

Towards an integrated measure of need affiliation and agreeableness derived from the Operant Motive Test

DAVID SCHEFFER¹, JAN EICHSTAEDT¹, ATHANASIOS CHASIOTIS² & JULIUS KUHL³

Abstract

The Operant Motive Test (OMT) has been conceptualized to measure the amalgam of aroused needs and motive-relevant traits which specifies an implementation strategy of the motive. Therefore the OMT differs conceptionally from the TAT. In Study 1 we found empirical evidence for this interaction hypothesis. The OMT, but not the TAT, was a function of a significant interaction effect of an aroused affiliation need and agreeableness. The overall correlation between OMT and TAT was small and only marginally significant in an experimental arousal condition. Study 1 also yielded evidence that the OMT measure of affiliation (i.e. *m* affiliation) has construct validity. Study 2 gave indirect evidence for stability of OMT *m* affiliation. In Study 3 the OMT predicted peer ratings of customer service orientation.

Key words: implicit motives, motive measurement, operant behavior, assessment methods

¹ Helmut-Schmidt-University Hamburg, Germany. Correspondence should be addressed to David Scheffer, Helmut-Schmidt-University, Hamburg, Germany, Holstenhofweg 85, D-22039, Hamburg, Germany. Electronic mail can be sent to david.scheffer@hsu-hamburg.de

² Tilburg University, Netherlands

³ University of Osnabrück, Germany

Motives are conceptualized as stable, individual differences which can be seen as psychological “energy plants” or recurrent concerns for the initiation, implementation and evaluation of behavior (Lewin, 1926; Murray, 1938). Despite an early differentiation between the concepts of need and motive, these two terms have often been used interchangeably. McClelland (1985) defines a *motive* as a cluster of cognitions with affective overtones organized around preferred experiences and goals. In contrast, a *need* can be defined in terms of a discrepancy between an actual and a desired state energizing need-related behavior (Heckhausen, 1991; McClelland, Atkinson, Clark, & Lowell, 1953).

Operant motive measures like the Thematic Apperception Test (TAT) were used in motivation research over the last seven decades and often yielded substantial predictive validity, even after periods of up to 18 years. At the same time operant motive measures have been criticized on psychometric grounds. However, operant motive measures might be improved by a refined conceptualization of implicit motives, interpreting them as associations between needs and trait-like implementation strategies. A new operant motive test (OMT) provides first evidence for an association between aroused needs, e.g. need for affiliation, and traits, e.g. agreeableness (Scheffer, 2005). In the research reported here, we further investigated the hypothesis that motive assessment can be improved when it is expanded by a trait that is related to the implementation of motive-relevant behavior.

McClelland, Koestner, and Weinberger (1989) argued that implicit and explicit motives differ in important ways. Implicit motives were shown to predict *operant* (i.e., self-initiated) behavior, while explicit motives are more likely to predict *respondent* (i.e., externally controlled) behavior. The difference between operant and respondent behavior largely depends on the degree of control exerted by situational cues (Emmons & McAdams, 1991). Operant behavior is generated more freely than respondent behavior and is expected in ambiguous or unstructured situations, whereas respondent behavior is more frequent in structured situations. Examples for operant behavior are standard setting and risk taking (Atkinson, 1957; Kuhl, 1978b), social behavior in work contexts (Spangler, 1992), and long-term career development (McClelland & Boyatzis, 1982). In a nutshell, an implicit motive is conceived of as an extended network of cognitive-emotional representations of a need, relevant goals and action alternatives. Because of its extended and subcognitive (i. e., emotional) nature a motive is not fully accessible on the level of conscious awareness. In contrast, an explicit motive is a consciously accessible conceptual hypothesis about an underlying motive. Explicit representations may or may not accurately reflect its implicit counterpart.

The assessment of implicit motives

Implicit motives are supposed to generate operant behavior, therefore the measurement of implicit motives has been based on operant behavior samples since Murray’s (1938) work on the assessment of human motives. The Thematic Apperception Test (TAT, Murray, 1943; Winter, 1996) is the most prominent example of an operant measure of implicit motives. Participants’ responses in picture story exercises are not primarily determined by the stimulus cues, but are triggered by internal processes like needs in the course of writing stories to ambiguous pictures (Atkinson & McClelland, 1948). A parsimonious explanation of this method can be based on the concept of priming (Meyer & Schwaneveldt, 1971). Content related to stereotypes, goals, emotions and other motivationally relevant information can

increase the activating status of semantically related associations in memory (Bargh, Chen, & Burrows, 1996; Greenwald & Banaji, 1995).

Operant tests like the TAT were criticized, because they do not satisfy classical psychometric criteria, especially internal consistency and test-retest reliability which fluctuate around .30 (e.g. Entwisle, 1972; Fineman, 1977; Tuerlinckx, De Boeck, & Lens, 2002). However, despite their somewhat lower reliability compared to trait measures, TAT measures of motives have reasonable validity (Atkinson, 1958; McClelland et al., 1989; Meyer et al., 2001; Spangler, 1992; Hofer & Chasiotis, 2003). But how can a rather inconsistent “state-measure” have long-term predictive validity – even over time periods of 18 years (e.g. McClelland & Boyatzis, 1982)? One possible explanation is that operant measures have a special technical problem regarding retest correlations which leads to a systematic underestimation of their reliability (Smith, 1992; Winter & Stewart, 1977): Because participants get the implicit impression that operant measures are a test for creativity, they try to invent new stories. Another explanation may be that some aspects of operant measures are more state-like (e.g. needs), and other aspects more trait-like (e.g. strategies of implementing a need). Both explanations will be explored in this article.

Integrating state- and trait-like aspects in Operant Measures

A study by Kuhl (1978a) indicated compatibility of TAT responses with Rasch’s (1960) criteria of one-dimensionality and specific objectivity of measurement. His results suggested that responses in the story exercise were a joint function of needs and the implementation strategy of these needs. Later on, the implementation strategies of the needs were conceived as stable traits (i.e. action vs. state orientation, see Kuhl, 1981; Kuhl & Beckmann, 1985). Thus, one strategy for improving reliability of operant tests can be seen in controlling for individual differences in the way needs are implemented into behavior. Without taking the particular forms of need implementation into account, it is not surprising that operant behavior appears erratic and inconsistent. From a functional-design perspective (Kuhl, 2000), *implicit motives* can be described as “intelligent needs”, i.e. *implicit self-representations* which integrate cognitive-emotional representations of need states with extended knowledge concerning behavioral options for need satisfaction and motivational energy to enact those options across a variety of situational contexts. When a need fails to become a motive, i.e. when the need is not integrated in an extended implementation-related knowledge structure, need-satisfaction is likely to occur in a context-insensitive way (e.g., when a “symbiotic” or “dependent” patient clings to virtually any person who gets close to him, even when that person rejects or exploits him). According to theories of motivation, the knowledge and motivational energy necessary for the context-sensitive implementation of need-related goals develop on the basis of early autobiographical experiences (Atkinson, 1958; Heckhausen, 1991; McClelland, 1985). Ideally, measures of motives should comprise not only the need component, but also the implementation component. Winter, Stewart, Klohnen, and Duncan (1998) reported findings suggesting that behavioral prediction can be improved when need measures (e. g., affiliation) are complemented by trait measures which might be interpreted as implementation strategies (e.g., agreeableness).

Murray (1943) assumed that operant fantasy behavior in TAT assessment is based on at least two content classes, which he labeled needs and experiences. For instance, contents

written in the TAT by hungry Marines on a submarine base varied as a function of hours of food deprivation, i.e. indications of being hungry and indications of knowing how to attain food (for example using a fork and a knife, Atkinson & McClelland, 1948). More generally, the two types of contents may be distinguished by participants' responses to two types of questions, i.e. why-questions (related to needs) vs. how-questions (related to implementation of need-related goals). Winter et al. (1998) argued that why-questions and how-questions correspond to two independent concepts of personality, that is implicit needs explaining why behavior is initiated (what is important to the person) and traits explaining how behavioral implementation of need-related goals proceeds. Unfortunately, why- and how-questions are not separated in TAT measurement. Scoring procedures even do not ensure that participants respond to both questions.

Needs and implementation-related traits presumably interact in producing motivated behavior. Kuhl (1983) and Heckhausen (1991) suggested that motivated behavior is characterized by a sequence of choice, goal setting, and action. Choice can be related to the why-question because needs can affect the formation of wishes and intentions that form the basis of choice more directly than actual behavior (Heckhausen & Kuhl, 1985). In contrast, goal setting and action can be related to behavioral and volitional processes, i.e. to the question of how motivational inclinations are implemented.

The Operant Motive Test (OMT)

The OMT (Kuhl & Scheffer, 1999; Scheffer, 2005) is designed to assess individual differences in consecutive associations between need and trait descriptors in participants' fantasy behavior in response to "ambiguous" pictures depicting social interactions. The OMT differs from the TAT in several ways. First, participants are to choose one main character from the ones depicted in the picture as protagonist. The participant's identification with a specific character is to facilitate elaboration of *personal* needs and traits in fantasy behavior. Second, pictures were selected that facilitate accessibility of motives together with the implementation component. Specifically, the OMT pictures have a clear-cut, albeit implicit relation to the motive theme (e. g., affiliation) to activate implicit representations of motives (Baumann, Kaschel & Kuhl, 2005; Kuhl, Scheffer, & Eichstaedt, 2003; Scheffer, Kuhl, & Eichstaedt, 2003). This contrasts with use of motivationally "open" stimuli in the classical TAT (Murray, 1943) and is more in accordance with subsequent research showing that clear-cut thematic relations to the motives improves validity (Heckhausen, 1963). Third, participants are instructed to invent a story on the given picture without having to write down the full story. Instead, spontaneous associations are written down (e.g., very short sentences or even single words rather than full narrative accounts). The reduction of the *explicit* response format to verbal associations was chosen to reduce distortions caused by logical reasoning (similar to distortions that occur when dreams are verbalized in a story format), also reducing both administration and scoring time considerably.

To facilitate the separation between need-related and trait-related associations, participants are to write their associations in response to *two* questions. The first question "what is important to the main character" is supposed to elicit need indicators (i.e. the why-question of behavior, according to the model of Winter et al., 1998, resp. the choice phase in Kuhl's and Heckhausen's models). The second question asks "how does the main character feel"

and is supposed to elicit indicators of the implementation of needs, that is the “how” question concerning instrumental behavior which is related to traits, according to Winter et al. (1998), and to the volitional phase in Kuhl’s and Heckhausen’s models. The underlying assumptions are based on research indicating that moods and affective processes are critical indicators for enactment-related determinants, especially with regard to behavioral facilitation or inhibition (Gray, 1987; Kuhl, 2000; Kuhl & Kazén, 1999). The OMT coding procedure defines the presence of a motive, encompassing both the need and the implementation-related trait, only if the choice-implementation sequence is present. The complete OMT scoring procedure assesses three motives, i.e. affiliation, achievement, and power (see Chasiotis, Hofer, & Campos, 2006; Hofer et al., 2007; Kuhl & Scheffer, 1999; Kuhl et al., 2003; Scheffer et al., 2003). Within each motive both promotion-related and prevention-related implementation components are distinguished (Elliot & Church, 1997; Higgins, 1997), and within either form of implementation an incentive-focused and a self-regulated form of implementation is differentiated. In the remainder of this article we focus on only one motive, i.e. affiliation, and one emotional component of need implementation, that is implementation by agreeableness (which is tantamount to the incentive- rather than self-regulated form of affiliative concerns about closeness to others, protection and security).

Supporting the assumption of independence between the explicit and the implicit measures of motives, the correlation between implicit OMT *m* affiliation and explicit need for affiliation is very low (e.g. $r = .03$, $n = 39$; Kuhl & Kazén, submitted).

The Big Five factor Agreeableness is defined as an inclination to go along with others and to comply with group norms and should capture one of the determinants of the implementation of an affiliation need (Graziano & Eisenberg, 1997). The OMT need-trait association of need affiliation and Agreeableness is called *m* Affiliation. This new term is meant to express the assumed amalgam between an aroused affiliation need and implementation-related information. Knowing that an individual has a strong *m* Affiliation could help predicting the behavior of this individual across a wide range of situations. It can be expected that this individual would not only *need* affiliation, but that he or she would be inclined to implement this need by adopting group norms. Now consider an individual with a strong affiliation need, but who scores low in Agreeableness. Probably most researchers would find it a lot harder to predict the behavior of this person. Such a person would probably seek proximity but might appear at the same time less conforming, or even cold and rejecting towards other people. Such a lack of self-concordance would make people feel uneasy with themselves and would make them less consistent (Brunstein, Schultheiss, & Grässmann, 1998). *M* Affiliation is the amalgam of the aroused affiliation need and its self-concordant implementation through Agreeableness. It may be illustrated by the following coding example. An answer indicating affiliation need after the first question (what is important to the main character?) would be: “*He [i.e., the main character] seems to be isolated and wants contact to the two other persons*”. An answer indicating an agreeable implementation style after the second question (how does the main character feel) would be: “*He [i.e., the main character] feels relieved and comforted because he is accepted*”. Together, both answers would result in one *m* Affiliation score. Thus, only if participants show both types of answers, that is indicate a full choice and implementation sequence, *m* Affiliation could be scored. The presence of an Agreeableness-related content is not sufficient for coding affiliation, because the trait of Agreeableness could also be used as an implementation strategy for other needs like *n* achievement or *n* power.

Overview and hypotheses

Study 1 was designed to test the hypothesis that the OMT measure of *m* Affiliation is a combined effect of an aroused need for affiliation (i.e. the treatment condition) and Agreeableness (i.e. the implementation trait). We expected a significant interaction effect of an experimental induced need for affiliation and the NEO FFI measure of Agreeableness on OMT *m* Affiliation but not on TAT *n* Affiliation. The study also aimed at exploring the relationship between OMT *m* Affiliation and TAT *n* Affiliation. Because the TAT *n* Affiliation was expected not to reflect the interaction effect of an aroused need for affiliation and Agreeableness, we assumed to find only a low correlation between OMT *m* Affiliation and TAT *n* Affiliation, despite of the shared method variance of both measures. Study 2 explores the new measure's retest reliability which was expected to be satisfactory when controlling for an important moderating factor, i.e. general mental ability as assessed in an intelligence test. Study 3 examines one aspect of the validity of OMT *m* Affiliation. We expect that higher values in OMT *m* Affiliation should be positively associated with customer service orientation in work contexts (i.e. professional proximity to others), when goal setting by the management makes it a salient group norm.

Study 1

Study 1 examines the relationship of the new measure with the TAT in a situation where an affiliation need had been aroused according to the classical procedure of Shipley and Veroff (1958). It tests the hypothesis that *m* Affiliation of the OMT is associated with a significant interaction effect of an experimental aroused affiliation need and Agreeableness, while the TAT is not. This should lead to a small correlation of both measures. Both measurements, however, should be significantly affected by the experimental treatment.

Method

Participants. Fifty-two male army officers took part in an introductory course of psychology at the Helmut-Schmidt-University/University of the Federal Armed Forces Hamburg and voluntarily participated in the study. Their age ranged from 20 to 34 years with a mean of 23.04. All participants were freshmen at the university and, thus, did know some comrades well but most not.

Measures and Procedure. In a first group session the German version of the NEO-FFI (Borkenau & Ostendorf, 1993) was administered and scored for Agreeableness. In a second group session, which followed two weeks later, the participants took part in an affiliation arousal procedure described by Shipley and Veroff (1952). 26 participants were randomly assigned to the treatment condition, 26 to the control condition. The two groups did not differ significantly in Agreeableness ($t(50) = -.37, p > .70$). In the arousal condition participants were asked to find three other participants from their class who knew them well enough to rate them according to personal characteristics using a German version of the Adjective Check List (ACL, Gough & Heilbrun, 1980). The rating is a crucial part of the procedure of Shipley and Veroff (1958): Because the ACL contains positive and negative

adjectives, ratings on the ACL should induce a need to be evaluated positive by the peers, i.e. an affiliation need. It should be noted that, despite the fact that the item ratings are made explicitly, the need-relevance itself is not made explicit by this manipulation. After finishing the ACL ratings, which took approximately 15 minutes⁴, participants started to work on the OMT or the TAT, respectively. Half of the participants first underwent the TAT procedure and then the OMT procedure. The other half of the participants started with the OMT followed by the TAT. Then all participants were given feedback on their personality scores and were thoroughly debriefed about the aim of the study. The ACL peer ratings were scored only for the scales *sociability* and *nurturance* and aggregated for the three peer raters to obtain a validity criterion for the three personality measures used in this study (i. e., *n* Affiliation, *m* Affiliation, and Agreeableness).

The participants were allotted 5 minutes per TAT-picture to write a story which later was content coded for *n* affiliation according to Winter's (1994) *Manual for Scoring Motive Imagery in Running Text Version 4.2*. Both raters had demonstrated greater than 85 % agreement with the expert scoring in Winter's calibration materials (1994). This figure is considered acceptable for research purposes (Lundy, 1988). The TAT consisted of the pictures Architect at Desk (Smith, 1992, p. 634), Two Women in Lab Coats in the Laboratory (Smith, 1992, p. 636), Ship Captain (Smith, 1992, p. 633), Couple on Bench by River (Smith, 1992, p. 635), Trapeze Artists (Smith, 1992, p. 637), Nightclub Scene (McClelland, 1975, p. 386), and Two Men (Inventors) in a Workshop (Smith, 1992, p. 644).

The OMT *m* Affiliation measure in this study is based on 4 pictures. The four items used in this study include, (1) one person seeking contact with two other people in a cafeteria, (2) two persons getting together, (3) relatives visiting an ill relative, (4) two persons in a crowded restaurant getting in contact with two other people. All these themes relate to affiliation as described by, e.g., Shipley and Veroff (1958).

Inter-rater agreement was .92 for the OMT *m* Affiliation coding of the four pictures following the same procedure as outlined above for the TAT. The OMT was scored by two experienced raters who previously also reached Inter-rater agreement above .85 for all OMT categories. No correction for length of protocol is necessary because there is only one coding for each picture of the OMT. Internal consistency (Cronbach's Alpha) of *m* Affiliation was .52.

Results and discussion

The number of words produced in TAT stories were substantially correlated with TAT *n* affiliation ($r = .52, p < .01$). Therefore the TAT measure was corrected for protocol length and standardized. The substantial correlation for Agreeableness and number of words ($r = .49, p < .01$) was not predicted. A possible explanation is that high Agreeableness is associated with social desirability which could have increased story length (e.g., to "please" the experimenter, Stöber, 2001). There was no significant correlation between number of words in the TAT and OMT *m* Affiliation ($r = .14, p > .26$). Table 1 presents means, standard deviations, and correlations among *n* Affiliation, *m* Affiliation and Agreeableness. None of the correlations reached the level of significance.

⁴ Some participants were asked by more than three peers for evaluation on the ACL. It was ensured, however, that all participants had to rate at least 2 and not more than 4 peers, which took about 15 minutes.

Table 1:
Means, Standard Deviations, and Correlations Among all Variables; Study 1

	<i>M</i>	<i>SD</i>	1	2	3
1. <i>n</i> Affiliation	4.68	2.20	-	.13	.08
2. <i>m</i> Affiliation	3.72	2.36			.06
3. Agreeableness	27.96	6.12			-

Note. $n = 52$; means and standard deviations are given in row scores for *n* affiliation

The low positive overall correlation between TAT *n* Affiliation and *m* Affiliation in Table 1 can be decomposed into a *negative* correlation between both measures in the control group ($r = -.29$) and a medium sized positive correlation between the two measures in the treatment condition ($r = .35, p < .10$). The positive correlation may be explained by the effect of the treatment condition on affiliation arousal which was evident in both measures (see below).

To test the hypothesis that OMT *m* Affiliation but not TAT *n* Affiliation encompasses an interaction effect of an aroused need for affiliation as well as Agreeableness, we first tested the hypothesis that *m* Affiliation is a function of the interaction of the need arousal treatment and Agreeableness. We conducted a hierarchic regression analysis with the standardized factors Agreeableness and Affiliation Arousal in the first step, and the interaction effect (resp. the product of standardized Agreeableness and Affiliation Arousal) in the second step. OMT *m* Affiliation was the dependent variable. The regression analysis revealed a moderate, but significant main effect of the treatment condition, i.e. affiliation arousal on OMT *m* Affiliation, $\beta = .30, p < .05$. The main effect of Agreeableness was insignificant, $\beta = .05, p > .40$. As predicted, the second step revealed a substantial interaction effect (Agreeableness \times Affiliation Arousal) on *m* Affiliation, $\beta = .50, p < .05$. The *R* of the interaction model was $R = .43$ and explained significantly more variance of OMT *m* Affiliation than the main effect model ($F(1, 48) = 5.48, p < .05$). As can be seen from Figure 1 this interaction is attributable to the fact that low arousal of affiliation results in reduced *m* Affiliation only when agreeableness is high. This finding is consistent with the hypothesis that OMT scoring separates non-affiliative agreeableness from affiliation-implementing agreeableness: Within the group of participants having high agreeableness scores those who do not combine this trait with high need for affiliation should not receive a high *m* affiliation score which explains the expected reduction of *m* Affiliation.

A similar hierarchic regression analysis with TAT *n* Affiliation as the dependent variable revealed a marginally significant effect of Affiliation Arousal, $\beta = .25, p < .10$, and no significant effect of Agreeableness, $\beta = .09, p > .60$. Most importantly and as predicted, the interaction effect of Agreeableness \times Affiliation Arousal was not significant, $\beta = .34, p > .10$. Neither the main effect model ($R = .26$) nor the interaction model ($R = .34$) reached significance.

In sum, the expected need-trait interaction was only significant for the OMT measure of *m* Affiliation which supports our assumption that the implementation component of an aroused affiliation is measured by the OMT.

To get an interesting comparison of the validity of *n* Affiliation (TAT) and *m* Affiliation (OMT) in the Affiliation Arousal situation we conducted an additional regression analysis with peer ratings on the ACL *nurturance* subscale, which is a criterion relevant to operant affiliation behavior (McAdams & Vaillant, 1982). As mentioned above, Affiliation Arousal was induced in the treatment condition by the evaluation of each participant by three peers on the ACL. Thus, the treatment condition provided a validity criterion. Participants who were strongly affected by affiliation arousal – because of their personality disposition – should have been rated as more affiliation-oriented on the affiliation-related need scale of the ACL, i.e. *nurturance*. The results indicate validity of *m* Affiliation. The ACL peer ratings on the scale *nurturance* could be well predicted by *m* Affiliation, $\beta = .51, p < .01$. In contrast, TAT *n* Affiliation did not predict the peer ratings ($\beta = .18, p > .35$).

Study 2

Method

The study was designed to explore the stability of the OMT *m* Affiliation measure. Individual difference variables must not necessarily have high stability (i.e., show substantial test-retest correlations). Nevertheless, it has been assumed that implicit motives are fairly stable over time for two reasons. First, they seem to get “imprinted” early in life (Scheffer, 2006). And second, they are predictive over a time-span of more than one decade (McClelland & Boyatzis, 1982). To directly proof this assumption, though, has turned out difficult because of the special measurement technique of operant tests. Participants seem to be unwilling to write down similar stories in the retest session. And this, of course, reduces retest correlations.

Participants. Sixty-six male army officers who took part in the study as part of an introductory course of psychology at the Helmut-Schmidt-University Hamburg. Their age ranged from 20 to 34 years with a mean of 23.0.

Measures and Procedure. The OMT was administered in a first group session and coded for *m* Affiliation according to the same procedure as outlined in Study 1. Two weeks later, the same OMT picture set was administered a second time. Both OMT sets were rated independently by two experts who had previously reached an inter-rater agreement above .85 following the procedure as outlined above for the Winter-TAT. Internal consistencies will be discussed below.

Because the participants may recall some of the stories they invented at the first time of measurement and try to avoid writing the same story once more, researchers (Smith, 1992; Winter & Stewart, 1977) have recommended to give the instruction to the participants, that they do not have to be creative and are welcome to write the same stories as in the first session. Such an instruction raises retest reliability of TAT measures from about .30 to .60, according to Smith (1992). However, such an instruction could lead to an overestimation of reliability due to a memory effect (participants might want to show how good they can remember what they have written before). Even more important, such an instruction violates the assumption of stochastic independence of the retest. In our study we therefore did not give such an instruction but rather tried to control a variable which may influence the assumed memory effect. Participants conducted a short test of general mental ability, the “Cul-

ture Fair Test" (CFT, Catell & Weiß, 1971), one week after the first test session. If Smith's memory assumption is right, higher intelligence should *reduce* the observed test-retest correlation of the operant measure because both memory and creativity are positively associated with general mental ability (Catell & Weiß, 1971). Participants with higher mental ability should therefore be more inclined to invent new stories in the retest session.

Results and discussion

General mental ability was unrelated to the first and second *m* Affiliation measurement, $r = .05$ and $r = -.03$, respectively. The test-retest correlation in the "intelligent group" (i.e. participants scoring above the median of the sample) was $r = .41$. In the less intelligent group the test-retest correlation was $r = .72$. Intelligence also seemed to moderate internal consistencies of the retest, which were $\alpha = .67$ in the group with intelligence test results below the median and $\alpha = .05$ in the group with intelligence test results above the median. Because internal consistency can be interpreted as special form of retest stability of test parts (i.e. single pictures) this has been predicted.

These results support the memory hypothesis suggested by Smith (1992), and Winter and Stewart (1977). Higher intelligence of participants reduces test-retest correlation, because general mental ability is a prerequisite for remembering details of the stories written in the first test session, and for creativity.

Study 3

Method

This study aimed at exploring the differential impact of *m* Affiliation in a work context. Individuals motivated by affiliation seem to show inferior performance compared to achievement or power motivated individuals (e.g. McClelland & Boyatzis, 1982). But this inferiority may well be due to the "wrong" criteria. Because affiliation motivated individuals want to be liked (Atkinson & O'Connor, 1966), they could do well in service occupations. Therefore we chose *customer service orientation* as the dependent variable. Customer service orientation can be considered an index of proximity behavior in the field of industrial and organizational psychology (Dalton, Lombardo, McCauley, Moxley, & Wachholz, 1996), and consists of behaviors expressing professional attachment to internal *and* external customers. Specifically, the particular implementation mode considered in this article (i.e., affiliation characterized by seeking protection and security through being close to and conforming with others) should predict affiliative behavior in situations when affiliation is perceived as being requested by significant others.

Because of its importance, customer service orientation is expected from employees. It is expressed as an important objective in goal setting procedures and is included in 360 degree feedback instruments which are used to assess employee performance based on evaluations by two or more sources such as managers, peers, subordinates, and customers (e.g. Fletcher & Baldry, 1999). We assumed high *m* Affiliation to be associated with better peer ratings on customer service orientation. This association, however, should only be found in participants

who take social expectations seriously: High *m* affiliation should not be associated with high customer service orientation unless participants express high perceived relevance of and commitment to customer service orientation.

Participants. Seventy-two female and male trainees (32 women and 50 men), of various internationally operating companies in the area of Hamburg took part voluntarily in a peer feedback rating process organized by the *Nordakademie* which is one of the top ranking business schools in Germany. Their age ranged from 22 to 36 with a mean of 25.0.

Measures and Procedure. All participants took part in a group session during which the same OMT picture set as in Study 2 was administered. Again inter-rater agreement of two independent expert-raters was above .85. Internal consistency of *m* Affiliation in this sample was .57.

Approximately three months later the trainees were assessed by at least three colleagues in their company on a 360 degree feedback instrument developed by the Center for Creative Leadership (*Benchmarks*; Dalton et al., 1996). *Customer service orientation* was measured by one scale of the instrument. Evaluations obtained from participants' peers were aggregated to a mean score. The variable *goal setting* was measured as part of the multi-source feedback process. Peers were asked to appraise on a 6-point Likert Scale how clearly organizational goals and objectives were communicated by the company's management, and how obligatory and challenging these goals were for employees. For example, one item read "Pay raise is dependent on reaching the goals." The scale had an internal consistency of .83. The appraisals of all peers were aggregated to a mean score.

Results and discussion

In a hierarchic regression with the predictors *Goal Setting* and *m* Affiliation and the dependent variable *peer ratings of customer service orientation* no significant main effects were found for *m* Affiliation or *Goal Setting* ($\beta = .15$ and $.07$, respectively), but a significant interaction effect, $\beta = .47$, $p < .01$. The interaction pattern indicated that participants with high scores on *m* Affiliation obtained positive feedback scores on *customer service orientation* only when scores on goal setting were also high. Thus, only in the work context characterized by high goal setting trainees scoring high in *m* Affiliation were rated better on customer service orientation than trainees low in *m* Affiliation (z-values were $.43$ vs. $-.39$). This interaction is consistent with the hypothesis that the particular component of *m* Affiliation assessed here is concerned with perception of and conformity with goals associated with expectations of significant others.

General discussion

Study 1 supports the validity of the Operant Motive Test (OMT) as an elaboration of the classical TAT. As expected, the OMT measure of *m* Affiliation was a function of an aroused need for affiliation and an implementation trait, i.e. Agreeableness. The TAT measure of *n* Affiliation did not reflect this interaction effect to a significant degree. This supports our assumption that the implementation components of motives are not reflected in TAT motive measurement. In other words, the TAT assesses what it is supposed to assess: the strength of

a need irrespective of the extent and content of implementation strategies associated with it. That might provide a theoretical explanation of the low negative correlation between *n* Affiliation (TAT) and *m* Affiliation (OMT) in the control group and the substantial and positive correlation of $r = .35$ in the experimental group. The line of arguments is generalizable (Scheffer, 2005): only when situational arousal facilitates the implementation of a need, motives assessed by the TAT and the OMT share common variance to a significant degree. According to our theorizing, this dissociation between the two methods under non-arousal conditions is based on the OMT's capacity to filter out instances of agreeableness that are prompted by needs other than affiliation: When affiliation needs are aroused either method yields increased affiliation scores because the insensitivity of the OMT for non-affiliative agreeableness is not relevant when need for affiliation is aroused experimentally.

A substantial association ($\beta = .51$) between *m* Affiliation and peer ratings on need for nurturance suggests that the OMT measure may sometimes be more predictive for observable affiliative behavior than *n* Affiliation measured by the TAT which did not show this association to peer ratings. This corroborates the importance of measuring the *combination* of the implementation component (i.e. Agreeableness) and the need for affiliation (and filtering out cases of non-affiliative agreeableness): This implementation component is to increase the likelihood of finding motive-behavior relationships. It should be noted, however, that this interpretation does not exclude a similar relationship between *n* Affiliation and nurturance or similar indicators of affiliative behavior when implementation strategies are not required (e.g., under unconstrained conditions when a critical degree of need strength is sufficient for eliciting relevant behavior).

Study 2 supported the assumption that assessing the need and the implementation component of a motive renders the measurement more reliable. The stability of *m* Affiliation reached .71 across an interval of two weeks after controlling for the mediating variable intelligence. Higher intelligence reduced reliability of the measurement, presumably because higher general mental ability supports creativity as well as memorizing details of previously written stories which will be avoided in the retest session according to Winter and Stewart (1977). Also internal consistency of the measurement was affected by intelligence and reached $\alpha = .67$ in the sub-sample below the median of general mental ability.

Nevertheless, the internal consistency (Cronbach's Alpha) of *m* Affiliation ranging between .37 and .71 does not reach values typical of self-report measures. The psychometric research discussed in our introductory section suggests that this divergence may point, at least in part, to a shortcoming of classical test theory in modeling motive measurement. Nonetheless, more research is needed to increase the reliability of operant motive measures without losing the merits of operant testing. Our results suggest that reliability of a motive expressed in operant fantasy behavior can be increased, at least when an aroused need is associated with an implementation trait. The trait of Agreeableness can be interpreted as an implementation-oriented function facilitating the consistent expression of an aroused affiliation need in overt behavior. To sum up, the research presented in Study 1 and 2 indicates that consistency and reliability of the assessment of implicit motives may be improved by enhancing the TAT by additionally assessing implementation strategies while preserving the TAT's main characteristic.

Studies 3 provided evidence of the validity of OMT *m* Affiliation because it predicted positive peer ratings on customer service orientation of trainees in work contexts that were characterized by goal setting. Thus, OMT *m* Affiliation seems to be a valid predictor of

proximity-seeking behavior in contexts in which the need for affiliation can be implemented by adopting group norms. This is in line with the assumption that motivational variables reflect flexible, context-sensitive functions which come into action only when required by the context.

The context-sensitivity of motives is also a theoretical reason explaining basic limitations of internal consistency of motive measures. According to Zalewska and Brandstätter (2001), low internal consistency coefficients may indicate that the components of a construct represent its well separated facets (e.g. “how” as well as “why” questions), and not unreliable results (Hofer & Chasiotis, 2003a). In the case of *m* Affiliation, norm pressure defines the discriminative stimuli that arouse the need of affiliation as well as the implementation of this need by Agreeableness (Kuhl, 2001). This is in line with the dynamic theory of action (Atkinson & Birch, 1970). Depending on context, the same personality disposition may be expressed in quite divergent patterns of behavior. Evidence for the paradoxical finding that the same personality disposition can be expressed quite “inconsistently” also comes from Feather’s (1962) analysis of persistence. He demonstrated and explained why the most persistent problem solver in one situation would be the least persistent in another. Physiological need like hunger is an even more obvious instance of context-dependence of need expression: After being satiated even individuals having a strong disposition for eating (i.e., who easily get hungry) would not be expected to engage in eating behavior (which would result in low internal consistency of test behavior even if the dispositional component were absolutely stable). In other words, inconsistent behavior can nevertheless be indicative for a stable personality disposition. This application of the principles of the dynamics of action calls for carefully specifying why and how a specific behavioral correlate of a disposition is expected to become measurable. The OMT’s conceptualization of *m* Affiliation helps specifying these conditions because it gives an answer to both a why of affiliative behavior and a how of its implementation.

Methodologically, this behavioral inconsistency of stable personality dispositions can also be linked to the bandwidth-fidelity dilemma formulated by Cronbach and Gleser (1957). Brunswik’s (1943) lens analogy against the methodological physicalism of his time is another formulation. Both suggest to either use narrow traits to predict specific criteria or to use broad traits to predict broad criteria. According to Cronbach and Gleser (1957) a broad construct, like *m* Affiliation in our case, would be a more suitable predictor for complex criteria.

The term *operant* (Skinner, 1953) denotes that the individual does not *react* to a stimulus situation. Rather, individuals spontaneously emit actions that are influenced, rather than determined, by the immediate situation. Therefore operant tests are similar in some aspects to measures of implicit memory as used in cognitive psychology (e.g., Goschke, 1997) and, more recently, in social psychology (Greenwald & Banaji, 1995). According to our view, the most important commonality of classical operant and modern implicit tests relates to *self-generation* of responses by the test taker (Emmons & McAdams, 1991; McClelland, 1980). Because test takers are not directly asked to describe themselves, operant personality measures can tap implicit personality traits, like motives, which are not easily accessible to awareness nor are they prone to impression management. Operant measures are believed to be less susceptible than self-report measures to response factors like evaluation apprehension, impression management or limitations of introspection (Nisbett & Wilson, 1977). Ex-

plicit knowledge seems to be a valid predictor of behavior only when influential stimuli are salient and highly plausible.

Therefore, exclusive reliance on self-report measures may hinder theoretical progress in psychology (Greenwald et al., 2002). In the field of motivational psychology the use of indirect (i.e. operant) measures has been undermined because they do not satisfy classical psychometric criteria, especially internal consistency and test-retest reliability (e.g. Entwisle, 1972; Fineman, 1977). The recent attraction to indirect measures of, e.g., self-esteem in the field of social psychology (Bosson, Swann, & Pennebaker, 2000) may encourage motivation research to resume a long tradition of operant testing. Predictive validity and classical concepts of reliability are empirically only loosely correlated (Meyer et al., 2001), and may not be applicable to all kinds of measurements in psychology (Murphy & DeShon, 2000). The theoretical conceptualization of motives outlined in this article, on which the methodology of the OMT is based, is one step towards the improvement of operant testing and the OMT builds on that concept. Hopefully, more researchers will work in this direction and help preserving *and* innovating an almost 70 year old test tradition.

References

- Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, *64*, 359-372.
- Atkinson, J. W. (1958). *Motives in fantasy, action, and society*. Princeton, NJ: Van Nostrand.
- Atkinson, J. W. (1981). Studying personality in the context of an advanced motivational psychology. *American Psychologist*, *36*, 117-128.
- Atkinson, J. W., & Birch, D. (1970). *The dynamics of action*. New York: Wiley.
- Atkinson, J. W., & McClelland, D. C. (1948). The projective expression of needs: II. The effect of different intensities of the hunger drive on thematic apperception. *Journal of Experimental Psychology*, *33*, 643-658.
- Atkinson, J. W., & O' Connor, P. (1966). Neglected factors in studies of achievement-oriented performance: Social approval as an incentive and performance decrement. In J.W. Atkinson & N.T. Feather (Eds.), *A theory of achievement motivation* (pp. 299-325). New York: Wiley.
- Baumann, N., Kaschel, R., & Kuhl, J. (2005). Striving for unwanted goals: Stress-dependent discrepancies between explicit and implicit achievement motives reduce subjective well-being and increase psychosomatic symptoms. *Journal of Personality and Social Psychology*, *89*, 781-799.
- Bargh, J. A., Chen, M. & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology*, *71*, 230-244.
- Borkenau, P., & Ostendorf, F. (1993). *NEO-Fünf-Faktoren Inventar (NEO-FFI) nach Costa und McCrae: Handanweisung* [NEO-Five-Factor Inventory (NEO-FFI) according to Costa and McCrae: Manual]. Göttingen: Hogrefe.
- Bosson, J. K., Swann, W. B., & Pennebaker, J. W. (2000). Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited? *Journal of Personality and Social Psychology*, *79*, 631-643.
- Brunstein, J. C., Schultheiss, O. C., & Grässmann, R. (1998). Personal goals and emotional well-being: The moderating role of motive dispositions. *Journal of Personality and Social Psychology*, *75*, 494-508.

- Brunswik, E. (1943). Organismic achievement and environmental probability. *Psychological Review*, 50, 255 – 272.
- Cattell, R. B., & Weiß, R. H. (1971). *Grundintelligenztest CFT 3*. [General intelligence test: CFT 3]. Braunschweig: Georg Westermann.
- Chasiotis, A., Hofer, J., & Campos, D. (2006). When does liking children lead to parenthood? Younger siblings, implicit prosocial power motivation, and explicit love for children predict parenthood across cultures. *Journal of Cultural and Evolutionary Psychology*, 4, 95-123.
- Cronbach, L. J. & Gleser, G. C. (1957). *Psychological tests and personnel decisions*. Urbana, ILL: University of Illinois.
- Dalton, M., Lombardo, M. M., McCauley, C. D., Moxley, R., & Wachholz, J. (1996). *Benchmarks: A manual and trainer's guide*. Greensboro, NC: Center for Creative Leadership.
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72, 218-232.
- Emmons, R. A., & McAdams, D. P. (1991). Personal strivings and motive dispositions: Exploring the links. *Personality and Social Psychology Bulletin*, 17, 648-654.
- Entwisle, D. R. (1972). To dispel fantasies about fantasy-based measures of achievement motivation. *Psychological Bulletin*, 77, 377-391.
- Feather, N. T. (1962). The study of persistence. *Psychological Bulletin*, 59, 94-115.
- Fineman, S. (1977). The achievement motive construct and its measurement: Where are we now? *British Journal of Psychology*, 68, 1-22.
- Fletcher, C., & Baldry, C. (1999). Multi-source feedback systems: a research perspective. *International Review of Industrial and Organizational Psychology*, 14, 149-193. London: Wiley & Sons.
- Goschke, T. (1997). Zur Funktionsanalyse des Willens: Integration kognitions-, motivations- und neuropsychologischer Perspektiven. *Psychologische Beiträge*, Bd. 39, 375-412.
- Gough, H. G., & Heilbrun, A. B. Jr. (1980). *The revised Adjective Check List manual*. Palo Alto: CPP. German version by A. B. Weinert, Universität der Bundeswehr Hamburg, 1988.
- Gray, J.A. (1987). *The psychology of fear and stress*. (2nd ed.). Cambridge: University Press.
- Graziano, W. G., & Eisenberg, N. H. (1997). Agreeableness: A dimension of personality. In R. Hogan, J. Johnson and S. Briggs (Eds.), *Handbook of personality psychology* (pp. 793-825). San Diego: Academic Press.
- Greenwald, A.G., & Banaji, M.R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102, 4-27.
- Greenwald, A.G., Banaji, M.R., Rudman, L.A., Farnham, S.D., Nosek, B.A., & Mellott, D.S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review*, 109, 3-25.
- Heckhausen, H. (1963). *Hoffnung und Furcht in der Leistungsmotivation* [Hope and fear in achievement motivation]. Meisenheim/Glan: Hain.
- Heckhausen, H. (1991). *Motivation and action*. Heidelberg/New York: Springer-Verlag.
- Heckhausen, H., & Gollwitzer, P. M. (1987). Thought contents and cognitive functioning in motivational vs. volitional states of mind. *Motivation and Emotion*, 11, 101-120.
- Heckhausen, H., & Kuhl, J. (1985). From wishes to action: The dead-ends and short-cuts on the long way to action. In M. Frese & J. Sabini (Eds.), *Goal-directed behavior: The concept of action in psychology* (pp. 134-160). Hillsdale, NJ: Erlbaum.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280-1300.
- Hofer, J. & Chasiotis, A. (2003). Congruence of life goals and implicit motives as predictors of life satisfaction: Cross-cultural implications of a study of Zambian male adolescents. *Motivation and Emotion*, 27, 251-272.

- Hofer, J., Busch, H., Chasiotis, A., Kärtner, J., & Campos, D. (2007; in press). Concern for generativity and its relation to implicit power motivation, generative goals, and satisfaction with life: A cross-cultural investigation. *Journal of Personality*.
- Kuhl, J. (1978a). Situations-, reaktions- und personbezogene Konsistenz des Leistungsmotivs bei der Messung mittels des Heckhausen-TAT [Consistency of Heckhausen's TAT measure of the achievement motive across situations, response modalities and individuals]. *Archiv für Psychologie*, *130*, 37-52.
- Kuhl, J. (1978b). Standard setting and risk preference: An elaboration of the theory of achievement motivation and an empirical test. *Psychological Review*, *85*, 239-248.
- Kuhl, J. (1981). Motivational and functional helplessness: The moderating effect of state versus action orientation. *Journal of Personality and Social Psychology*, *40*, 155-170.
- Kuhl, J. (1983). *Motivation, Konflikt und Handlungskontrolle* [Motivation, conflict, and action control]. Heidelberg: Springer-Verlag.
- Kuhl, J. (1996). Who controls whom when 'I control myself'? *Psychological Inquiry*, *7*, 61-68.
- Kuhl, J. (2000). A functional-design approach to motivation and volition: The dynamics of personality systems interactions. In M. Boekaerts, P.R. Pintrich & M. Zeidner (Eds.), *Self-regulation: Directions and challenges for future research* (pp. 111-169). New York: Academic Press.
- Kuhl, J. (2001). *Motivation und Persönlichkeit: Interaktion psychischer Systeme*. Göttingen: Hogrefe.
- Kuhl, J., & Beckmann, J. (1985). *Action control theory: From cognition to behavior*. New York: Springer.
- Kuhl, J., & Kazén, M. (1999). Volitional facilitation of difficult intentions: joint activation of intention memory and positive affect removes stroop interference. *Journal of Experimental Psychology: General*, *128*, 382-399.
- Kuhl, J., & Kazén, M. (2007). Motivation, affect and hemispheric asymmetry: Power versus intimacy. Manuscript submitted for publication. University of Osnabrück, Germany.
- Kuhl, J., & Scheffer, D. (1999). *Manual for scoring the Operant Motive Test (OMT)*. University of Osnabrück.
- Kuhl, J., Scheffer, D., & Eichstaedt, J. (2003). Der Operante Motiv-Test (OMT): Ein neuer Ansatz zur Messung impliziter Motive. [The Operant Motive Test (OMT): A new approach to the measurement of implicit motives] In F. Rheinberg & J. Stiensmeier-Pelster (Eds.), *Diagnostik von Motivation und Selbstkonzept* (pp. 129-149). Göttingen: Hogrefe.
- Lewin, K. (1926). Über die Ursachen des seelischen Geschehens. *Psychologische Forschung*, *7*, 310-316.
- Lundy, A. (1988). Instructional set and Thematic Apperception Test validity. *Journal of Personality Assessment*, *52*, 309-320.
- McAdams, D. P., & Vaillant, G. E. (1982). Intimacy motivation and psychosocial adjustment: A longitudinal study. *Journal of Personality Assessment*, *46*, 586-593.
- McClelland, D. C. (1975). *Power: The inner experience*. New York: Irvington Publishers.
- McClelland, D. C. (1980). Motive dispositions: The merits of operant and respondent measures. In L. Weeler (Ed.), *Review of personality and social psychology* (Vol. 1, pp. 10-41). Beverly Hills, CA: Sage.
- McClelland, D. C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman & Co.
- McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1953). *The achievement motive*. New York: Appleton-Century-Crofts.
- McClelland, D. C., & Boyatzis, R. E. (1982). The leadership motive pattern and long-term success in management. *Journal of Applied Psychology*, *67*, 737-743.

- McClelland, D. C., Koestner, R., & Weinberger, J. (1989): How do self-attributed and implicit motives differ? *Psychological Review*, 96, 690-702.
- Meyer, D. E., & Schwaneveldt, R. W. (1971). Facilitation in recognizing pairs of words: Evidence of a dependence between retrieval operations. *Journal of Experimental Psychology*, 90, 227-234.
- Meyer, G. J., Finn, S. E., Eyde, L. D., Kay, G. G., Moreland, K. L., Dies, R. R., Eisman, E. J., Kubiszyn, T. W., & Reed, G. M. (2001). Psychological testing and psychological assessment: A review of evidence and Issues. *American Psychologist*, 56, 128-165.
- Murphy, K. R., & De Shon, R. (2000). Interrater correlations do not estimate the reliability of job performance ratings. *Personnel Psychology*, 53, 873-900.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Murray, H. A. (1943). *Thematic Apperception Test Manual*. Cambridge: Harvard University Press.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231-259.
- Rasch, G. (1960). *Studies in mathematical psychology: I. Probabilistic models for some intelligence and attainment tests*. Oxford: Nielsen and Lydiche.
- Scheffer, D. (2005). *Implizite Motive*. Göttingen: Hogrefe.
- Scheffer, D., Kuhl, J. & Eichstaedt, J. (2003). *Der Operante Motiv-Test (OMT): Inhaltsklassen, Auswertung, psychometrische Kennwerte und Validierung [The OMT: Content categories, scoring, psychometric properties and validation]*. In F. Rheinberg, und J. Stiensmeier-Pelster (Hrsg.), *Diagnostik von Motivation und Selbstkonzept*, (pp. 151-168). Göttingen: Hogrefe.
- Shipley, T. E., & Veroff, J. (1952). A projective measure of need for affiliation. *Journal of Experimental Psychology*, 43, 349-356.
- Skinner, B. F. (1953). *Science and human behavior*. New York: Macmillan.
- Smith, C. P. (1992). *Motivation and personality: Handbook of thematic content analysis*. Cambridge: Cambridge University Press.
- Spangler, W. D. (1992). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Research*, 112, 140-154.
- Tuerlinckx, F., De Boeck, P., & Lens, W. (2002). Measuring needs with the Thematic Apperception Test: A psychometric study. *Journal of Personality and Social Psychology*, 82, 448-461.
- Winter, D. G. (1994). *Manual for scoring motive imagery in running text (Version 4.2)*. University of Michigan.
- Winter, D. G. (1996). *Personality: Analysis and interpretation of lives*. New York: McGraw-Hill.
- Winter, D. G., & Stewart, A. J. (1977). Power motive reliability as a function of retest instructions. *Journal of Consulting and Clinical Psychology*, 45, 436-440.
- Winter, D. G., Stewart, A. J., John, O. P., Klohnen, E. C., & Duncan, L. E. (1998): Traits and motives: Toward an integration of two traditions in personality research. *Psychological Review*, 105, 230-250.
- Zalewska, A. M., & Brandstätter, H. (2001). Value-motive congruence and reactivity as determinants of well-being. In H. Brandstätter & A. Elias (Eds.), *Persons, situations, and emotions: An ecological approach* (pp. 95 – 112). New York: Oxford University Press.