Mapping Explicit Social Motives of Achievement, Power, and Affiliation onto the Five-Factor Model of Personality

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Published in: Scandinavian Journal of Psychology
Abstract

Previous research has shown that explicit motives are meaningfully related to the five-factor model of personality. The present study extends this research by using different measures of the explicit social motives of achievement, power and affiliation, and by employing measures of both approach and avoidance of these motives. Correlational and factor analyses demonstrated that explicit motives of achievement, power, and affiliation, both approach and avoidance components of these motives, can be consistently mapped onto personality trait measures of the five-factor model. Implications of this general finding, along with some exceptions, are discussed with regard to further research.

Keywords: Five factor model of personality, explicit, implicit, social motives, traits.
Mapping Explicit Social Motives onto Personality Traits

Traits and motives represent theoretically distinct concepts, which researchers employ to describe and explain human behavior (e.g. Pervin, 1989). Traits have been conceptualized as stable habits or styles that consistently characterize a person’s behavior (Maddi, 1980), as enduring dispositions that may have affective, behavioral or attitudinal aspects (Costa & McCrae, 1980), and as “stylistic and habitual patterns of cognition, affect, and behavior” (Emmons, 1989, p. 32).

Most trait theorists recommend the Five-Factor Model (FFM) of personality (Tupes & Christal, 1992; Norman, 1963), which in its latest version (Costa & McCrae, 1992) identifies the traits of Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A) and Conscientiousness (C) as the general building blocks of personality. Motivational psychologists, on the other hand, focus on social motives like Achievement, Power and Affiliation to characterize a person’s personality (e.g. Emmons, 1993; Pervin, 1989). Motives represent the goals that a person prefers, and they are often – though by no means always (cf. McClelland, 1985) – experienced as conscious intentions or needs (Cantor & Zirkel, 1990). Such conscious motives have been termed “explicit motives” by McClelland (1985) or, alternatively, “self-attributed motives” by McClelland, Koestner, and Weinberger (1989). They can be distinguished from “implicit motives”, which are not consciously accessible.

On this abstract level, the distinction between traits and motives is that traits are stylistic and habitual patterns, irrespective of a person’s preferred goals, and motives are preferred goal states, regardless of how these goal states is generally reached. Besides this conceptional distinction, Costa and McCrae (1980) argue that traits represent motivational aspects as well. Stylistic and habitual patterns represent what a person is usually aiming for and vice versa. Also, the most commonly used questionnaire to measure explicit motives, the Personality Research Form (PRF), was conceived by the test’s designer (Jackson, 1984) as a trait measure. Moreover, when looking at the single items of the actual measures of traits and
explicit motives, the formulation of these items indicates that the measures tap similar constructs.

Given that explicit motives and traits overlap and are operationally related, mapping explicit motives onto the Five-Factor Model allows for an integration of research focusing on trait constructs and research assessing explicit social motives. For example, several studies have shown that Conscientiousness predicts high academic performance in diverse settings (e.g. Furnham & Chamorro-Premuzic, 2004; Duff, Boyle, Dunleavy, & Ferguson, 2004; Gray & Watson, 2002). Similarly, there is evidence that a strong explicit Achievement Motive is related to high academic performance (e.g. Gjesme, 1974, 1975) and entrepreneurial behavior (see Collins, Hanges & Locke, 2004).

If explicit Achievement Motive were to map onto Conscientiousness, then these two bodies of research could be integrated through the assumption that the conscious need to excel drives both highly conscientious individuals and individuals with a strong explicit motive to achieve. Thus, mapping explicit motives onto the FFM may help us to compare results from the two lines of research where mapping is successful, or may stress the need to investigate traits and explicit motives in their own right.

To date, there have been several studies seeking to relate explicit motives to the FFM of personality (e.g. Costa & McCrae, 1988; Olson & Weber, 2004; Paunonen, Jackson, Trzebinski, & Försterling, 1992; Stumpf, 1993). Most of these studies have assessed explicit social motives using the Personality Research Form, which was designed to measure Murray’s (1938) list of 20 basic manifest needs. For example, a factor analysis of the PRF scales by Skinner, Jackson & Rampton (1976) yielded a five-factor structure which closely resembled the five-factor model of personality. Factors were labeled “orientation toward work vs. play” (akin to Conscientiousness), “aesthetic, intellectual orientation” (akin to Openness), “dependence vs. autonomy” (akin to Neuroticism), “self-protective vs. submissive orientation” (akin to low Agreeableness) and “outgoing, social leadership” (akin to
Extraversion). In a combined factor analysis of NEO-PI factors and the PRF scales, Costa and McCrae (1988) found clear evidence that the PRF scales could be meaningfully organized within the framework of the FFM. Elaborating on this work, Stumpf (1993) found evidence that the PRF yields a five-factor structure that closely resembled the FFM in an analysis of 18 data sets from diverse samples. Thus, there is evidence that explicit motives and traits are closely related.

Studies relating implicit motives to personality measures (Schultheiss & Brunstein, 2001; Pang & Schultheiss, 2005) or to explicit motives (e.g. Sprangler, 1992) have revealed no or only weak relationships. This is quite a common finding in that implicit and explicit measure different aspects and are a least not highly correlated (e.g. Nosek, Greenwald, & Banaji, 2007). Furthermore, the semi-projective tests which could be seen as an in-between measure of implicit and explicit motives actually revealed only weak correlations with explicit measures (Sokolowski, Schmalt, Langens, & Puca, 2000). As a consequence of this, research has focused on the interplay of the implicit motives and personality trait (Winter, John, Stewart, Klohnen, & Duncan, 1998), the interplay of implicit and explicit motives (e.g. Brunstein & Maier, 2005; Trash, Elliot, & Schultheiss, 2007), or the effects of congruence between implicit motives and goals (e.g. Brunstein, Schultheiss, & Grässmann, 1998; Job & Brandstätter, in press).

Limitations of Research

The empirical findings accumulated so far, however, may not allow direct comparisons between traits and explicit motivational concepts, for two reasons. First, and most importantly, all of the studies seeking to relate explicit motives to traits have relied on a single indicator of motives (in most cases, the PRF). Since the results obtained for the PRF may not generalize to other measures of explicit motives, Costa and McCrae (1988) point out that in order to further explore the relationship between motives and traits, “using alternative
As an example, one can consider Costa and McCrae’s (1988) joint factor analysis of NEO-PI scales and PRF scales, which found that the Achievement scale of the PRF had high loadings on the Openness factor as well as on the Conscientiousness factor. In a similar factor analysis of the FFM and basic social values, Achievement values were related to both Extraversion and Conscientiousness (Roccas, Sagiv, Schwartz, & Knafo, 2002). Mapping explicit motives onto the FFM can only be assumed to be successful if consistent relationships between different measures of explicit motives and personality traits can be observed.

Second, the differentiation between approach and avoidance explicit motives (e.g. Gable, Reis, & Elliot, 2003) has not yet been incorporated into attempts to map explicit social motives onto personality traits. Commenting on the PRF scales, Costa and McCrae (1988) argue that Murray’s focus on needs (approach motives) and his relative neglect of fears (avoidance motives) “makes the complete correspondence between needs and the five-factor model questionable” (p. 259). Thus, although Costa and McCrae (1988) did find that some of the PRF scales loaded on a factor that was marked by NEO-PI Neuroticism, Stumpf (1993) found that this factor could not be reliably replicated in all 18 data sets he analyzed (p. 42).

It is also open whether there is a specific avoidance component for each explicit motive or whether McClelland’s (1985) assumption holds that avoidance represents a general component relevant for any type of striving regardless of its specific content. The work of Elliot and Thrash (2002) on the structure of traits, emotionality, and behavioral activation and inhibition suggest that the avoidance components of the explicit motives are highly associated and would also be highly associated with Neuroticism.

*The Present Research*

The present research addresses these limitations by using more than one single motive measure and by additionally including the avoidance component of these motives. We
confined our assessment to the three explicit social motives of Achievement, Affiliation and Power, for two reasons. First, these explicit motives are central dimensions of research on human motivation (e.g. McClelland, 1985; McAdams, 1992; Winter, 1996). Second, since our goal was to assess more than one measure for each motive, the inclusion of more motives may have resulted in an undue response burden for our participants.

In accordance with previous research (Costa et al., 1988; Roccas et al., 2002; Olson et al., 2004; Stumpf, 1993), we expected explicit Achievement motives to be most closely related to Conscientiousness. As previous results showed relations to Openness and Extraversion - as outlined above - we expect a relationship to these factors, although less strong than with Conscientiousness.

Our prediction concerning the relationship between explicit Power motives and traits is less straightforward. In one set of studies, the Dominance scale of the PRF (which is used as a measure of the Power Motive) was positively, but moderately, related to Extraversion and negatively related to Agreeableness (Costa et al., 1988; Stumpf, 1993), while in others it was only related to Extraversion (e.g. Paunonen et al., 1992). Nevertheless, we expect the Power motive to be (moderately) related to extraversion and possibly related to Agreeableness.

In accordance with previous results (Costa et al., 1988; Stumpf, 1993), we expect the explicit Affiliation motives to be highly related to Extraversion. We do not assume any other substantial correlations with other factors.

As outlined above, the work by Elliot and Thrash (2002) suggests that explicit Avoidance components of the explicit motives are highly interrelated and correspond closely to the Neuroticism factor of the FFM, filling the gap that was left open by the PRF scales. In line with this, we expect that the Avoidance components of the explicit motive will be related accordingly.

We further extended our analysis to the facets of the FFM as represented by the NEO-PI-R. Explicit motive measures represent more specific constructs than personality factors and
should therefore relate more closely to facets of personality traits. In accordance with the work of Costa et al. (1988) and Stumpf (1993), we expected the strongest relationships between the explicit Achievement motive and the facet Achievement Striving of Conscientiousness. The explicit Power motive has shown close associations with the facet Assertiveness of Extraversion and the facet of Modesty of Agreeableness, and we also expect to find these relationships in our work. For the Affiliation Motive, an especially close relationship within the domain of Extraversion has been found for the facets of Warmth and Gregariousness, and is also expected for the present research.

**Method**

**Participants**

A total of 622 people participated in the study. They received either university course credit or feedback on their personality profile. Persons with missing values for age or sex, as well as participants who had more than 10% missing values in a questionnaire (either subscale or facet) were excluded. Missing values for the remaining participants were estimated with the “expectation maximization” procedure within each construct (Verleye, Pepermans, & Despontin, 1998). In addition, five participants younger than 18 years were excluded. The final sample included 380 women and 207 men, with an age range of 18 to 68 years ($M = 25.17, SD = 6.64$). The general level of education was high ($N = 562$ having completed at least high school), and most of the participants were students of the University of Potsdam ($N = 457$). The study was conducted online at the beginning of 2005.

**Personality Trait Measure**

The German version (Ostendorf & Angleitner, 2004) of the revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992) is a 240-item personality questionnaire developed to measure five dimensions of personality: Neuroticism (N), Extraversion (E), Openness to Experience (O); Agreeableness (A), and Conscientiousness (C). Items had to be
answered on a 5-point scale from (1) strongly disagree to (5) strongly agree. Each dimension consists of six facets (see Table 2 for a list of facets).

**Explicit Motive Measures of Approach**

**Personality Research Form (PRF).** The PRF is the most commonly used motive questionnaire in a wide range of research topics (e.g. Brunstein & Maier, 2005; Costa et al., 1988; Pang & Schultheiss, 2005; Woike, Mcleod, & Goggin, 2003). From the PRF, we selected the subscales Achievement, Dominance and Affiliation to assess the three explicit social motives of **Achievement**, **Power** and **Affiliation** (Emmons & McAdams, 1991; Jackson, 1984; Stumpf, Angleitner, Wieck, Jackson, & Beloch-Till, 1985). Each scale consists of 16 true-false questions that are balanced for acquiescent responding. The Achievement motive is measured with items concerning hard, persistent work and a preference for difficult problems. The Power motive is measured with items concerning the wish to hold high-status positions and to lead others. Finally, the Affiliation motive is measured with items concerning the wish to be with other people or to interact with others in a friendly manner.

**Personal Values Questionnaire (PVQ).** The three motives of **Achievement**, **Power** and **Affiliation** were measured by the German version (Langens, 1995) of the PVQ (McClelland, 1991). Each scale consists of 10 items that had to be answered on a 5-point scale ranging from (1) strongly disagree to (5) strongly agree. Although the PVQ is not as widely used as the PRF, studies conducted so far indicate good measurement qualities (Brunstein & Hoyer, 2002). Achievement is measured with items concerning the development of one’s own competencies in solving difficult problems and a preference for taking responsibility for achievement projects. This closely mirrors the understanding of achievement motivation sensu McClelland (1985). For the power motive, the items of the PVQ are similar to the PRF, but additionally contain items assessing concerns for prestige (see Winter, 1973). Affiliation is assessed by items which, again like the PRF, represent the wish to be with others. In addition, some affiliation items also measured the wish to be with family members.
Achievement Motive Scale (AMS). The German version (Dahme, Jungnickel, & Rathje, 1993) of the AMS (Gjesme et al., 1970) assesses the need for Achievement in the tradition of Atkinson’s risk-taking model (Atkinson, 1957). It measures the preference for challenging tasks and for receiving feedback regarding one’s ability, which is labeled as the Hope of Success (see Fear of Failure component below). The scales consist of 15 items, which had to be answered on a 4-point scale ranging from (1) strongly disagree to (4) strongly agree. The AMS is widely used in Scandinavia and Germany and has proven to be a reliable and valid instrument (e.g. Dahme et al., 1993; Hagtvet & Zuo, 2000; Man, Nygard & Gjesme, 1994; Rand, 1987).

Mehrabian Affiliation Tendency Questionnaire (MAFF). The German version of the MAFF was used to measure the explicit Affiliation motive (Mehrabian, 1970). The MAFF consists of 25 true-false questions. The scale is balanced for acquiescent responding. The MAFF measures the preference for being with other people (versus doing things alone). Again, the questionnaire has proven to be a reliable and valid instrument (Mehrabian, 1994).

We were unable to find a questionnaire that provided an additional measure of the Power motive. This also holds for the Avoidance component of the Power motive.

Explicit Motive Measures of Avoidance

Achievement Motive Scale (AMS). In addition to Hope for Success, the AMS also measures Fear of Failure. The scale consists of 15 items, which had to be answered on a 4-point scale ranging from (1) strongly disagree to (4) strongly agree and has proven to be a reliable and valid instrument (see above).

Mehrabian Sensitivity to Rejection Scale (MSR). The German version of the MSR was used to measure the explicit motive to Avoid Social Rejection (Mehrabian, 1970). The MSR consists of 24 true-false questions. The scale is balanced for acquiescent responding. The MSR measures fear of rejection as represented by reticence to state one’s own opinion and
disliking being with strangers. The questionnaire has proven to be a reliable and valid instrument (Mehrabian, 1994).

**Strategy of Data Analyses**

To explore the relationships between explicit social motives and personality traits, we conducted correlation and factor analyses. A motive (e.g., Achievement) can be assumed to map onto a personality trait (e.g., Conscientiousness) if the following conditions are met: (1) The correlations among different measures of the same motive (e.g., PRF-Achievement, PVQ-Achievement, and AMS) and between these motive measures and a personality trait (e.g., Conscientiousness) are of similar magnitude. (2) Measures of the same motive have high loadings on a common factor, which is also marked by a personality trait. In line with relevant previous research (e.g. Costa & McCrae, 1988; Stumpf, 1993), we conducted principal factor analysis with varimax rotation.

**Results**

**Preliminary Analyses**

We compared the factor structure of the NEO-PI-R as presented by Ostendorf and Angleitner (2004) with our data. Tucker-Burt-Wrigley-Neuhaus congruence coefficients (see Guadagnoli & Velicer, 1991) computed separately for the five factors showed strong congruence with the factor structure obtained for the present sample (all coefficients > .98). The correlations for women and men were very similar, and we therefore do not include gender in presenting the results. The loadings for women and men on the conducted factor analysis are also very similar, resulting in high congruence coefficients (all coefficients > .96).

**Correlation Analyses**

Table 1 presents the correlations among the motive measures and the means, standard deviations, and internal consistencies of each measure. For all motive measures, the internal consistencies are satisfactory. As expected, the correlations of the questionnaires within each
motive domain were moderate to high ($r > .53$). This indicates that measures of the same motive have substantial overlap, although the correlations within each motive domain could have been expected to be higher for instruments of the same construct (Campbell & Fiske, 1959).

The correlations between the motive domains were generally low, with some exceptions. First, measures of Achievement and Power were substantially positively correlated. This holds especially true for the PVQ Achievement and Power motive ($r = .53$). Second, there were moderate negative correlations between the Achievement motive measures and the Avoidance components of the motives, and the strongest negative relationships were found for the AMS. Third, the PRF-power motivation is moderately and negatively correlated with the Avoidance components. Altogether, the correlations indicate sufficient construct and differential validity so far.

Table 2 presents the correlations between personality trait and motive measures. As expected, the Achievement motive correlated positively with the domain of Conscientiousness, and showed the strongest relationship with the facet of Achievement Striving. The correlations between Achievement Striving and the motive measures were of similar magnitude to the correlation measures of achievement motivation (see Table 1). The Achievement motive measures have substantial positive correlations with Extraversion, which is particularly the case for the facets Assertiveness and Activity and with Openness for the Achievement Motive Scale (AMS), particularly for the facets Openness to Ideas. The negative correlations with Neuroticism and the facet of Vulnerability of this domain are not in line with the previous research and with our expectations.

In addition to showing high correlations to conscientiousness, a highly achievement-motivated person is therefore more likely to be resistant to stress (low Vulnerability), and be active and assertive. Furthermore, the positive correlations with Openness to Ideas
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(Openness), especially for the AMS, indicate that being intellectually interested in new ideas is accompanied by a high achievement motive.

For the Power motive, we obtained highly positive correlations for Personal Research (PRF) with Extraversion and moderate negative correlations with Agreeableness. The moderate negative correlation to Neuroticism was not expected. In line with expectation, for the facets, strong and positive relationships were observed with Assertiveness (Extraversion) and negatively with Modesty (Agreeableness). Due to the substantial correlations with a variety of other facets, a high Power motive measured with the PRF is associated with less Anxiety and Self-Consciousness, lower stress resistance (Vulnerability), as well as with activity, straightforwardness, competence and a focus on achievement (Achievement Striving).

The Power motive measured with the Personal Values Questionnaire (PVQ) has weaker relationships with personality traits and facets. The correlations of the PVQ with the personality measure are also weaker than the correlations of the two motive measures themselves (see Table 1). This violates our precondition, in that the correlations between the Power motive measures and the personality measure have to be as high as between the two Power motive measures (see Strategy of Data Analyses). However, like PRF-Power, the strongest correlations were found for the facets Assertiveness (Extraversion), Modesty and Straightforwardness (both Agreeableness).

As expected, the Affiliation motive correlated strongly and positively with Extraversion (see Table 2). This correlation is grounded in the facets of Warmth and Gregariousness. These correlations of the Affiliation motive with personality traits are about as high as the correlations among the motive measures (see Table 1). The correlation of the Affiliation motive and the facet of Positive Emotions (Extraversion) is also quite high. As is the case for Power, the correlations are less pronounced for the PVQ, a finding which will be discussed below. Additionally, there were moderate positive correlations between the Affiliation motive
and the facets of Trust and Altruism of the domain Agreeableness. A highly affiliative person is therefore more likely to be friendly and sympathetic (Warmth), trusting and altruistic, and appreciative of time spent with other people.

As hypothesized, the Avoidance components of the Achievement and Affiliation motives showed moderate to high positive correlations with Neuroticism (see Table 2). Except for the facets of Anger-Hostility and Impulsivity, the correlations with all other facets of Neuroticism were all greater than $r = .49$. Furthermore, these Avoidance components were characterized by low Assertiveness and the feeling of low competence.

**Factor Analyses**

Next, we conducted a factor analysis of the personality trait domains and the motive measures. An investigation of the scree plot and the application of the parallel analysis (PA) method (Zwick & Velicer, 1986) clearly indicated a five-factor solution (eigenvalues: 4.53, 2.60, 1.69, 1.57, 1.19, 0.54, 0.49, 0.47). The results of the five-factor solution are presented in Table 3. As would be expected from the correlations presented above, measures of Achievement motivation and Conscientiousness had high loadings on a common factor. The AMS-HS measure had a substantial secondary loading on Openness. Contrary to expectations and to the correlation presented above (see also Table 2), the Power motive did not show the highest loading on a factor along with Extraversion, and even the secondary loading is small. The Power motive had the highest loadings on the factor indexed (negatively) by Agreeableness. Additionally, PRF-Power had a substantial negative loading on Neuroticism. Finally, the Affiliation motive measures loaded high on the factor with Extraversion, and both Avoidance components loaded on the factor along with Neuroticism.

**Discussion**

The present research was guided by two main questions: First, can the three explicit motives Achievement, Power, and Affiliation be mapped onto personality traits when different motive measures are used? Previous studies had used only a single measure of
motives, typically the PRF. Second, can the Avoidance components of explicit social motives also be reflected by personality traits? Until now, this question has been left open.

The FFM domains of personality were measured with the widely used NEO-PI-R. In the NEO-PI-R, each domain is represented by six facets, allowing for a more detailed analysis of personality. By employing the Personal Research Form (PRF) and the Personal Value Questionnaire (PVQ), we were able to assess all three explicit social motives using different instruments. We also employed additional measures of the Achievement (Achievement Motive Scale, AMS) and Affiliation motives (Mehrabian Affiliation Tendency Questionnaire, MAFF and Mehrabian Sensitivity to Rejection Scale, MSR), which provided measures of approach tendencies (Hope of Success and Affiliation motivation) and avoidance tendencies (Fear of Failure and Fear of Rejection). No commonly used measure for the Power motive for Approach and Avoidance could be found for the study.

In general, the explicit motives of Achievement and Affiliation could be mapped on personality traits when using different measures of the Motives. The motives were strongly related to the expected personality traits and facets, and the correlations of the motive measures within a domain were about as high as the correlations with the corresponding personality trait measure. For the Power motive, the mapping on personality traits was less straightforward, and the correlations of the Power motive measures with personality traits were lower than the correlations between the motive measures themselves. This violates the assumption that the personality traits measure the same construct as the Motive measures. For the Avoidance components of the explicit motive, the mapping was again successful, showing that Avoidance components are highly correlated and are also captured by personality trait measures.

*Achievement Motive*

In accordance with our expectations, for the Achievement motive, all of the measures employed in our research (PRF, PVQ and AMS-HS) showed the highest loadings on the
domain of Conscientiousness and high correlations especially with the facet of Achievement Striving of this domain. In line with expectations, we also found weak relationships between Achievement motives and Extraversion, which was qualified by moderate correlations for the facets Assertiveness and Activity of Extraversion. Furthermore, we found substantial relationships between the Achievement motive and Openness to Ideas, especially for the AMS-HS Achievement measure.

The successful mapping on personality trait is especially noteworthy for the AMS, which captures aspects of the Achievement motive in the tradition of Atkinson’s risk-taking model (Atkinson, 1957) such as the preference for challenging tasks and the need to receive feedback concerning one’s ability. These aspects are not captured by Conscientiousness and might explain the fact that the AMS showed close relations with Openness to Ideas. Openness is regarded as having a high propensity for innovation and solving problems and an engagement in intellectual and creative tasks (e. g. Buss, 1991; McAdams & Pals, 2006). It is also characterized by curiosity with regard to developing new competences (MacDonald, 1995). This corresponds to the preference for challenging tasks, which could be interpreted as being curious about one’s own performance and being open to receiving feedback about one’s own competences. In contrast, the PRF and the PVQ, with their focus on Achievement Striving in the workplace, and to a lesser degree in solving problems, show a smaller overlap with the personality trait Openness to Ideas.

*Power Motive*

Contrary to previous research and our expectations, there was no strong evidence that power motivation maps onto Extraversion. Instead, the Power motive was more strongly characterized by low Agreeableness, and correlated most strongly and negatively with the facet of Modesty. Relationships with Extraversion were only evident for one measure (PRF) and most strongly for one of its facets, namely Assertiveness. The PRF further has substantial
relationships with various domains and facets, in particular a negative relation to Neuroticism and a positive relationship to the facet of Competence (Conscientiousness).

This indicates that power motivation is a complex and rather heterogeneous phenomenon (McClelland, 1975; Winter, 1973; Schultheiss, Pang, Torges, Wirth, & Treynor, 2005), which includes striving for elevated status and trying to influence other people (captured by both the PRF and PVQ) as well as a concern for prestige and an inclination to arouse strong emotions in other people (captured only by the PVQ). These aspects are not captured by (a single) personality trait or facet. Further, the concern for prestige and inclination to arouse emotions included in the PVQ measure did not seem to be captured by personality trait measures, which could explain why the correlation for the PVQ with personality traits and facets were generally low, and lower than for the PVQ.

The correlations with various domains and facets of personality measures also indicate that there might be more aspects of power motivation than have been considered by motivation researchers. The negative relation to Neuroticism for the PRF indicates that power-motivated persons seem to be sensitive to negative stress and social rejections to a lesser degree. This may free the way for power motivation, and longitudinal data suggest that punishment in childhood leads to a lower implicit power motive in adulthood (McClelland, 1985). Our data appear to suggest that this might also hold for the explicit power motive, or at least indicate that the explicit Power motive is associated with less sensitivity to stress and social rejections. In a similar vein, the Power motive is associated with higher Competence, which enables a power-motivated person to be assertive and lower in Modesty.

On the other hand, our second measurement of the Power motive (PVQ) indicates that the Power motive does not necessarily correlate with Neuroticism and that this correlation might be restricted to the measurement of the Power motive with the PRF. Looking at the item level, it might be interpreted that the PVQ asks how important power-related aspects are, while the PRF asks participants to indicate power-related behavior and positions. This would
mean that the importance of power is not associated with Neuroticism, but that the path from
Power motive to behavior is restricted by Neuroticism, as we argued in the previous
paragraph. The notion that Neuroticism and the Avoidance motive hinder desires from being
implemented would complement the recent research interest in implicit motives, goal
enactment and well-being (see Brunstein, 2008; Job & Brandstätter, in press).

**Affiliation Motive**

As expected, affiliation motives were strongly related to Extraversion in general, and
were most closely related to the facets Warmth and Gregariousness of Extraversion.
Moreover, the Affiliation motive substantially correlates with Positive Emotions of
Extraversion. Positive Emotions are considered to be an indicator of a general sensitivity of
the reward system associated with Extraversion (Elliot & Trash, 2002; Watson & Clark,
1997). This allows for the interpretation that the Affiliation motive is accompanied by a
sensitivity of the reward systems to the social situation. This also refers to the core
motivational aspect of affiliation motivations that social relationships are more rewarding for
persons high in affiliation (McClelland, 1985; Sokolowski & Heckhausen, 2008). The
Relationships with Extraversion were weaker for one measure with the PVQ. Similar to the
Power motive, the PVQ measures an aspect that is not represented by the other measures,
namely the wish to be with family members.

Additionally, there were moderate positive correlations between the Affiliation motive
and the facets of Trust and Altruism of the domain Agreeableness. High affiliation is
therefore not only characterized by enjoying the company of others, but also by a belief in the
sincerity and good intentions of others and an active concern for the welfare of others. This
should in general lead to more enjoyable and rewarding social relationships (van Lange, De
Bruin, Otten, & Joireman, 1997), and most likely stabilize and foster the Affiliation motive.

The finding that the explicit affiliation motive and the explicit power motive are related
to extraversion is also in accordance with Depue’s model of agentic (i.e. power-related) and
affiliative components of extraversion (e.g. Morrone, Depue, Scherer & White, 2000). On the other hand, it points to the problem that several concepts are subsumed under one domain. McCrae and Costa (1996) see the core in the enjoyment of the company of others and this is in accordance with the strong relationship we found for the Affiliation motive. Other researchers see the core of extraversion as lying in leadership potential and a disposition for power use (e.g. Hogan, 1996), which is in line with the strong relationship of the Power motive with the facet of Assertiveness of Extraversion. On an empirical level, the facet of Assertiveness has relatively low factor loadings on the domain (Becker, 2004; Ostendorf, & Angleitner, 2004). This points to the fact that leadership and a disposition for power use is not at the core of Extraversion in the personality measure we used (NEO-PI-R), and other personality measures could lead to different results concerning the Power and Affiliation motive (cf. Paunonen et al., 1992). We will return to this issue when discussing the limitations of our study.

Avoidance Components the Motives

In line with our predictions, the Avoidance component of the Achievement and Affiliation motives were highly correlated and fall on a common factor with Neuroticism. This gives rise to two conclusions. First, Fear of Failure of the Achievement motive and Sensitivity to Rejection of the Affiliation motives do tap into the same construct. This supports the reasoning of McClelland (1985) that there is one Avoidance motive based on generalized anxiety (cf. Carver & White, 1994; Elliot & Trash, 2002). Second, Neuroticism could be seen as a sensitivity of a general system to respond to environmental stress (e.g. Hogan, 1996) and not only in situations in which people’s social relationships are threatened (e.g. Denissen & Penke, 2008).

On the other hand, at a deeper level Fear of Failure might have developed from social rejection or the Fear of Social Rejection. Empirical data from Trudewind and Husarek (1979; see also Brunstein & Heckhausen, 2008) point in this direction. Individuals developed a
stronger Fear of Failure when their mothers criticized failure but were neutral to success, attributed failure to lack of ability, showed little respect for their children’s wish for autonomy, and finally, were more likely to apply social norms for their children (i.e. compare results with others) instead of individual norms (i.e. compare the results with the child’s own previous results) or objective norms. This also fits in with the regular finding that social norms foster Fear of Failure (Rheinberg & Engeser, in press).

The negative relationship of the Avoidance components to the facet of Assertiveness (Extraversion) might also lend credence to this interpretation. Individuals might fear negative reactions to assertive actions and therefore avoid assertive actions. Furthermore, the negative relations to Competence (Conscientiousness) could be due to the fear of being rejected or disapproved of.

Implications

The possibility to map motive measures onto personality traits has great advantages. In general, the two lines of personality research could be compared. Motivational research could benefit from the vast research on sophisticated personality measures of traits (the motive measures have attracted far less empirical research) and could concentrate on the measurement and study of implicit motives and the interaction of implicit motives and explicit motives or personality traits (see introduction). Further, the FFM of personality could be used as a reference to locate explicit motive measures. At least for the Affiliation motive, the personality trait measures can be used without serious restriction and the two different lines of research are comparable. The same holds true for Neuroticism and the Avoidance motive.

For the Achievement motive, there are some restrictions. Researchers interested in the specific aspects of Achievement motivation as characterized by Atkinson’s theory might therefore prefer to use the AMS (a short form of the AMS was recently published which also corrected for the intercorrelations of Hope of Success and Fear of Failure; Lang & Fries,
For researchers interested in a more general sense of achievement striving, however, the psychometrically more sophisticated personality trait measures might be preferable. The two bodies of research for Conscientiousness and the Achievement motives appear to be warranted by our data. Using the example of the introduction, we could assume that the same underlying psychological processes for Conscientiousness predict high academic performance in diverse settings, and that the explicit Achievement motive predicts high academic performance and entrepreneurial behavior.

A large proportion of the research on personality traits deals with correlations and factor analysis of different instruments, leaving out further aspects of validity. Research on personality traits could therefore benefit from the research on motivation, which has a stronger tradition of using real-life data and an experimental approach. As an example, Woike and colleagues (Woike, 1995; Woike et al., 2003) found strong effects of explicit motives on autobiographical memory and memories of daily events for the PRF measure of Achievement and Affiliation. Personality researchers might use the results as an indication that Conscientiousness and Extraversion have the same effects on autobiographical memory and on the memories of daily events. Similarly, the renewed interest in achievement-motivated behavior in experimental settings could provide new insights into the impact of personality traits in experimental settings (cf. Brunstein & Heckhausen, 2008).

For the Power motive, a direct comparison between personality research and research on motivation is not possible, as the mapping of the Power motive on personality is less straightforward. For motivational research, this means that the reliance on personality measures cannot be recommended and investment in good measures of the motive seems warranted. This investment should be informed by the results found here regarding personality trait measures. The personality trait measures should also be used as a reference system to locate the Power motive again. Personality trait measures could be informed by the
results found in this study that Extraversion is a composite of possible separate aspects not subsumed in one domain.

**Limitations**

The present study has integrated several instruments of explicit motive measures and their avoidance components, but only one personality trait measure was used. This personality measure - the NEO-PI-R - is a widely used and accepted personality trait measure which was used as an accepted reference to other measures. Nevertheless, the use of other personality measures might possibly have yielded different results. We touched on this issue above in terms of Extraversion and pointed out that different measures of the Five-Factor Model have some conceptual deviations (see Denissen & Penke, 2008). The present research further relied on the five-factor model (FFM) of personality, excluding competing models of personality traits (e.g. Ashton, Lee, & Goldberg, 2004; Eysenck, 1992; Zuckerman, 2002), which may capture the global aspects of personality equally well or even better. To extend our conclusions made on the grounds of the FFM, these other models should be considered.

A second limitation is that in the current study, only construct validity was considered and no external criteria were included. Consequently, external criteria should be included to investigate whether measures of personality traits and explicit motives predicting the same outcome. Future research should systematically tap into behavioral data when questioning participants or should conduct experiments testing the validity of personality trait measures and motive measures.

**Conclusions**

By using more than one measure of the three explicit motives of Achievement, Power, and Affiliation, it was possible to replicate previous results and successfully map explicit motives and personality traits, with some restrictions outlined above. Thus, the two areas of research are strongly related based on the high construct validity. Considering the facets of personality enabled a more detailed picture. By including the Avoidance components of the
explicit motives, it was possible to shed light on the terra incognita and to show Avoidance components as being highly related to Neuroticism.
Reference List


Table 1

Descriptive Statistics and Two-Tailed Correlations among Variables.

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Note. N = 587. The decimal points have been omitted for correlations.

For \(|r| > .08, p < .05\); \(|r| > .11, p < .01\).

Correlations within each motive domain are given in boldface.

PRF = Personality Research Form, PVQ = Personal Values Questionnaire, AMS-HS = Achievement Motive Scale - Hope of Success, MAFF = Mehrabian Affiliation Tendency Questionnaire, AMS-FF = Achievement Motive Scale - Fear of Failure, MSR = Mehrabian Sensitivity to Rejection Scale.
### Table 2

**Correlations of Motive Measures with NEO-PI-R Facets and Domain Scales.**

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Note. \( N = 587 \). Decimal points have been omitted. For \(|r| > .08, p < .05; |r| > .11, p < .01.\)

Correlations greater or equal to \(|.30|\) are given in boldface.

For abbreviations see Table 1.
Table 3

*Joint Factor Loadings for NEO-PI-R Domain Scales and Motive Measures*

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*Note. N = 587. Decimal points have been omitted and highest loadings are given in boldface.*

Varimax-rotated principal components; the five factors explain 77% of the variance.

For abbreviations see Table 1.