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The Motive for Support and the Identification of Responsive Partners

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Abstract

To obtain support from others, a person must first identify responsive partners. One strategy for doing so is to use indicators of responsive partners. We argue that a person with a strong motive for support should rate all indicators highly useful—the “Elevated Motives Effect.” Study 1 confirmed this hypothesis by correlating participants’ total ratings with existing measures of motive-strength. Study 2 applied the Elevated Motives Effect to demonstrate that motive-strength (in interaction with knowledge of indicators) predicts performance on a laboratory task in which participants evaluated a person: Superior knowledge led to superior performance only when motive-strength was high. Study 3, an experience-sampling study, showed that in everyday life, motivated people more often seek support from others when distressed.

Keywords

Trust; Dating; Responsiveness; Close Relationships; Communion; Interpersonal Theory; Signal Detection; Prototype; Social Support; Attachment

Human beings need each other. According to numerous writers, people have a strong motive for building close relationships with others (e.g., Baumeister & Leary, 1995; Bowlby, 1979; Holmes, 2000; Horowitz, Wilson, Turan, Zolotsev, Constantino, & Henderson, 2006). One major aspect of satisfying this “communal motive” is to seek other people’s support at times of stress (Bowlby, 1979; Holmes & Rempel, 1989; Reis, Clark, & Holmes, 2004).

However, there seem to be individual differences among people in the nature, frequency, and intensity of support-seeking behavior. One reason for these differences may be that people differ in the strength of a specific motive for support from others. This motive has not been studied much, partly because there are no measures that specifically concern the strength of a motive for support at times of stress. This article describes a new approach for assessing the strength of this motive. Another purpose of the article is to better understand how people go about satisfying the motive for other people’s support at times of stress.

In general, interpersonal motives may be classified in terms of two broad constructs—communion and agency. Communal motives concern people’s fundamental desire for

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interpersonal connections with other people (Locke, 2000), and include, among others, motives for intimacy, for group belonging, for sociability, as well as the motive for other people's support, which is the focus of this article.

According to a popular view (Emmons, 1989; Klinger, 1987; Little, 1983), a motive may be conceptualized in terms of a hierarchical structure: It subsumes a set of narrower constructs (e.g., "goals") that the person must satisfy in order to satisfy the higher-order motive. Therefore, we first need to deconstruct a motive into associated goals and strategies in order to understand how people satisfy the motive. For example, a motive for intimacy needs to be deconstructed into the narrower goals that it subsumes (e.g., sharing private feelings with a partner, recalling childhood memories together).

A procedure is therefore needed (both for theory and for research) that systematically identifies the goals and corresponding strategies that people commonly use to satisfy a motive such as the motive for social support. We recently described how the concept of a prototype can help us deconstruct a motive into the goals and strategies that are commonly associated with that motive (Horowitz & Turan, 2008; Turan & Horowitz, 2007). According to the theory, communal prototypes such as "ways to attain a sense of intimacy with a partner" or "ways to identify a responsive partner" each expose an ordered set of strategies that people might pursue to satisfy the higher-order communal motive (e.g., for intimacy or support).

In previous research (Turan & Horowitz, 2007), we have focused on one particular communal motive in greater detail, namely, a motive for support. One goal subsumed under this higher-order motive is identifying close relationship partners who can be trusted to "be there" when needed (i.e., to be responsive; Holmes & Rempel, 1989; Reis, Clark, & Holmes, 2004). We used prototype methodology to expose the knowledge structure describing the indicators people use to identify a potentially responsive partner. We then demonstrated that people who possess this knowledge are better able to achieve the goal of identifying responsive partners (thereby enabling them to better satisfy the higher-order communal motive). Individual differences in the knowledge of indicators, then, would constitute one factor that determines how well a person can identify a responsive partner.

In this article we shall argue that, in addition to knowledge, a second individual difference also affects how well a person is able to identify a responsive partner—namely, the strength of the higher-order motive itself (i.e., the strength of the motive for other people's support). To begin with, the revised interpersonal model proposes that people differ in the strength of any particular motive (Horowitz et al., 2006). People with a stronger motive for support are more apt to care about goals and strategies associated with that motive. Without sufficient motivation for support, a person would have little reason to care about identifying responsive partners—and therefore would not direct attention to, apply resources to, or devote energy to the task. Therefore, the strength of the higher-order motive is a second factor that should affect how well a person can identify potentially responsive partners.

The strength of a person's higher-order motive (e.g., for support) should affect the person's judgments about elements of the relevant knowledge (e.g., indicators of a responsive partner). A relatively strong motive for support implies that in the past the person has repeatedly sought to identify responsive partners (the goal) by using various indicators. Therefore, many indicators of the knowledge structure would seem familiar to the person, who would then judge all indicators to be more useful as a way of predicting a partner's potential responsiveness. We call this the Elevated Motives Effect. The effect of exposure and familiarity on related types of judgments has already been demonstrated in other literature (Quirin, Kazén, & Kuhl, 2009; Unkelbach, 2007) and will be reviewed more fully in the General Discussion.

One implication of the theory, then, is the following: People with a strong communal motive, on average, should judge all elements of a relevant (prototype-derived) knowledge structure to be more important than people with a less intense communal motive. That is, highly motivated people should rate all indicators of a potentially responsive partner to be more useful. Once this implication of the theory is established, it might even be used as a measure of the strength of the person's higher-order motive: The higher the ratings of the usefulness of the indicators (on average), the stronger the motive for support.

Hypotheses

The three studies reported below test implications of our theory concerning the deconstruction of a communal motive for support into goals and strategies. First, the strength of the motive for support should affect ratings of the quality of indicators of a responsive partner. Second, the strength of the motive (as assessed by those ratings) should affect (a) performance on laboratory tasks related to that motive as well as (b) naturalistic behavior (observed with an experience-sampling task). Our hypotheses are described next.

1. The Elevated Motives Effect

We hypothesize that people with a strong motive for support, on average, judge the “indicators of a partner's likely responsiveness” to be more useful than people with a weaker motive. Therefore, our first hypothesis is that the participants' summed ratings across all indicators will correlate significantly with an explicit measure of the strength of their motive for communion. This hypothesis is tested in Study 1.

2. Knowledge by motivation interaction

We then test a hypothesis concerning people's ability to identify a responsive partner on a standardized laboratory task. We hypothesize that two factors interact to determine people's performance on this laboratory task—(a) the strength of the person's communal motive for support and (b) the person's knowledge of relevant indicators. An extensive literature has already demonstrated the importance of a statistical interaction between motivation and knowledge in determining academic performance (Gagné & Fleishman, 1959; Hirschfeld, Lawson, & Mossholder, 2004; Vroom, 1964). However, such an interaction has never been demonstrated for social performance. Our hypothesis is that superior knowledge leads to superior performance in identifying responsive partners only when the person's motivation is sufficiently high. We test this hypothesis using two different measures of motivation—(a) a self-report measure as well as (b) a (nontransparent) measure based upon the Elevated Motives Effect. This hypothesis is tested in Study 2.

3. Elevated Motives Effect and Motivated Behavior in Everyday Life

Like other motives, a strong motive for support should energize and direct relevant behavior (Baumeister & Leary, 1995; Brunstein, Schultheiss, & Grässmann, 1998; McClelland, 1987). Therefore, if the sum of the ratings of indicators of responsiveness reflects the strength of a person's higher-order motive for support—and if that motive in turn energizes behavior for obtaining support—then people with high overall ratings should, in everyday life (e.g., in the course of a week), more often seek contact with others at times of emotional distress. This hypothesis is tested in an experience-sampling study (Study 3).

Study 1

The Elevated Motives Effect: Judgments of the Indicators and the Strength of the Communal Motive

As noted above, one goal in satisfying a communal motive for support is to identify potentially responsive partners, and one strategy for doing so is to make use of indicators of responsive partners. These indicators have been identified using prototype methodology. We previously used the indicators to construct a new measure (Turan & Horowitz, 2007), which we call the KNOWI (Knowledge of Indicators) Task. The KNOWI Task contains a mixture of highly informative (prototypic) and less informative indicators, and participants are asked to judge (rate) the informativeness of each. Participants are said to be more knowledgeable if they are better able to discriminate between good and not-so-good indicators. Our earlier studies showed that participants with high scores perform better than low-scoring participants on relevant laboratory tasks. Thus, a knowledgeable person would seem to be better able than others to identify partners who can be trusted to be responsive.

The KNOWI Task as a Signal Detection Task—Signal detection theory (McNicol, 1972) was designed to clarify a person's ability to discriminate a "signal" from background "noise" (e.g., the presence vs. absence of a tone). By analogy, high-quality indicators of the KNOWI Task might be regarded as "signal" and low-quality indicators as "noise". According to signal detection theory, four outcomes are possible: The stimulus may be: (a) correctly judged to be present (hit); (b) incorrectly judged to be present (false alarm); (c) correctly judged to be absent (correct rejection), and (d) incorrectly judged to be absent (miss).

Signal detection theory proposes that two factors influence people's judgments in these situations: (a) accuracy and (b) criterion bias. Accuracy (or sensitivity) refers to the person's ability to make distinctions between signal and background. It may be assessed simply by the number of hits minus the number of false alarms. In the same way, the KNOWI Task assesses a person's knowledge of indicators by computing the person's mean rating of high-quality indicators ("hits") minus the person's mean rating of low-quality indicators ("false alarms"). We call this index the KNOWI-accuracy.

The other index of signal detection theory, namely, the criterion bias, is a motivational variable and reflects the person's readiness (across all stimuli) to judge a signal to be present. A person's readiness on the KNOWI Task to rate all indicators relatively high in quality is analogous to a criterion bias: We assume, by the Elevated Motives Effect, that some people—those who are more highly motivated, hence more familiar with indicators of a responsive partner—have a readiness to judge all indicators ("signals") relatively higher in quality. Just as the criterion bias of signal detection theory may be assessed by the number of hits plus the number of false alarms, the sum of all ratings on the KNOWI Task (high-quality plus low-quality indicators) would provide a simple index of response readiness. To avoid the negative connotation of the term "criterion bias", we shall use the term KNOWI-readiness for the KNOWI Task.

In Study 1 we test the Elevated Motives Effect by demonstrating that the KNOWI-readiness index is related to the strength of a person's communal motive. Locke's (2000) Circumplex Scales of Interpersonal Values (CSIV) assesses the degree of importance respondents attach to each of eight categories of interpersonal goals. The eight scales form a circumplex (see Figure 1), organized around the two (orthogonal) dimensions of interpersonal motivation that are at the top of the hierarchy of interpersonal motives—communion (connecting with others) and agency (influencing others). Scales that are high in communion reflect the strength of the respondent's desire to connect with other people in a relationship. The scale that reflects the greatest degree of communion is the Communion Scale (+C). Because the motive for support

is subsumed under the broad motive for communion, we hypothesized that the KNOWI-readiness would be significantly correlated with the +C Scale of the CSIV.

One advantage of Locke's (2000) measure is that the eight scales of the CSIV reflect eight different regions of the two-dimensional interpersonal space formed by communion and agency. Theoretically, these eight scales should show a predictable pattern of correlations—a "cosine curve pattern" (described below)—with any other interpersonal measure (Gurtman, 1993). We could therefore test whether the KNOWI-readiness index, as a measure of the communal motive for support, shows this expected cosine curve pattern.

Would Locke's (2000) measure of communal motivation correlate with the readiness index from any rating task, even one based on an agentic motive? We think not, and wanted to demonstrate that KNOWI-readiness is specific to a communal motive. Therefore, we needed to compare scores on the KNOWI-readiness with an analogous readiness index based on ratings from a task related to an agentic motive (e.g., self-enhancement). Paulhus has provided just such a task, the Overclaiming Questionnaire (OCQ; Paulhus & Harms, 2004; Paulhus, Harms, Bruce, & Lysy, 2003). The OCQ provides a list of words (e.g., scientific terms) containing real concepts as well as fake concepts (foils): Participants are asked to rate their familiarity with each term. From the participants' ratings of their familiarity with each term, two indices are computed; we call them "OCQ-accuracy" and "OCQ-readiness". The results showed that the OCQ-accuracy index, which assesses participants' ability to discriminate real words from foils (a measure of participants' knowledge of vocabulary terms), predicts the participants' scores on a separate intelligence test. In addition, the OCQ-readiness index was related to several measures of the self-enhancement motive. Apparently, people who are highly motivated to appear intelligent (e.g., narcissistic people) claim familiarity with many stimulus terms and therefore obtain a high OCQ-readiness.

Therefore, in Study 1 we assessed two types of "criterion biases"—the KNOWI-readiness (ratings based on a communal motive) and the OCQ-readiness (ratings based on a self-enhancement motive). Hypothesis 1 is that the KNOWI-readiness is associated with measures of the communal motive, but not with measures of the motive for self-enhancement. We therefore expected the KNOWI-readiness—but not the OCQ-readiness—to correlate significantly with the Communion Scale of Locke's (2000) CSIV. Hypothesis 2 is that the OCQ-readiness is associated with the agentic self-enhancement motive but not with the communal motive. We therefore expected the OCQ-readiness—but not the KNOWI-readiness—to correlate significantly with measures of self-enhancement. Finally, Hypothesis 3 is that the two types of criterion bias are themselves uncorrelated.

Method

Participants and Procedures—The participants were 293 students (166 women and 127 men) in Introductory Psychology classes at Stanford University. Their mean age was 20.7 ($SD = 1.76$). The sample included 136 Caucasian participants, 49 Asian American, 46 Hispanic, 35 African American, and 27 others. They completed the measures used in this study as part of packets that included many other measures. Thus, the number of participants completing each measure varied: There were 293 participants who completed the Knowledge of Indicators Task (KNOWI, Turan & Horowitz, 2007); 95 participants completed the Overclaiming Questionnaire (OCQ, Paulhus et al., 2003); 85 participants completed the Narcissistic Personality Inventory (NPI, Raskin & Terry, 1988); and 284 participants completed the Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000).

Measures

The Knowledge of Indicators (KNOWI) Task (Turan & Horowitz, 2007): As described above, the KNOWI consists of a mixture of good and poor indicators of a partner's responsiveness. The task contains 11 good indicators, 11 poor indicators, and 19 filler items. An example of a good indicator is "notices changes in my mood and asks if anything is wrong". An example of a poor indicator is "does not ignore others on the street". Participants are asked to rate the degree to which each indicator increases their confidence that a potential partner "will be there for me at times of stress." Each participant's ratings are averaged separately for the good (G) and poorer (P) indicators. We define a participant's accuracy as the difference between that participant's two means and denote it ($G - P$). For more details on the scoring, see Turan and Horowitz (2007).

The KNOWI-readiness index reflects a greater readiness overall to judge indicators to be of high quality. On the KNOWI Task, which requires continuous ratings, the KNOWI-readiness index may be assessed by the sum ($G + P$) of the ratings for all indicators (analogous to the number of hits plus the number of false alarms). In the present study Cronbach's α for the sum was .89. Our earlier article showed that the test-retest reliability of the KNOWI-readiness is satisfactory; $r = .69$ (Turan and Horowitz, 2007). Paulhus and Harms (2004; also see Paulhus et al., 2003) recommend that investigators statistically control each index (accuracy and response readiness) for the effect of the other. In our analyses we have followed this recommendation.¹

The Over-claiming Questionnaire (OCQ, Paulhus et al., 2003): Participants rate their familiarity with 150 words from 10 different categories (historical names and events, fine arts, language, books and poems, authors and characters, social science and law, physical sciences, life sciences, culture names, and philosophy). Each category includes 12 real words and three non-words (foils). Paulhus et al. showed that OCQ-accuracy is correlated with participants' intelligence, and the OCQ-readiness is correlated with a variety of measures of the self-enhancement motive (e.g., narcissism).

The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988): The NPI, which was also used by Paulhus, Harms, Bruce, and Lysy (2003), is frequently used to assess individual differences in narcissism in non-clinical populations. It consists of 40 self-report items. Sample items are: "I like to be the center of attention" and "Modesty doesn't become me". In the present study, the NPI had good internal consistency; $\alpha = .94$.

Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000): As described above, the CSIV contains 64 items describing different interpersonal goals—e.g., "that I feel connected to others". Respondents rate each goal on a 5-point scale to indicate its importance to them. The items are organized into eight scales that form a circumplex within an interpersonal space composed of two dimensions: communion and agency (see Figure 1). Each scale represents a different combination of the two underlying dimensions.

¹In our theory (as in signal detection theory), a high (or low) response readiness does not imply a good (or poor) ability to discriminate accurately between good and poor indicators. That is, accuracy (sensitivity) is logically distinct from response readiness. Consider two people, A and B, who differ in the strength of their motives: On an 8-point scale, suppose A uses low ratings (e.g., 1 through 4), and B uses high ratings (e.g., 5 through 8). Either may be able to discriminate well or poorly. If they discriminate well, the low-motive person might use ratings of 1 and 2 (for poor indicators) vs. 3 and 4 (for good indicators); and the high-motive person might use ratings of 5 and 6 (for poor indicators) vs. 7 and 8 (for good indicators). If they cannot discriminate well, the low-motive person would simply rate all indicators—both good and poor—1 through 4; and the high-motive person, 5 through 8. However, when these two constructs are assessed using a difference and a sum, a statistical complication may arise: It can be shown that the Pearson correlation between a sum and a difference of two scores, ($G + P$) and ($G - P$), depends algebraically upon the relative variances of G and P. If the variance of P exceeds that of G, the correlation is necessarily negative. In the present data, this was the case, and, in the various samples reported below, the correlation between the two indices (the sum- and difference-scores) ranged from $-.16$ to $-.35$.

Results and Discussion

As noted above, all statistical associations between scores on the readiness index and other variables were computed as partial correlations controlling for scores on the corresponding accuracy index. First, we correlated the OCQ-readiness with narcissism; $r(N = 72) = .37, p < .05$. This result replicates Paulhus, Harms, Bruce, and Lysy's (2003) finding. As we expected, however, the KNOWI-readiness was not correlated significantly with either the OCQ-readiness or with narcissism: For OCQ-readiness, $r(N = 65) = -.11, p > .40$; for narcissism, $r(N = 51) = .05, p > .70$. Thus, the KNOWI-readiness, in contrast to the OCQ-readiness, seems to be unrelated to self-enhancement.

We then correlated the KNOWI-readiness with the strength of various interpersonal motives assessed by the CSIV (partialling out KNOWI-accuracy). The Communion (+C) Scale of the CSIV is the purest measure of communal motivation (see Figure 1). The partial correlation between the KNOWI-readiness scores and the +C Scale was $r(N = 231) = .38, p < .001$. All other scales of the CSIV had lower correlations with the KNOWI-readiness.

Figure 1 shows the eight scales of the CSIV located in the two-dimensional space to form a circumplex. Each scale may be expressed in terms of its angular distance θ from the +C Scale. Theoretically, the greater the angular distance from the +C Scale, the less the scale has in common with the +C Scale (Locke, 2000). For example, the -C Scale is the most distant scale since it is diametrically opposite the +C Scale ($\theta = 180$ degrees). The interpersonal theory has implications for the degree of correlation that each scale should show with an external variable (Gurtman, 1993). An external variable that one expects to correlate most highly with the +C Scale ought to show its lowest correlation with the -C Scale. Therefore, we expected the KNOWI-readiness to have its highest correlation with the +C Scale and its lowest correlation with the -C Scale. Other scales of the CSIV should show intermediate correlations with KNOWI-readiness: The greater their distance from the +C Scale, the lower the correlation should be.

The data supported this hypothesis. Figure 2 shows the correlations between the KNOWI-readiness and each of the eight scales of the CSIV (partialling out KNOWI-accuracy).² The figure approximates a theoretical "cosine curve" that typically characterizes relationships among interpersonal variables (see Gurtman, 1993). As hypothesized, the strongest correlate of KNOWI-readiness was the +C Scale, and the magnitude of the correlation between KNOWI-readiness and the other CSIV scales depended upon their distance (angular separation θ) from the +C Scale, resulting in a cosine-curve pattern.

In brief, these results indicate that the KNOWI-readiness index is an interpersonal variable that may be understood in terms of communal motivation. The results thus locate the KNOWI-readiness within a "nomological network" of variables (Cronbach & Meehl, 1955) formed by the eight scales of the CSIV—thereby establishing the construct validity of the KNOWI-readiness (Gurtman, 1993).

In contrast, the correlation between OCQ-readiness and the +C Scale (partialling out OCQ-accuracy) was not significant; $r(N = 62) = -.18, p > .15$. Thus, people with a strong communal motive produce generally higher importance ratings on all indicators of the KNOWI; but the strength of their communal motive does not predict their responses to the OCQ.³

²One could also compute these correlation coefficients (between the KNOWI-bias and each of the eight scales of the CSIV) while controlling for participants' mean score across all eight subscales of the CSIV. Such an analysis leads to the same conclusions: The shape of the cosine-like curve remains very similar.

The results of Study 1 support the Elevated Motives Effect: People with a strong communal motive generate relatively higher ratings, on average, for all indicators (high- as well as low-quality indicators) of a responsive partner. In addition, this study provides evidence for the convergent (and discriminant) validity of the KNOWI-readiness as a stable measure of one specific type of communal motivation. Together with earlier evidence regarding the validity of the accuracy index (Turan and Horowitz, 2007), the present results also suggest that the two indices of the KNOWI Task (accuracy and readiness, respectively) concern a person's knowledge and the strength of that person's communal motive. Therefore, the KNOWI Task has a valuable property: It allows a researcher to assess simultaneously two important factors related to social support, namely, knowledge and motivation.

Study 2

Identifying a Potentially Responsive Partner: How Motivation Moderates the Effect of Knowledge

If people are to satisfy the motive for support, they must first identify responsive partners. To do so, they must (a) possess relevant knowledge and (b) care about (i.e., value, want to receive) support. The claim that motivation and cognitive ability jointly influence performance has been well documented in the area of academic achievement, i.e., a statistical interaction showing that cognitive ability results in academic achievement to the extent that people are motivated (Hirschfeld et al., 2004). By analogy, we hypothesized that motive strength and knowledge show a similar interactive effect in shaping social performance when identifying a responsive partner.

The theoretical reason for this statistical interaction is clear: A property of all motives is to mobilize existing resources to achieve corresponding goals. When performance is required, people with a strong motive mobilize and apply their available knowledge (an important resource). Therefore, knowledge without motivation—and motivation without knowledge—would seem to be insufficient for enhancing any performance. Historically, this view dates back to studies of latent learning in animals (Tolman, 1948), which emphasized the joint effect of motivation and learned cognitions on performance. More recently, Lopes, Brackett, Nezlek, Schutz, Sellin, and Salovey (2004) have speculated that a similar interaction may exist between social knowledge and motivation in predicting social performance. Therefore, we hypothesize that people with a strong motive for support are more likely than others to mobilize and apply their existing knowledge when they evaluate a potential partner's responsiveness: Superior knowledge should lead to superior performance in identifying responsive partners only when the person's motivation is sufficiently high.

Study 2 first examined this interaction using Locke's (2000) measure to assess the strength of the communal motive. Then we examined an implication of our theory about the Elevated Motives Effect—namely, that the same interaction should manifest itself when the KNOWI-readiness is used to assess motivation.

Previously we reported a laboratory study that showed the value of knowledge (KNOWI-accuracy) in predicting social performance (Turan & Horowitz, 2007). In that study, each participant interacted with a confederate, who, in the course of the interaction, “happened to mention” several subtle details suggesting that her roommate's boyfriend had violated indicators of responsiveness. Below we present additional data on the motivation of the

³The CSIV does not contain any one scale that assesses the specific form of motivation associated with narcissistic self-enhancement. The strongest correlate of the OCQ-readiness was Scale +A-C (agentic and disconnected), and the weakest correlate was the diametrically opposite Scale -A+C (submissive and communal). These correlations again approximated a cosine curve, with the highest point, in this case, at the “agentic and disconnected.”

participants in that sample. These data on motivation allowed us to examine the joint effect of communal motivation and knowledge on the participants' evaluation of the boyfriend. For this purpose, strength of communal motivation was assessed in two ways—(a) with Locke's Communion Scale of the CSIV and (b) with the KNOWI-readiness index.

Method

Each participant interacted with a confederate, who described a personal problem involving her female roommate. In order to standardize the conditions across participants, the participants and confederates were all women. The participants were instructed to listen and react naturally to the confederate's problem. The problem description included subtle incidental details that could be taken to indicate that the roommate's boyfriend was not responsive. The study assessed the participants' sensitivity to these incidentally mentioned details.

Participants—The participants were 49 female undergraduate students enrolled in the Introductory Psychology course at Stanford University (20 Caucasian, 13 Asian American, 6 Hispanic, 5 African American, and 5 others). Their mean age was 20.6 ($SD = 1.54$). Data from this sample have previously been analyzed by Turan and Horowitz (2007).

Confederates—The confederates were two senior undergraduate women. They memorized a prepared script and then practiced their role with approximately 20 pilot participants.

Procedure—The participant, upon arriving at the laboratory, was introduced to her partner (the confederate). The experimenter then explained that the two of them would have a conversation together in which one, selected at random, would describe a personal problem to the other. The confederate was always "selected" to be the person describing the problem. She was told to think of a problem that had arisen recently in her life. The participant was asked to listen and react naturally to her partner as though she were interacting with a close friend.

The problem that the confederate described concerned a recent difficulty with her roommate. The roommate had become distant and upset for reasons that the confederate did not understand. The confederate then proceeded to describe recent events in her roommate's life. In the course of describing the roommate's situation, she also mentioned that her roommate was in a new relationship with a boyfriend. The boyfriend was described in generally positive terms (e.g., "he is fun to be with"), but three brief vignettes that the confederate happened to mention all reflected violations of highly prototypic indicators from items of the KNOWI Task; that is, they revealed cues that the boyfriend was not reliably responsive to his girlfriend. (For more procedural details, see Turan and Horowitz, 2007).

The confederate and experimenter were both blind to the participants' scores on the KNOWI Scale. The confederate answered questions as briefly as possible and maintained a uniformly neutral acceptance of the participant's reactions. The partners were allowed to continue their discussion for a maximum of 13 minutes.

Semi-structured Interview—After the interaction, the experimenter led the participant and confederate to separate rooms, where they each completed a questionnaire about their experience. Then the experimenter interviewed the participant about her interaction with the confederate. The experimenter asked successive questions that led the participant quite naturally to describe the partner's problem, the roommate's relationship, and the boyfriend's characteristics. To begin with, the experimenter asked the participant to describe the problem that her partner (the confederate) had described. This first question gave the participant a chance to tell the interviewer about the confederate's problem. (After the participant had mentioned the roommate's boyfriend, the interviewer could legitimately ask about the boyfriend.) The

next two questions served to disguise the main purpose of the interview (i.e., to inquire about the boyfriend's responsiveness). The questions were: "What did the confederate want from the interaction" and "Was the participant able to help?" Then the interviewer asked what the participant thought of the roommate's relationship with her boyfriend and what kind of a boyfriend he seemed to be. The next question asked what the participant would do if she were in the roommate's shoes. Finally, to test the limits of the participant's understanding, the interviewer asked direct questions about the boyfriend's responsiveness: "Could the roommate go to the boyfriend about her problems?" and "Would he be there for her?" The entire interview was audio-taped.

Coding of interview: Three coders (the first author and two research assistants), all blind to the participants' scores on the KNOWI Task, listened to each tape recording and independently coded each interview using the following procedure. First, each of the three vignettes was rated separately on a 7-point scale. In order to obtain a high score, the participant had to remember details of the vignette and cite them as a possible indicator of the boyfriend's non-responsiveness. A low rating was assigned whenever a vignette was recalled without making any connection to the boyfriend's responsiveness (e.g., citing a vignette to illustrate the boyfriend's positive qualities). Finally, the coders made one additional rating of the participant's overall understanding using (a) the separate scores for the three vignettes as well as (b) other comments that the participant had volunteered. This final rating was used in the analyses reported below. The lowest possible rating indicated that a vignette was never cited as evidence of non-responsiveness—that is, either the vignettes were not mentioned, or a vignette was recalled as evidence of a desirable quality or without any support-relevant implication. The highest possible rating indicated that the participant remembered all three vignettes, recognized their significance, and drew a clear inference. These ratings thus reflect the participant's overall sensitivity to cues related to responsiveness. The three raters' ratings were then averaged to yield a measure of each participant's performance on the task. The inter-rater reliability was high; intraclass correlation = .93.

Measures

The Knowledge of Indicators (KNOWI) Task (Turan & Horowitz, 2007): Every participant had completed the KNOWI Task (for details, see Study 1) as part of a questionnaire packet administered earlier in the term.

Circumplex Scales of Interpersonal Values (CSIV; Locke, 2000): For details about this measure, see Study 1. In Study 2 we used the Communion Scale (+C) of the CSIV as a direct measure of communal motivation.

Results and Discussion

The means, standard deviations, and intercorrelations of the study variables are presented in Table 1. We hypothesized that the strength of a person's communal motive affects the relationship between the person's knowledge about the indicators and the person's performance on the interview. A regression analysis was performed, predicting interview scores from three sources—knowledge (KNOWI-accuracy), communal motivation (scores on the Communion Scale of the CSIV), and their interaction. Following the procedure recommended by Aiken and West (1991) both predictor variables were centered. This analysis yielded two significant sources of variance—(a) the main effect of knowledge ($\beta = .34, t = 2.47, p < .05$) and (b) the interaction between knowledge and motivation ($\beta = .31, t = 2.26, p < .05$). The multiple R was .53; $p = .01$.

The significant interaction is shown graphically in Figure 3. Following the recommendation of Aiken & West (1991), we examined the effect when the participants' motivation was low

—that is, when the Communion Scale score of the CSIV was 1 *SD* below the mean: In that case, knowledge was unimportant in predicting the participants' performance ($\beta = -.01, t = -.04, p > .90$). We then examined the effect when the participants' motivation was high—that is, when the Communion Scale score was 1 *SD* above the mean: In that case, knowledge was significant in predicting performance ($\beta = .70, t = 3.86, p < .001$). In other words, the results revealed an “aptitude by trait” interaction, where the “trait” was a motivational variable. Knowledgeable participants performed better only if they valued connection in relationships.

This analysis demonstrated the effect of motivation on the knowledge-performance relationship using the Communion Scale of the CSIV as a measure of motivation. Once this effect had been established, we repeated the analysis using the KNOWI-readiness as a measure of motivation. The results of this second regression analysis are shown graphically in Figure 4; they were very similar to those of the first regression analysis. The interaction between the KNOWI-accuracy scores and the KNOWI-readiness scores in affecting performance was significant ($\beta = .34, t = 2.45, p < .05$). The multiple *R* was .53; $p < .01$. When the participants' motivation was low (KNOWI-readiness score 1 *SD* below the mean), KNOWI-accuracy was unimportant in predicting the participant's performance ($\beta = .10, t = .50, p > .60$). However, when the participants' motivation was high (KNOWI-readiness score of 1 *SD* above the mean), KNOWI-accuracy was significant in predicting performance ($\beta = .89, t = 3.99, p < .001$).

Finally, we entered both interactions—(a) the interaction of the Communion Scale of the CSIV with KNOWI-accuracy and (b) the interaction of KNOWI-readiness with KNOWI-accuracy—simultaneously into the regression equation predicting performance in the interview. The main effects of (a) the Communion Scale of the CSIV, (b) KNOWI-accuracy, and (c) KNOWI-readiness were also entered as predictors. This analysis yielded a significant effect for the interaction between KNOWI-readiness and KNOWI-accuracy ($B = .21, t = 2.05, p < .05$). However, the interaction between the Communion Scale of the CSIV and KNOWI-accuracy was no longer significant ($B = .59, t = 1.61, p > .11$). This result suggests that KNOWI-readiness has predictive value beyond that of the CSIV, which is a more transparent measure and less specific with respect to the motive for others' support.

Like other important motives, the motive for support seems to mobilize existing resources to satisfy relevant goals. Why does motivation matter so much? Why do knowledgeable people with strong communal values (interests, wants) perform better on the laboratory task than knowledgeable people without such values? One of the consequences of motivation is that people attend selectively to motive-relevant stimuli and have better memory for those stimuli (e.g., McClelland, 1995; Schultheiss & Hale, 2007). We assume that people with strong communal motives are more interested in interpersonal cues and processes, such as those in the laboratory task. Their greater interest would seem to affect their attention to, perception of, and memory for details of their interaction with the confederate.

Figure 3 and Figure 4 also suggest a cross-over interaction. Does this crossover interaction imply a disproportionately poorer performance by participants who are highly motivated but lacking in knowledge? We cannot tell. In our sample there were only two participants who were at once more than one *SD* below the mean on knowledge and more than one *SD* above the mean on motivation. Therefore, our data do not permit any inference about the performance of people who are very highly motivated but possess a deficit in knowledge.

To summarize, the findings of Study 2 suggest that knowledge and motivation have an interactive effect on social performance. Knowledge seems to provide the skill or ability to succeed. However, without a strong motive to apply it, knowledge itself does not lead to optimal performance. Furthermore, the KNOWI-readiness is at least as good a measure of motivation as the Communion Scale of the CSIV for demonstrating this interaction.

Study 3

The Motive for Support, the Elevated Motives Effect, and Behavior in Daily Life: An Experience Sampling Study

According to our formulation, a person must first identify responsive partners if the person is to satisfy the motive for support. Then the person can form a close relationship with promising individuals, and, when distressed, the person can approach those individuals for support. Study 3 concerns this final step of satisfying the motive for support when distressed.

If the sum of the ratings on the KNOWI (KNOWI-readiness) reflects the strength of a person's motive for support (the Elevated Motives Effect)—and if that motive in turn energizes support-seeking behavior—then a person with high overall ratings should, in everyday life, more often seek contact with others when the person feels distressed (Collins & Feeney, 2000; Murray, Holmes, & Collins, 2006). That is, like other motives, a strong motive for support should energize and direct relevant behavior (Baumeister & Leary, 1995; Brunstein, Schultheiss, & Grässmann, 1998; McClelland, 1987).

In Study 3 this hypothesis was tested using a signal-contingent experience sampling methodology. Participants received pagers, and they were randomly paged five times a day during a 7-day period. They recorded their emotions, thoughts, and interpersonal behaviors each time they were paged. In this way, we obtained data close in time to the participants' emotions, thoughts, and behaviors, thereby avoiding methodological problems associated with retrospective reports. Experience sampling data on participants' emotions enabled us to identify those occasions on which each participant was distressed. In addition, on each sampling occasion participants were asked whether or not they had talked to someone since the last occasion about how they were feeling. Their responses allowed us to determine whether they had sought support during the interval between occasions. We tested the hypothesis that people high on KNOWI-readiness are relatively more likely to have talked to others about their distress during the interval between the occasion on which distress was reported and the following occasion.

Method

Participants—The sample consisted of 153 participants (83 women and 70 men), who completed the KNOWI as part of a larger ongoing experience-sampling study of emotional experience (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). They ranged in age from 18 to 94 years ($M = 55.1$, $SD = 20.4$). Forty-eight participants were African-American, and 105 were European American.

Materials

Experience sampling questions: Participants reported how intensely they were experiencing each of 19 different emotions every time they were paged (using a 7-point scale). The 19 emotions included 8 positive emotions (happiness, joy, contentment, excitement, pride, accomplishment, interest, and amusement) and 11 negative emotions (anger, sadness, fear, disgust, guilt, anxiety, irritation, frustration, boredom, shame, and embarrassment). For the present study, participants were also asked about their support-seeking behavior: "Since the last time you were beeped, did you talk to somebody about how you were feeling?" In this way, we could test the hypothesis that participants with higher motivation are more likely to seek support, when they are distressed.

Procedure—In the laboratory, participants were told that the purpose of the study was to examine emotions in everyday life. Then the procedures for the experience-sampling phase were explained, and participants were asked to respond to the questions each time they were

paged during the following week. In the weeklong experience-sampling phase, participants were paged five times each day between 9 a.m. and 9 p.m. The paging times were selected randomly, except that no participant was paged twice in a single 20-min period. After the participants completed the experience-sampling phase, they returned to the laboratory and completed the KNOWI Task and other measures as part of the larger study.

Results and Discussion

Theoretically, the motive for support should manifest itself when a person is distressed and therefore in need of support (Collins & Feeney, 2000; Murray, Holmes, & Collins, 2006; Mikulincer, Gillath, & Shaver, 2002; Sroufe & Waters, 1977). Therefore, we wanted to demonstrate that people with high scores on KNOWI-readiness are more apt to seek support at those times when they are distressed. To do this, we used multilevel random coefficient models using the Hierarchical Linear and Nonlinear Modeling (HLM) program (Version 6.04; Raudenbush, Bryk, & Congdon, 2007).

Our data consisted of two levels: At Level 1 (the within person level) we examined, for each participant, the relationship between being distressed and talking to someone about feelings across the 35 sampling occasions. Theoretically, distress should lead to seeking others. We therefore examined the relationship between the variables in that temporal order: Does distress reported at time t lead a person to talk to others during the interval between time t and time $t + 1$? In this analysis we also controlled for a report at time t of having talked to others about feelings (in order to address the possibility that the lagged effect of distress at time t on reporting at time $t + 1$ having talked to others may be confounded by reported talking to others at $t + 1$).

By averaging a participant's ratings on all negative emotions on a given occasion, we estimated that participant's distress level on that occasion. On average, participants did not report strong negative emotions: On a scale from 1 to 7, the mean of negative emotions across participants was 1.75 ($SD = .95$)⁴. In fact, as in other experience sampling data on daily affect (e.g., Carstensen et al., 2000), in about 29% of the sampling occasions participants reported feeling none of the negative emotions (i.e., a mean of 1.0 across all negative emotions). This tendency resulted in extremely skewed within-person distributions, with average negative affect scores very close to 1.0 on most occasions. This type of distribution would make it difficult to establish meaningful linear relationships with other variables.

In our analyses, we addressed this problem of skewness in three different ways: (a) We applied a multiplicative inverse transformation (power transformation of -1) to reduce the positive skew of the distress scores. In addition, (b) we examined two methods of dichotomizing the data to show whether or not participants had experienced negative affect. In one method of dichotomizing, (b1) we determined whether participants were, on each sampling occasion, above or below their own personal mean level of negative affect. The rationale for this method is the following: Participants who report chronic mild distress on most occasions would not be expected to discuss their mild distress with another person on every such occasion. On the other hand, participants who almost never report distress at all are probably reporting a noteworthy event when they do report even a mild degree of distress. In the other method of dichotomizing, (b2) we determined whether each participant's mean rating of negative distress on that sampling occasion was 1.0 (literally zero distress) or whether any negative distress (greater than 1.0) was reported at all (see Carstensen et al., 2000 and Schimmack & Diener, 1997 for other examples of decomposition of affect data in this way).

⁴This was the case even though we excluded the two emotions that occurred extremely rarely (embarrassment and shame) to reduce the skewness and because people are not likely to talk to others about embarrassing or shameful experiences (Cohen & McKay, 1984; Thoits, 1986).

For all three methods, the dependent variable in the Level 1 equation—reporting at time $t+1$ having talked to someone about feelings since time t —is a dichotomous variable. Therefore, we estimated the effects of distress (and, as a control variable, of reporting at time t having talked to someone) using a Bernoulli distribution.

Using method (a), we then wanted to determine whether people with high scores on KNOWI-readiness were more likely to talk to someone about their feelings when distressed. In other words, is KNOWI-readiness (i.e., a between-person, or Level 2 variable) a significant predictor of the relationship between distress at time t and a report at time $t+1$ of having talked to someone about own feelings? The continuous distress variable (after transformation) was centered around each participant's mean (group centering). Talking at $t1$ was used un-centered. (Alternative methods of centering led to similar results and to the same conclusions regarding our hypothesis about the effect of KNOWI-readiness at Level 2.) We examined whether the relationship between these Level 1 variables (i.e., slope) is moderated by the Level 2 variable KNOWI-readiness. KNOWI-accuracy was also entered into the model; both KNOWI-readiness and KNOWI-accuracy were centered around their grand mean. We found significant effects for KNOWI-readiness (coefficient = .14, $SE = .07$, $t = 2.14$, $p < .05$) and for KNOWI-accuracy (coefficient = .23, $SE = .11$, $t = 2.19$, $p < .05$)⁵. That is, participants high on KNOWI-readiness showed a stronger positive relationship between being distressed and subsequently talking to someone.

When we used the two methods of dichotomizing distress in the Level 1 equations, similar results concerning the effect of KNOWI-readiness at Level 2 were obtained. (We used both dichotomized distress and a report at time t of having talked to someone un-centered; centering around group means led to similar results.) When distress, dichotomized as 1.0 or above 1.0, was used to operationalize distress at Level 1, the effect of KNOWI-readiness on the Level 1 slope was significant (coefficient = .06, $SE = .02$, $t = 2.51$, $p < .05$). The effect of KNOWI-accuracy was also significant (coefficient = .11, $SE = .04$, $t = 2.38$, $p < .05$). Similarly, when distress, dichotomized as above or below each participant's mean, was used in Level 1 analyses, the effect of KNOWI-readiness on the slope was significant (coefficient = .07, $SE = .03$, $t = 2.43$, $p < .05$); however, the effect of KNOWI-accuracy was not significant (coefficient = .02, $SE = .04$, $t = .46$, ns).

Thus, all three ways of operationalizing distress revealed that participants with higher scores on KNOWI-readiness showed a stronger relationship between being distressed and subsequently seeking others. Note that in these analyses, KNOWI-readiness predicted, not how much participants talked to others, on average, but rather the degree to which participants increased their efforts to talk to others when they became more distressed (slope). Thus, the KNOWI-readiness does identify participants who are motivated to talk to another person when they are distressed. However, these results concern the effects of the participants' motivation, not the reason for strong motivation in the first place: Some highly motivated participants may seek others for support because they have learned from experience that the contribution of supportive others can be—and often is—helpful (a strength). Other highly motivated participants, however, may seek others because they lack self-confidence to such a degree that they need excessive help and reassurance from other people (a vulnerability). This point will be examined more closely in the General Discussion.

⁵Apparently, people who possess knowledge about the indicators are more likely to show support-seeking behavior. Note that this study concerned “seeking support versus not,” rather than “performing well or poorly on a task” (the focus of Study 2). Therefore this result raises the question as to why knowledge contributes to the likelihood that the person approaches others for support. It is possible that knowledge is not necessary for simply approaching others, but rather is related to a general social skill that does facilitate approach behavior. This issue needs to be examined in future research.

In brief, these results provide additional evidence that the KNOWI-readiness assesses the strength of the motive to connect with supportive others. Thus, the KNOWI-readiness predicts, not only performance in the laboratory, but also support-seeking behavior in everyday life.

General Discussion

We have assumed throughout this article that motivational constructs are organized hierarchically. At the most abstract level, interpersonal motives may be classified as communal or agentic. The motive for support is a fairly abstract communal motive. It subsumes narrower motivational constructs (e.g., a motive to form a relationship with responsive partners), and that motive subsumes still narrower goals (e.g., a goal to identify potentially responsive partners). How does a person go about attaining this goal? According to the theory presented in this article, the person who wants to identify such a partner must possess some knowledge of the indicators, and the person must also have a strong motive for support.

Our theory also contains a proposition that “an elevated motive leads to elevated ratings”. According to this proposition, features of any prototype of a motive (e.g., indicators of a responsive partner) are more familiar to people with a strong motive because those people have acquired a greater backlog of experiences in which they have attempted to satisfy the motive. Therefore, highly motivated people generally rate many indicators (good and poor) as more informative because, owing to their past experiences, those people have acquired a greater sense of familiarity with many of the indicators. Thus, the sum of a person’s ratings on the KNOWI Task reflects the strength of that person’s motive for supportive partners.

Furthermore, the two indices obtained from the KNOWI (a difference-score in one case, a sum in the other) correspond well to the two fundamental indices of signal detection theory: One is an ability to discriminate (accuracy, sensitivity); the other is a readiness to deem a stimulus a signal (criterion bias). In brief, then, the KNOWI Task offers the advantages of signal detection methods: It allows a researcher to assess simultaneously two important individual-difference variables that are thought to play a role in support processes: knowledge and motivation.

The three studies reported in this article support the Elevated Motives Effect by confirming its implications. Study 1 demonstrated that the sum of a participant’s ratings is correlated with Locke’s (2000) measure of communal motivation. Study 2 demonstrated that the two indices of the KNOWI (one assessing knowledge, the other assessing motive strength) interact to provide a better predictor of social performance on a relevant laboratory task than either factor alone. Study 3 extended the findings to everyday life: It confirmed the hypothesis that people with a high KNOWI-readiness score exhibit more support-seeking behavior in their everyday lives.

Other literature in cognitive psychology and social cognition is related to the Elevated Motives Effect. When a person rates the informativeness of an indicator, the person is, in effect, judging the truth of the proposition “this indicator is extremely informative”. Various researchers have asked people to rate the “truth value” of familiar and unfamiliar propositions and have shown that familiar propositions—both true and false propositions—are generally rated higher in truth value (e.g., Begg, Anas, & Farinacci, 1992; Hasher, Goldstein, & Toppino, 1977; Reber & Schwarz, 1999; Unkelbach, 2007; also see Quirin, Kazén, & Kuhl, 2009). It is not clear whether a familiar proposition has a higher “truth effect” (a) because it is more fluent (easier to process), (b) because it is more readily recognized from the past, or (c) because it has some other nonspecific “ring” of familiarity. All of these factors would seem to apply when a highly motivated person rates indicators of a responsive partner.

In addition, Vorauer and Ross (1993) describe a “diagnosticity bias.” They showed that people, when trying to make a judgment that is relevant to some motive, “overestimate the extent to which behaviors and events convey the information that they most want to obtain” (p. 620). Vorauer and Ross suggest that a desire to obtain information about a topic makes motive-relevant constructs more accessible to the person. Similarly, Greenberg, Pyszczynski, Warner and Bralow (1994) showed that, when people want to make a prediction, they “overestimate the relevance of available information to the judgment they are required to make” (p. 594). In brief, other researchers have also observed that ratings of informativeness may be elevated by motivational factors related to the task.

As another application of the Elevated Motives Effect, we recently examined the strategies people use to increase intimacy with others (Turan & Horowitz, 2010). Participants’ summed ratings of the usefulness of different intimacy strategies showed a substantial correlation with the strength of the participants’ intimacy motive as assessed with existing measures. In addition, the strength of participants’ intimacy motive, assessed with our new measure based on judgments about the usefulness of intimacy strategies, was related to how participants interpreted an ambiguous social interaction: Participants who rated the usefulness of different intimacy strategies higher were more likely to interpret an animation depicting an ambiguous social interaction as an attempt for increasing intimacy.

Knowledge and Motivation in Support Processes

How are the effects of knowledge and motivation related to the effects of other predictors of support processes? For example, suppose a person has chronic expectations that other people are generally unsupportive. Such expectations may affect the type of partner the person selects and the quality and quantity of support the person seeks (e.g., Collins & Feeney, 2000). Turan and Vicary (2010; also see Turan, Goldstein, Garber, & Carstensen, 2010) have found that attachment security, relationship knowledge, and motivation for responsive partners have unique independent effects on relationship outcomes. In addition to having direct effects, such expectations may interfere with the application of whatever knowledge the person does possess. Similarly, a person may find it difficult to apply existing knowledge under particular circumstances—e.g., if the person fears losing the partner; or is dazzled by the partner’s physical attractiveness; or relies too heavily on over-learned relationship patterns from the past.

It is also possible that the factors cited above are particularly important when people make decisions about their own lives. Personally significant situations—i.e., situations involving “hot” cognitions—may require more than simply knowledge and strong motivation. In contrast, the situations used in Study 2 involved relatively “cold” cognitions. Future studies can examine the joint effects of all of these factors, including knowledge and motivation, on identifying responsive partners in hot- and cold-cognition situations.

Factors like those discussed above might also affect partner selection: For example, a person who makes correct judgments about the responsiveness of a potential partner might not necessarily end up with a responsive partner: Some other motive—such as a desire to be seen with a very attractive partner or a desire to avoid the possibility of having no partner at all—might overshadow the motive for a responsive partner. More research is needed to understand the complex mechanisms involved in partner selection. Future research could also examine how these and other factors shape other important outcomes, including the decision to end a relationship with an unsupportive partner.

Signal Detection Theory and Assessment

The KNOWI Task has a distinct advantage over other types of measures used to study interpersonal relations: It does not require participants to describe their own traits or motives.

Participants simply rate the quality of each indicator as a predictor of a potential partner's future responsiveness. The measure thus circumvents confounding effects of social desirability associated with self-report.

The two indices derived from the KNOWI Task (one a difference-score, the other a sum) correspond to the two major indices of signal detection theory. The same method could be applied to assess many other interpersonal constructs. To assess a trait such as "paranoid suspiciousness," for example, respondents can be asked to rate the degree to which various prototypic indicators are useful in revealing whether another person cannot be trusted. The readiness index (the sum of all ratings) would assess each respondent's overall degree of paranoid suspiciousness, which, according to our theory, relates to the strength of the corresponding self-protective motive. The accuracy index (a difference between ratings of highly prototypic and less prototypic indicators) would reflect each respondent's ability to discriminate between good and poor indicators.

In summary, this article has examined implications of a theory about the hierarchical structure of motivational constructs. By examining prototypic indicators needed to satisfy sub-goals of the higher-order motive, we confirmed and applied the Elevated Motives Effect. We also showed how a simple measure based on the indicators could be constructed to assess, simultaneously, knowledge and motive strength. The two indices were then used to predict everyday behavior as well as performance on a controlled laboratory task.

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Figure 1.
The circumplex structure of the eight scales of the CSIV.

Figure 2.
Correlations between the KNOWI-readiness scores and each of the eight scales of the CSIV.

Figure 3.

The relationship between KNOWI-accuracy scores and the interview scores is moderated by motive strength as measured by the Communion (+C) Scale of the CSIV.

Figure 4.

The relationship between KNOWI-accuracy scores and the interview scores is moderated by motive strength as measured by the KNOWI-readiness scores.

Table 1
Means, Standard Deviations and Intercorrelations between Variables in Study 2 (N = 49)

Variable	Mean	SD	1	2	3	4
1. KNOWI-accuracy	2.50	1.39	-	-.21	.20	.42**
2. KNOWI-readiness	10.64	1.93		-	.11	.03
3. Communion Scale of CSIV	3.29	.51			-	.19
4. Interview Scores	4.27	1.64				-

 $p < .01$.