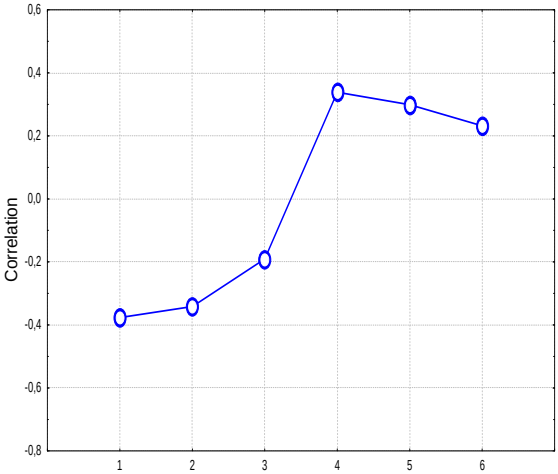

Figure 13 Tatjana Chicu, 2004, Romania, N = 198

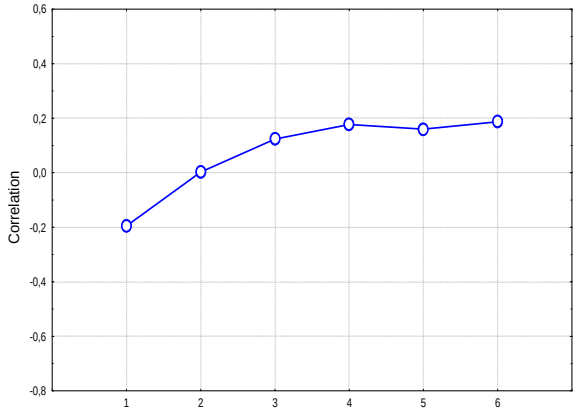

Figure 15 Jasmin Tuboro, 2001, Philippines, N = 1232

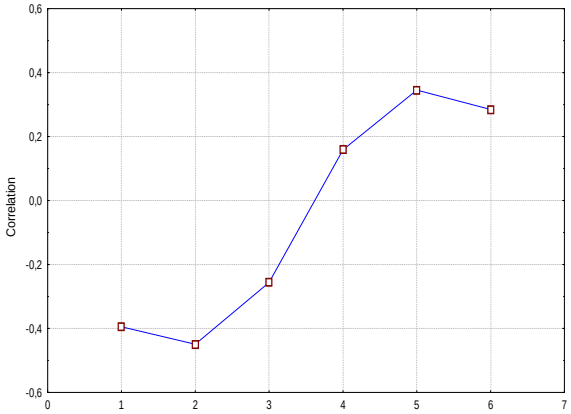

Figure 16 Ilya Krumer, 2001, Latvia-Russian, N = 60

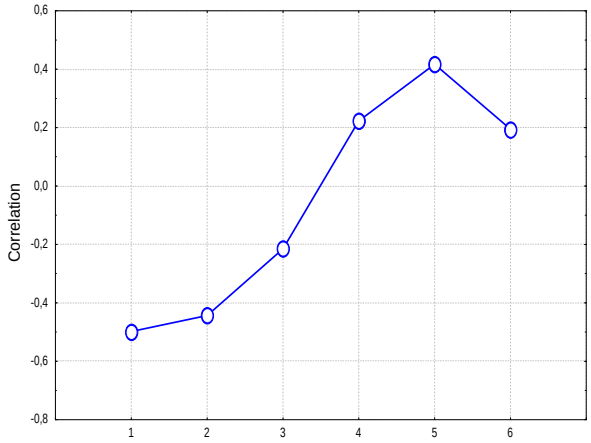

Figure 18 Sanguan Lerkiatbundit, 2003 (in press), Thailand, N = 159.

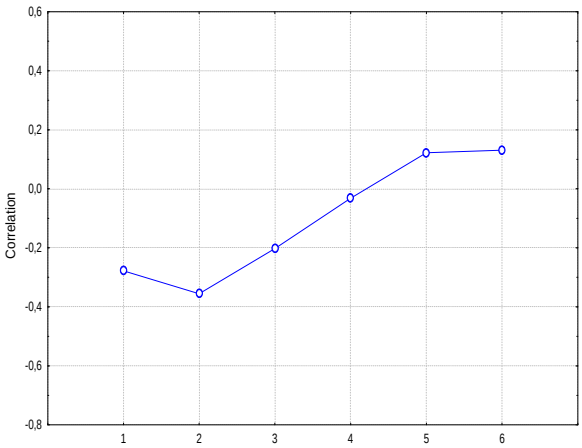

Figure 17 Nermin Ciftcy, 1997, Turkey, N = 403