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Projection in Person Perception Among Spouses as a Function of the Similarity in Their Shared Experiences

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Past research has demonstrated that the psychological state of observers influences how they view others. This influence often has been termed "projection." The current study explores projection in close relationships of cohabiting partners. In Study 1a, structural equation modeling revealed a significant component of projection when spouses reported on the depressive symptoms of their partners. In Study 1b, the same analysis was expanded to include spouses' reports on a variety of affective states, attitudes, and behaviors of their partners. It was demonstrated that the degree of projection increases with the increase in the magnitude of the correlation between the self-views of the spouses. A cognitive process that accounts for this finding is proposed, along with a view of projection as a heuristic device rather than a bias.

We don't see things as they are; we see things as we are.
—The Talmud

As expressed in this Talmudic saying, the idea that our own motives and characteristics influence how we perceive the world is centuries old. Indeed, current research suggests that interpersonal perception consists of a balance between two influences, one coming from the target, the other from the observer. To be effective in their interpersonal interactions, observers must be sensitive to the characteristics of their interaction partners so that their perception is in tune with the way the target person views himself or herself. Veridical perception of the verbal and nonverbal behavior of the other allows observers to respond to them appropriately. Nevertheless, research has shown that perception of others also is influenced by the characteristics of the observer. This effect, the tendency of one's own characteristic to influ-

ence the perception of that characteristic in another person, was referred to as social projection (Allport, 1924), attributive projection (D. S. Holmes, 1968), and egocentric bias (Heider, 1958) to mention only a few of the well-known terms for the phenomenon. Observers' self-views may influence not only how other people are perceived but also how they are evaluated. Hill, Smith, and Lewicki (1989) and Dunning, Perie, and Story (1991) suggested that the trait categories that people use in describing others depend on their self-views: Observers put more emphasis on those categories that enhance them.

The interplay between the two forms of influence is especially interesting in cases involving interpersonal perception between spouses. On one hand, the richness of information that observers have about their spouses affords observers more sensitivity to the characteristics of their partners (Colvin, Vogt, & Ickes, 1997). On the other hand, however, this same richness of information, coupled with their emotional involvement, affords more opportunities for the observing spouses to project their own self-image on the evaluation of their partners (Aron, Aron, Tudor, & Nelson, 1991; Darley & Gross, 1983). Recently, Murray, Holmes, and Griffin (1996) investigated the contribution of these processes in shap-

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ing observers' perceptions. Married partners rated the extent to which each of 21 traits characterized themselves and their spouses. These ratings were aggregated and subjected to structural equation modeling analysis. Murray et al. (1996) reported that observers' impressions of their partners were as much influenced by their self-image as they were a reflection of their partners' self-reported attributes.

Similarity and Projection

The influence of the state of the observer on perceptions of others has been discussed by Davis, Hoch, and Ragsdale (1986). These authors posited that in the perception of attitudes and preferences, the self serves as an anchor for evaluations of the other. Such an analysis is consistent with Sherif and Hovland's (1961) social judgment theory in that the judgment process is described according to an anchor-and-adjust mechanism. When evaluating another person, the observer is assumed to evaluate himself or herself first and to adjust the initial evaluation to reflect discrepancies between the self and the other person (the target). The use of such a mechanism is particularly likely when the observer and the other are similar. As the similarity between the two diminishes, it becomes less meaningful to use the self as an anchor. For example, observers who know that their spouse's job preference is different from their own are less likely to use their own preference as an anchor for projecting their self-view on their spouse and more likely to use different means for evaluating the other.¹ For instance, they may search their memory for episodes when their spouse talked about job preferences and use this recollection for making a judgment (see review in Sudman, Bradburn, & Schwarz, 1996).

The presence of projection also is predicted from an analysis of the way the observers interpret the information they consider when they form their evaluation. One's own standing on the dimension of judgment may color how information about the other is understood and weighted (e.g., Dunning & Cohen, 1992; Higgins & Bargh, 1987; Schul, 1992). Such an effect has been suggested as one of the mechanisms that underlies the "false consensus" effect (see reviews in Krueger & Clement, 1997; Marks & Miller, 1987), where it was found that observers' own behaviors, attitudes, and preferences influence their assessments in others. Here too, projection is likely to occur when the observer and the target are close to each other on the dimension being judged. According to Sherif and Hovland (1961), in this case, the judgment of the other will be shifted in the direction of the observer's own standing—it will be assimilated (see also Manis, Nelson, & Shedler, 1988). As the other becomes more dissimilar to the observer, the likelihood of assimilation decreases.

It should be noted that projection has motivational antecedents as well. Viewing a significant other as similar to oneself promotes the observer's sense of security and predictability and creates an illusion of understanding (Murray et al., 1996). This can lead observers in close relationships to behave as if the target is part of their own self (Aron et al., 1991) and, in some cases, this helps to secure the relationship, especially when it is threatened, such as, for example, when spouses experience marital conflict (Sillars, Pike, Jones, & Murphy, 1984).

To summarize, past research suggests that observers project their own characteristics in perceiving and evaluating others. Moreover, the theoretical analysis of projection leads to the hypothesis that the effect of projection should increase as the similarity between the observer and the target increases. This hypothesis implies that perceivers will be least sensitive to characteristics of others in cases where they are highly similar to them. The analyses reported below explore projection in interpersonal perception between married or cohabiting couples in a large community sample. To reduce the complexity of the presentation, we present the analyses as two studies. Study 1a is based on secondary analyses of data collected at Wave 3 and Wave 4 follow-ups of the JOBS II field experiment (for details, see Vinokur, Price, & Schul, 1995). In Study 1a, we extend and generalize Murray et al.'s (1996) analysis as we explore the extent to which projection influences spouses' perception of their partners' depressed mood. Study 1b is based on data collected from a subsample of the couples who participated in the JOBS II field experiment at Waves 4 and 5. In Study 1b, we examine how the magnitude of projection is related to the degree of similarity between the self-reports of the spouses using 20 different measures.

STUDY 1A

Using path-analytic structural modeling, Murray et al. (1996) examined spouses' impressions of their partners as a function of both the partners' and the observing spouses' self-view. They reported that the coefficient of the path of influence from the observer's self-view to the observer's evaluation of the partner was as large as the path of influence from the partner's self-view on the observer's evaluation of the partner. In other words, the spouse's projection had similar power for predicting the evaluations of the partner as did the partner's self-view. Study 1a was designed to extend and generalize Murray et al.'s findings in several ways.

First, the sample of respondents in the Murray et al. (1996) study was relatively small (82 married or cohabiting couples), with no information about what larger population it represents. Our sample of married and cohabiting couples is larger (627 couples) and is representative of the unemployed population in its main

demographic characteristics (see Method section below). Second, the respondents in the Murray et al. study were asked to use global trait ratings to characterize themselves and their spouses. The respondents in our study were asked to assess depressive mood using behavioral measures that might be less susceptible to projection bias (John & Robins, 1993; Kenny, 1991). Third, projection may reflect perceptual and cognitive influences or it might be the outcome of the different response language used by the observer and the target. Murray et al. controlled for the response-language interpretation by partialing out the impression that observers formed about a "typical person." We controlled for the response-language interpretation by having the observers use one measure for reporting their self-view and another measure for reporting on the targets. Finally, Murray et al. (1996) reported that the self-views of the married partners were not similar to each other, that is, that they were uncorrelated. This surprising finding (see below) may have to do with the fact that they aggregated over 21 domains. Our studies, in contrast, explore similarities between the spouses within specific domains. This allows us to explore in further detail the link between similarity and projection.

The longitudinal design of Study 1a is depicted in Figure 1. The figure depicts two persons, a target respondent (denoted by T) and an observer (denoted by O). Both the target and the observer described their own depressive symptoms at two time periods separated by about 18 months. These are denoted by T1 and O1 at Time 1 and T2 and O2 at Time 2. In addition, the observer described the target at Time 2 (denoted by TO2). Our main concern is with the TO2 measure. Specifically, we test whether the observers' assessments of the targets' depression is colored by their own depression (the O2-TO2 link), that is, whether they project their own mood state onto the mood state of their target.

Using the notation of Figure 1, projection may be estimated by the correlation between O2 and TO2, that is, by $r_{O2, TO2}$. This, however, is problematic because a high correlation between O2 and TO2 may reflect high projection but may also reflect high similarity ($r_{O2, T2}$) coupled with a high level of correspondence between the target person's self-report and the observer's report of the target (i.e., the T2-TO2 link). Therefore, the $r_{O2, TO2}$ correlation cannot provide unambiguous evidence for the extent to which the observers' self-views color their view of the target. Instead, we follow the practice of Murray et al. (1996) and estimate projection by the O2-TO2 link in Figure 1. Conceptually, projection is the coefficient estimated in a regression model whereby TO2 is predicted by two predictors: T2 and O2. Defined this way, projection estimates the relationship between

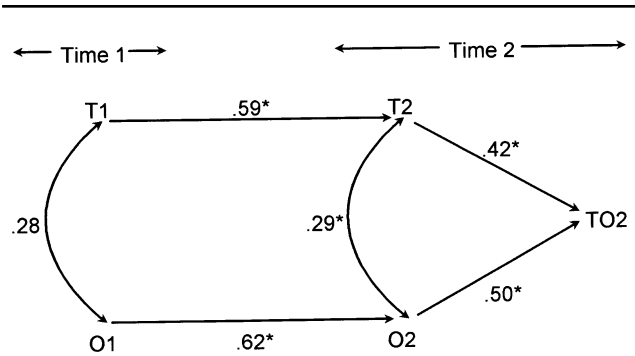


Figure 1 Standardized path coefficients and correlations estimated in a structural equation model.

NOTE: Normed, non-normed, and comparative fit indices are .98, .98, and .99, respectively. T1 and T2 denote the target person's self-view at Time 1 and Time 2, O1 and O2 denote the observer's self-view at Time 1 and Time 2, and TO2 denotes the observer's view of the target at Time 2. Time 1 to Time 2 interval is 18 months.

* $p < .01$.

the observer's self-report and his or her view of the target once the self-report of the target has been controlled.

The design depicted in Figure 1 allows us to study two other issues. The first involves the degree of stability in the way individuals view themselves. McCrae (1994) summarizes a large body of research showing that self-reports of individuals display impressive levels of stability over long periods of time. Therefore, in our study, we expect targets and observers to show a relatively high level of stability in their depressive symptoms. High stability is indicated by positive path coefficients T1-T2 and O1-O2.

The second issue involves similarity in the characteristics or interdependence in the mental states of observers and targets. Our study investigates perceived depression among married or cohabiting couples. Because spouses live under the same or very similar life circumstances, experiencing many common life events, it is expected that the distress of one person (e.g., the target) will be intertwined with that of the other (e.g., the observer). Westman and Vinokur (1998) have recently described three processes through which the distress of spouses can become interdependent. First, both persons might be exposed to the same stressful events that elicit distress and depression. Having to reduce their standard of living to the bare minimum, or having to cope with heightened uncertainty about the future, may increase the depression of both spouses concurrently. Second, being depressed, one spouse (e.g., Bill) may act in a way that increases the distress experienced by the other person (e.g., Jane). For example, Bill may undermine Jane's self-esteem by criticizing her continuously. As a result, Jane may become depressed (Vinokur, Price, & Caplan, 1996). Finally, the similarity in the level of the spouses' depressive symptoms might be the result of an empathic

reaction (Levenson & Ruef, 1997). Similarity between the spouses is indicated in Figure 1 by high values of path coefficients T1-O1 and T2-O2. This analysis suggests that in our study the similarity correlation coefficients should be much higher than those in the study by Murray et al. (1996).

METHOD

Participants

Study 1a is based on secondary analyses of data collected at the Wave 3 and Wave 4 follow-ups of the JOBS II study (for details, see Vinokur et al., 1995). The JOBS II study consisted of a field experiment testing the efficacy of an intervention to promote reemployment among recently unemployed job seekers who were recruited for this study from the offices of the Michigan Employment Security Commission. Using a short screening questionnaire to determine eligibility, 2,005 respondents were successfully recruited and participated in the JOBS II field study. Eligible respondents were those unemployed for less than 13 weeks, still looking for a job, and not expecting to retire within the next 2 years or to be recalled to their former jobs.

The demographic characteristics of the JOBS II sample closely resembled those of the U.S. unemployed population as reported by the U.S. Bureau of Labor Statistics (1992). For example, the median age in our sample was 34.7 years ($M = 36.20$, $SD = 10.38$) and included 45% men, 21.5% African Americans, 76% whites, 41% married, and a mean of \$1,881 monthly income from the unemployed person's last job. The U.S. unemployed population during 1991 had a median age of 30.4 years and included 58% men, 20% African Americans, 76% Whites, 41% married, and monthly earnings of \$1,834. More details about response rates and other characteristics of the sample of respondents are provided in Vinokur et al. (1995).

Data Collection

The Wave 1 pretest questionnaire, with a \$5 respondent payment, was mailed weekly to cohorts of respondents who were recruited to the study during its 6-month duration. The questionnaires were mailed about 2 weeks before the invitation to the JOBS intervention workshop in which the respondents were randomized as experimental or control respondents. Wave 2 and Wave 3 follow-up questionnaires, with a \$5 payment each, were mailed to the respondents 2 and 6 months, respectively, after the week of the intervention workshop. The Wave 4 follow-up questionnaire, with a \$5 respondent payment, was mailed to the respondents 2 years after the week of the intervention workshop. At Wave 3 and Wave 4, we ini-

tiated follow-up procedures to enhance response rates, including a postcard reminder and then a telephone call, followed by a re-mail of the questionnaire with a promise of a \$15 check or a \$20 check for a phone interview.

Using mailed self-administered questionnaires, data were collected from the job seekers and their significant others. The significant other was either the spouse or, for unmarried job seekers, someone who saw the unemployed respondent at least once a week and knew him or her well. At Wave 3 and Wave 4, 61% of the significant others reported living with the target person as a couple. In the current study, we refer to the unemployed job seekers as targets and to their significant others as observers.

To simplify the description of the analyses and the results in this study, Wave 3 and Wave 4 measures are referred to here as Time 1 and Time 2 measures, respectively. Thus, the targets' self-views in JOBS II are referred to as T1 and T2 and the self-views of the observers (significant others) are referred to as O1 and O2. At Time 1, 6 months after the original recruitment to the study, 66% of the targets were employed. At Time 2, 18 months later, 80% of the targets were employed.

To be included in the analyses of couples reported below, the target and the observer had to meet the following three criteria: (a) both returned Time 1 and Time 2 questionnaires, (b) the observer was the same person in the two waves, and (c) the target and observer described their relationship as married and/or living together as a couple. There were 627 couples who met these three eligibility criteria. For 272 (43%) of the couples, the target spouse was a man (and the observer spouse a woman), and in 355 (57%) cases, the target spouse was a woman (and the observer spouse a man).

Measures

DEP1. Observers (i.e., significant others in JOBS II) rated the extent to which they had been bothered or distressed in the past 2 weeks by 11 depressive symptoms, such as feeling blue, having thoughts of ending one's life, and crying easily. These symptoms were taken from the Hopkins Symptom Checklist (Derogatis, Lipmann, Rickels, Uhlenhuth, & Covi, 1974). The ratings were obtained using a 5-point scale varying from *not at all* to *extremely* and were averaged to form a scale with a Cronbach's coefficient alpha of .90. We refer to this measure as DEP1.

DEP2. Targets rated how much of the time during the past 2 weeks they had displayed 18 depressive symptoms, such as being depressed, sad, feeling hopeless, or feeling overtired. Their ratings were obtained using 5-point scales varying from *none of the time* to *all of the time*. The

ratings were averaged to form a scale with a Cronbach's coefficient alpha of .95. We refer to this measure as DEP2. Ratings of the target's depression using DEP2 were provided by the targets themselves and by the observers.

Whereas targets described their depression using both DEP1 and DEP2 measures, observers described their own depression using DEP1 and the target's depression using DEP2. This was done because of constraints on the length of the questionnaire. Nevertheless, when we examined the correlations between the targets' reports about their own depressive symptoms using these two somewhat different measures, we found that the correlation between DEP1 and DEP2 was .85 at Time 1 and .86 at Time 2. The levels of reliability of the two measures, and the correlation between the two, suggest that the two measures (DEP1 and DEP2) reflect the same underlying construct and therefore either one could be used as a proxy for the other.

RESULTS

To examine the model depicted in Figure 1 we conducted a confirmatory latent-variable structural model analysis using the EQS program (Bentler, 1995).² T1, T2, and TO2 were each indicated by two subscales of DEP2, whereas O1 and O2 were each indicated by two subscales of DEP1. The error components associated with the same subscales were correlated within target and within observer. We follow Raykov, Tomer, and Nesselroade's (1991) recommendation and report the goodness-of-fit measures based on Bentler and Bonett (1980), which include Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), and Comparative Fit Index (CFI).³

The means, standard deviations, and correlations of the full-scale measures appear in Table 1. The results of the structural equation analysis are presented in Figure 1, which depicts the standardized path coefficients computed for our sample of target-observer pairs who were married or lived together as couples. The three fit indices indicate acceptable levels of fit (NFI = .98, NNFI = .98, CFI = .99).

Self-reports of depression over the span of 18 months were fairly stable. The stability paths for targets ($\beta = .59$) and observers ($\beta = .62$) are statistically significant. Figure 1 also shows significant similarity effects: In line with past research, the data indicate that spouses' self-reports were correlated with each other at Time 1 ($r = .28$) and at Time 2 ($r = .29$).

Our main concern was to explore the influences on the observer's assessment of the target's depression. Observer's views of the target (TO2) were strongly influenced by their own depression (O2). As seen in Figure 1, and in line with the findings of Murray et al. (1996), the

TABLE 1: Means, Standard Deviations, and Intermesure Correlations (Study 1a)

	T1	T2	O1	O2	TO2
Time 1 target's self-ratings (T1)	—				
Time 2 target's self-ratings (T2)	.60	—			
Time 1 observer's self-ratings (O1)	.27	.21	—		
Time 2 observer's self-ratings (O2)	.23	.32	.61	—	
Time 2 observer's ratings of target (TO2)	.35	.53	.36	.60	—
<i>M</i>	2.04	2.03	1.64	1.65	1.96
<i>SD</i>	.71	.72	.66	.63	.64

effect of projection on the observer's view of the target (O2-TO2 link, $\beta = .50$) was close to the effect of the target's self-view (T2-TO2 link, $\beta = .42$). The path coefficients that were associated with the impact of the target's past depression (T1) and that of the observer (O1) were small and nonsignificant.

Finally, the large effect of projection would not be of great interest if it reflected only the similarity in response language used by the observer in expressing his or her own depressive symptoms, O2, and that of the target, TO2, rather than being a reflection of a bias in perception, interpretation, and evaluation. That is to say, the results suggesting projection could simply mean that observers are more positive (or negative) in their ratings than their partners. However, the design of Study 1a makes the response-language interpretation unlikely for two reasons. First, the similarity in response language is controlled for by the use of the longitudinal design and the correlated-error model. Second, recall that TO2, as well as T1 and T2, were indicated by the same measure—DEP2—whereas O1 and O2 were indicated by a different measure—DEP1. Thus, it is unlikely that the response-language interpretation accounts for the results. If anything, because the measures and response scales used by observers and targets to report their level of depression were different, the degree of bias may actually be underestimated.

Another way to illustrate the effect of projection involves the data depicted in Table 2. Even though the illustration is conceptually similar to the EQS analysis presented earlier, it is considerably simpler, so that the projection can be observed more readily. The top panel of Table 2 displays the classification of the targets in the entire sample according to their self-ratings of depression and the evaluation of the observer.⁴ The rows present the partition of the targets according to their self-rat-

TABLE 2: Observers' Accuracy in Classifying Targets' Depression Above or Below Median

	Observer's Rating of Target		
	Below Median	Above Median	Marginals
Entire sample			
Target's own rating			
Below median	262	124	386
Above median	122	219	341
Marginals	384	343	727
Below-median observers			
Target's own rating			
Below median	190	36	226
Above median	87	57	144
Marginals	277	93	370
Above-median observers			
Target's own rating			
Below median	72	88	160
Above median	35	162	197
Marginals	107	250	357

ings into those at or above median depression ($Med = 1.94$) and those below median depression. The columns present the classification of the targets according to observer's ratings, that is, into those at or above the median ($Med = 1.83$) and those below it.

The top panel shows that targets and observers agree on the classification in 66% of the cases (i.e., $[269+219]/727$) and that agreement did not vary as a function of whether the target was below or above the median. This symmetry, however, disappears when we examine it separately for observers who are above or below the median depression according to their own self-ratings. The middle panel of Table 2 presents the entries for observers who classify their own depression to be below the median ($Med = 1.45$). The bottom panel of Table 2 presents the analogous data for observers who classify themselves as having above-median depression.

A comparison of the middle and bottom panels reveals several important tendencies. Observers tend to use responses that are congruent with their own depressive state: 75% of the below-median observers ($277/370$) rated the target below the median; 70% of the above-median observers ($250/357$) rated the target above the median. In part, the high proportion of observer-congruent responses reflects the sensitivity of the observers to the self-rated depression of the targets. Earlier, we noted that targets with higher depressive symptomatology tend to have spouses with higher depressive symptomatology. Not surprisingly, Table 2 reveals that 61% of the targets who had spouses with a below-median depression ($226/370$) rated themselves as having a below-median depression, and 55% of the targets who had spouses with an above-median depression

($197/357$) rated themselves as having an above-median depression. Thus, observers correctly detected that more targets in the middle panel are below the median and more targets in the bottom panel are above the median.

However, the tendency of observers to match the ratings of the targets to their own depression goes well beyond the target's own depression. Whereas 61% of the targets in the middle panel rated themselves below the median, the observers rated 75% of these targets below the median. Similarly, whereas 55% of the targets in the bottom panel rated themselves above the median, the observers rated 70% of them above the median. Thus, it seems that observers are biased by their own depressive state in rating the targets—they are projecting their own depressive state onto the targets.

Projection resulted in a high degree of agreement between targets and observers who had a similar depressive symptomatology but low agreement between dissimilar targets and observers. In particular, the below-median observers correctly classified 84% of the below-median targets ($190/226$) but only 39% of the above-median targets ($57/144$). In contrast, the above-median observers correctly classified 82% of the above-median targets ($162/197$) but only 45% of the below-median targets ($72/160$). Although these comparisons might do injustice to the observer's observation skills because they are based on the transformation of a continuous variable into a dichotomy, the comparisons illustrate the phenomena we saw in the analyses of the continuous variable. In particular, this analysis shows that the depressive state of the observer had a systematic biasing influence on how he or she perceived the target.

In conclusion, based on a large representative community sample, our analyses in Study 1a demonstrated that spouses' views of their partners' depression were significantly influenced by projection: These views contained a significant component of variance that was associated with the observing spouse's own self-view. This component was as large as that associated with the impact of the target's own rating. This result replicates Murray et al. (1996) in spite of many procedural differences between our study and theirs. In Study 1b, we explore whether the magnitude of projection varies systematically according to the similarity in the spouses' states. This is done using a subsample of the respondents from Study 1a for whom we have data based on a wide variety of measures.

STUDY 1B

Study 1b reports on analyses based on the JOBS II Wave 4 follow-up and an additional follow-up (Wave 5) that was conducted 18 months after Wave 4 with a

subsample of respondents from the original study. We report on two sets of analyses. In the first set, we explore the magnitude of projection in a longitudinal design, as we did in Study 1a. This is done for five different measures. These are all the measures available in the study for which the observers described themselves and the targets using exactly the same scales at Time 1 (Wave 4) and Time 2 (Wave 5). These analyses allow us to replicate and generalize the findings reported in Study 1a.

In the second set of analyses reported below, we estimate projection using a set of 20 measures that were collected only at Time 2 (Wave 5). This larger set of measures allows us to examine whether there is a systematic linear relationship between the magnitude of projection and extent of similarity between the targets and the observers. Based on our theoretical analysis, we hypothesize that as the degree of similarity increases, so does the degree of projection.

In Study 1a, we were concerned with the observer's perception of the target's emotional state. It is likely that observers can distinguish their own depressive state from their spouse's, at least on a conceptual level. Some of the measures in Study 1b, however, make this distinction exceedingly difficult. For example, consider the measure of financial strain, which asks the respondents to report how difficult it is to live on their current income. Recall that targets and observers in our study share a household. As a result, the self-reported financial strain by the target (i.e., T2) and by the observer (i.e., O2) refer to nearly the same phenomenon. Although the observer is asked to consider the partner's view of financial strain (i.e., to provide the TO2 measure), he or she may not feel compelled to ignore his or her own individual experience in describing the partner because of the awareness that the assessment refers to a predominantly shared experience. As a result, the observer's own state may increasingly color perception of the target. With this caveat in mind, it is interesting to compare the measures that refer to a joint outcome (e.g., financial strain) or an experience within the same relationship (e.g., relationship satisfaction) to the measures that refer exclusively to the unique experience of the target (e.g., target's depression, desire to work, or actual number of hours he or she works). The former measures provide a boundary condition for the latter.

METHOD

Participants and Design

Study 1b is based on a subsample of 227 of the couples who participated in the JOBS II study. The sample for this study was drawn in a special way and was not intended for the purpose of the current investigation.

The original JOBS II sample was stratified into four subgroups that varied in terms of whether the target or the significant other (observer) reported at Wave 4 that the target had one or more (vs. none) symptoms of clinical depression using the short form of the University of Michigan–Composite International Diagnostic Interview (UM–CIDI) developed by Wittchen, Kessler, Zhao, and Abelson (1995) (see Measures section below). We mailed Wave 5 questionnaires to all couples in the three subgroups in which only the target, only the observer, or both reported at Wave 4 that the target had at least one symptom of clinical depression. Each of the three subgroups included 60 to 70 couples. From the fourth subgroup, in which neither the target nor the observer reported at Wave 4 that the target had symptoms of clinical depression, we randomly sampled 70 couples and mailed them Wave 5 questionnaires. Response rates in the four groups varied from 83% to 91%.

The analyses reported below are based only on those couples who met the selection criteria used in Study 1a, namely, (a) both target and observer reported in Wave 4 (Time 1) and Wave 5 (Time 2), (b) the observer was the same person in the two waves, and (c) the target and the observer were married or described themselves as romantically attached friends living together as a couple.

Procedure

Data were collected with self-administered questionnaires that were sent to the respondents in separate mailings. Respondents were paid \$15 for filling out and returning the questionnaires.

Measures

Actual work (hrs/wk actual work). The respondent indicated how many hours he or she (or the target) worked for pay (including overtime) per day, per week, or per month. All responses were recoded in terms of hours of work per week.

Job strain (distress). Job strain was assessed using eight items, six of which had been developed by Kandel, Davies, and Raveis (1985) and also used by Frone, Russell, and Cooper (1992). The two additional items were included to represent additional aspects of distress on the job (i.e., feeling harassed, intimidated). Respondents were asked to rate how much they (or the target) had various daily emotional experiences on the job (e.g., feeling relaxed, frustrated, upset) using 4-point scales that ranged from *not at all* to *very*. The Cronbach's coefficient alpha ranged from .83 to .88.

Quality of work life. Quality of work life was assessed using nine items that had been developed by Andrews and Withey (1976) and were used by Caplan, Vinokur, Price, and van Ryn (1989) to measure job satisfaction.

Respondents indicated on a 7-point scale, varying from *terrible* to *delighted*, how they (or the target) felt about various aspects of the job, including the work itself, the benefits, the people, and the company. The mean score of the responses formed the index, with a Cronbach's coefficient alpha ranging from .78 to .87.

Job involvement. Job involvement was assessed with a 5-item scale adapted by Frone et al. (1992) from a measure developed by Kanungo (1982). Job involvement items focused on the extent to which the respondents (or targets) felt their job was central to their self-concept or sense of identity. The respondents provided their answers using 6-point agree/disagree scales. The Cronbach's coefficient alpha ranged from .89 to .91.

Job stress. Job stress was measured with a 20-item scale taken from previously published measures (see Frone et al., 1992). Respondents rated how often they (or the target) experienced various stressful job-related events or situations (e.g., having too much work to do), feelings (e.g., confused about what to do), or cognitions (e.g., have important responsibilities, clear about planned goals). The ratings were provided on a 4-point scale ranging from *almost never or never* to *almost always*. The Cronbach's coefficient alpha ranged from .75 to .79.

Desire to work (hrs/wk wanting to work). The respondent indicated how many hours he or she (or the target) would like to work for pay, including overtime, per day, per week, or per month. All responses were recoded in terms of hours of work per week.

The Health Life Events measure. This measure, as well as the measures of work life events, financial events, and family life events that appear below, are based on a scale developed by T. H. Holmes and Rahe (1967) and later additions suggested by Vinokur and Caplan (1986). The Health Life Events score was the number of physical or mental health events that the respondent checked as those that he or she (or the target) experienced in the past year. The list included seven events, such as "experienced an illness or personal injury" and "experienced a change in eating habits (appetite change, weight loss/gain)."

Volunteered in the community. This score was the number of volunteered community activities that the respondent checked as those that he or she (or the target) engaged in during the past year. The list included four activities, such as "provide transportation, shop, or run errands for friends, neighbors, or relatives who do not live with you."

Work life events. This score was the number of work life events that the respondent checked as those that he or she (or the target) experienced in the past year. The list included 12 events, such as loss of a job, change in working hours or working conditions, and retired from job.

Months working as desired. The respondent indicated the number of months in the past 18 months that he or she (or the target) worked as many hours as he or she wanted to.

Role and emotional functioning. This was measured with a 15-item index developed by Caplan, Abbey, Andrews, Conway, and French (1984). The items require the respondents to indicate "how well have you (or the target) been doing in the past 2 weeks with respect to . . ." various role and emotional tasks, such as handling responsibilities and daily demands, staying level-headed, and making the right decisions. The respondents indicated their answers on a 5-point scale ranging from *very poorly* to *exceptionally well*. The scale's Cronbach's coefficient alpha ranged from .93 to .96.

Financial events. This score was the number of financial events that the respondent checked as those that he or she (or the target) experienced in the past year. The list included eight events, such as got a mortgage or loan and experienced a change in financial status (personal financial gain or loss).

Depression symptoms. Respondents rated the extent to which they (or the targets) were bothered or distressed in the past 2 weeks by 11 depressive symptoms, such as feeling blue, having thoughts of ending one's life, and crying easily. These symptoms were taken from the Hopkins Symptom Checklist (HSCL) (Derogatis et al., 1974). The ratings were obtained on a 5-point scale varying from *not at all* to *extremely* and were averaged to form a scale with a Cronbach's coefficient alpha ranging from .88 to .92.

Major Depressive Episode (MDE). The MDE measure consists of 23 questions adapted for self-administration from the UM-CIDI measure, a screening measure based on the Composite International Diagnostic Interview (CIDI) (Robins et al., 1988). The measure has a stem-branch structure that requires the respondent to answer a stem question positively to continue with the branch questions. Points are given for each branch question answered consistently with a diagnosis of MDE in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., Rev.) (*DSM-III-R*). Scores range from 0 to 8 with increasing probability of receiving a clinical diagnosis of MDE for each additional point.

Relationship strain. The relationship strain measure was based on items developed in a study by Kandel et al. (1985). Respondents rated how much they (or the target) experienced eight emotional reactions (upset, relaxed, harassed, frustrated, fortunate, unhappy, pleased, intimidated) in their day-to-day life with the spouse/partner. Ratings were made on a scale ranging from *not at all* to *very*. The relationship strain measure

formed by averaging ratings had Cronbach's alpha coefficients ranging from .87 to .91.

Distress symptoms (University of Michigan). Respondents rated how much of the time during the past 2 weeks they (or the targets) displayed 18 depressive symptoms, such as being depressed, sad, feeling hopeless, and feeling overtired. The majority of these symptoms are depression and anxiety symptoms. Their ratings were obtained using a 5-point scale varying from *none of the time* to *all of the time*. The ratings were averaged to form a scale with Cronbach's coefficient alpha ranging from .93 to .95.

Relationship involvement. Relationship involvement was assessed with a 5-item scale that had been used successfully in previous research (e.g., Frone et al., 1992). The items included 6-point rating scales ranging from *disagree strongly* to *agree strongly*. The scale had a Cronbach's alpha coefficient of .89.

Family life events. This construct refers to the number of family life events that the respondent (or the target) checked as having been experienced in the past year. The list of the events included 20 events, such as marital reconciliation with spouse/partner, son or daughter left home, spouse/partner began or stopped work for pay, or any other change in spouse's working situation.

Economic hardship. The economic hardship measure is based on a scale developed by Pearlin, Menaghan, Lieberman, and Mullan (1981). It has been used in numerous studies on unemployment and social stress (e.g., Hamilton, Hoffman, Broman, & Rauma, 1993). The measure consists of a count of the number of financial events that the respondents indicated had happened to them in the past month, or reported happened to the target, from a list of 25 events and activities.

Relationship satisfaction. Relationship satisfaction was assessed using the six items from Spanier's (1976) Dyadic Adjustment Scale that were shown to have the highest loadings on the dyadic satisfaction factor of the entire scale and are suitable for assessing satisfaction with the dyadic relationship. The respondents provided ratings of how often they (or the targets) experienced various thoughts or feelings that indicate satisfaction or dissatisfaction with the relationship (e.g., "... feel satisfied with this relationship?" "... feel this relationship will have a good future?" and "... feel frustrated with this relationship?"). The 6-point scale ranged from *never* to *all the time*. The Cronbach's alpha coefficient of this measure ranged from .92 to .95.

Financial strain. Financial strain was measured with a three-item index (Vinokur & Caplan, 1987) based on answers to three questions with 5-point rating scales. The questions asked were as follows: "How difficult is it for you (or for the target) to live on your (the target's) total

household income right now?" "In the next 2 months, how much do you (or the target) anticipate that you or your family will experience actual hardships, such as inadequate housing, food, or medical attention?" and "In the next 2 months, how much do you (or the target) anticipate having to reduce your (or the targets) standard of living to the bare necessities of life?" The alpha coefficients for the index ranged from .82 to .88.

RESULTS

Estimating Projection in a Longitudinal Design

In this set of analyses we estimate the coefficients in Figure 1 using five different measures. These are all the measures available in the study for which the observers describe themselves and the targets using exactly the same scales at Time 1 and Time 2. Each measure was analyzed separately according to the theoretical model depicted in Figure 1. The coefficients in this model were estimated in two ways. Three of the five measures (depression, financial strain, and relationship satisfaction) were assessed by multiple indicators. For these measures we could estimate the coefficients described in Figure 1 using the correlated-error model, as we did in Study 1a. The other two measures (desire to work and actual work) were assessed by a single question. Consequently, for these two measures, the theoretical constructs in the model were indicated by a single indicator, making it impossible to employ the correlated-error model. To ensure that our conclusions do not depend on the different procedures employed to estimate these two sets of measures, the former three measures also were estimated using a single-indicator model. All five models were estimated successfully. Minimum goodness-of-fit measures—NFI, NNFI, and CFI—for the models using the single indicator were .98, .87 and .99, respectively, and for the three multiple-indicators models were .89, .91, and .94, respectively.

In line with past research on stability of self-reports, the respondents viewed themselves consistently over time in spite of the 18-month interval between the two waves of measurements. The entries in Table 3 show that the standardized path coefficients linking the two self-measures of the target (T1 and T2) and those linking the self-reports of the observer (O1 and O2) were moderately high.

The similarity between the targets and the observers varied as a function of the domain of judgment. Targets and observers did not share the desire to work and the extent of actual work at either Time 1 or Time 2. In contrast, there is, as expected, a fairly high similarity in their assessment of financial strain and relationship satisfaction. Finally, targets and observers show a moderate simi-

TABLE 3: EQS Standard Path Coefficients for Wave 4 and Wave 5 Measures (Study 1b)

	<i>Depression</i>	<i>Desire to Work</i>	<i>Actual Work</i>	<i>Financial Strain</i>	<i>Relationship Satisfaction</i>
Single-indicator model					
T1 → T2	.60*	.37*	.60*	.53*	.68*
O1 → O2	.58*	.46*	.63*	.52*	.64*
T1 ↔ O1	.29*	-.14	-.06	.61*	.56*
T2 ↔ O2	.20*	.06	-.04	.55*	.43*
T2 → TO2	.43*	.28*	.39*	.27*	.18*
O2 → TO2	.36*	.07	-.10	.58*	.56*
Correlated error model					
T1 → T2	.65*	—	—	.59*	.72*
O1 → O2	.61*	—	—	.62*	.69*
T1 ↔ O1	.32*	—	—	.70*	.61*
T2 ↔ O2	.19	—	—	.75*	.50*
T2 → TO2	.54*	—	—	.20	.15
O2 → TO2	.42*	—	—	.63*	.68*

NOTE: T1 = Time 1 target's self-ratings, T2 = Time 2 target's self-ratings, O1 = Time 1 observer's self-ratings, O2 = Time 2 observer's self-ratings, TO2 = Time 2 observer's ratings of target.

* $p < .01$.

larity in the way they rate their own depression, as indicated by the moderate similarity correlations at Time 1 and Time 2. These coefficients are close to those assessed in Study 1a based on the entire JOBS II sample.

The sensitivity of the observers' judgments to the self-view of their partners is indicated by the T2-TO2 path coefficient. This coefficient is statistically significant for all five measures in the single-indicator analyses. We noted earlier, however, that financial strain and relationship satisfaction are different from the other three measures in that it is difficult for observers to distinguish their own state from that of the target because the measures refer to joint states. We therefore hypothesized that whereas the impact of projection would be very high, the impact of the target's self-ratings on the observer's rating (T2-TO2 link) would be the lowest for financial strain and relationship satisfaction. Indeed, these coefficients are the lowest in the single-indicator model and are not statistically significant when estimated in the correlated-error model.

Coefficient O2-TO2 indicates the effect of projection. Inspection of the entries in Table 3 suggests that projection is strongest for financial strain and relationship satisfaction, moderate for depression, and virtually nonexistent when observers assess the target's desire to work and extent of actual work. It may not be surprising that the assessment of the actual amount of work is not influenced by projection. This measure refers to observable events, and hence, the observer's report should correspond to the target's self-view. More surprising is the absence of projection effect in the assessment of the target's desire to work because in responding to this question observers must make an inference about the target's desires. We shall return to this point below.⁵

Similarity and Projection

The analyses above are consistent with the hypothesized relationship between similarity and projection, namely, that the magnitude of projection increases as similarity between the self-reports increases. To explore this relationship in more detail we used a wider set of measures that were available only at Time 2 (Wave 5 in the original study). For each measure, we predicted the observer's assessment of the target (TO2) from the observer's self-view (O2) and the target's self-view (T2). The estimates were computed from a multiple-regression model in which TO2 was predicted simultaneously from T2 and O2. The T2-O2 correlation was assessed separately.⁶ Table 4 presents the estimates of the standardized regression coefficients (beta) as well as the T2-O2 (similarity) and T2-TO2 (agreement) correlations.⁷

Table 4 shows that as the similarity ($r_{T2,O2}$) between the target and observer increases, so does the projection (β column). At the same time, the sensitivity (α column) of the observer to the self-view of the target decreases. In fact, across the 20 measures in Table 4, the correlation between similarity and projection is .88 and that between similarity and sensitivity is $-.60$.

Agreement, Similarity, and Sensitivity to the Target

Our analysis suggests that a higher correlation between T2 and TO2—indicating agreement between the target's self-view and the observer's view of the target—does not represent greater sensitivity of the observer to the way the target views himself or herself. Such agreement reflects, in part, observer-target similarity. Specifically, the entries in Table 4 indicate that

TABLE 4: Correlations and Standard Regression Coefficients From Least Square Regression Using Wave 5 Measures (Study 1b)

	<i>The Statistical Model: TO2 = α*T2 + β*O2 + ϵ</i>			
	<i>r_{T2, O2} (similarity)</i>	<i>α (sensitivity)</i>	<i>β (projection)</i>	<i>r_{T2, TO2} (agreement)</i>
(-) Hrs/wk actually working	-.31	.38	-.07	.41
(+) Job strain	-.16	.59	.20	.57
(+) Quality of work life	-.06	.59	.07	.58
(+) Job involvement	-.04	.46	.21	.46
(+) Job stress	.02	.57	.13	.57
(-) Hrs/wk wants to work	.02	.71	.04	.72
(-) Health life events	.10	.37	.29	.40
(-) Volunteered in the community	.15	.44	.34	.51
(-) Work life events	.16	.66	.15	.69
(-) Months worked as desired	.18	.52	.18	.56
(+) Role and emotional disfunctioning	.25	.30	.47	.42
(-) Financial events	.29	.36	.45	.50
(+) HSCL depression	.34	.46	.36	.58
(+) Relationship strain	.37	.21	.60	.44
(+) UM distress	.39	.46	.44	.62
(+) Relationship involvement	.41	.43	.27	.54
(-) Family life events	.44	.34	.56	.56
(-) Economic hardship	.47	.31	.56	.58
(+) Relationship satisfaction	.59	.24	.67	.64
(+) Financial strain	.66	.27	.62	.68

NOTE: (+) indicates a multi-item measure, (-) indicates either a single-item measure or a count measure, HSCL = Hopkins Symptom Checklist, and UM = University of Michigan.

observers and targets tend to agree in their views of the target more strongly (i.e., higher agreement correlation— $r_{T2, TO2}$) the more similar they were to each other. This is indicated by a positive correlation ($r = .33$) between similarity and agreement. Because a high level of similarity is associated with high levels of projection, reliance on target-observer agreement correlation as an indicator of the observer's sensitivity may be unwarranted. For example, the results presented in Table 4 suggest that although the agreement correlation is high for measures on which the observer had a very low level of projection (e.g., months worked as desired), this correlation is also high for measures in which the observers' ratings were associated with very high levels of projection (e.g., financial strain), where projection is coupled with high degree of similarity.

GENERAL DISCUSSION

The study examines the extent to which observers project their own state in describing their significant other. We find that the magnitude of projection depends critically on the measures used for the description. When the measures involve characteristics that are unique to the target (e.g., various aspects of the target's job), projection is minimal. When the measures involve outcomes that are shared by the target and the observer (e.g., financial strain, marital satisfaction), projection is high. Finally, in the case of mental health measures (e.g.,

depression), where the similarity between target and observer is moderate, so is the projection.

Similarity has been used in past research as an interdyad construct (e.g., Funder, Kolar, & Blackman, 1995; Menon, Bickart, Sudman, & Blair, 1995; Pietromonaco, Rook, & Lewis, 1992; Stinson & Ickes, 1992). In contrast, we investigate similarity as an intermeasure construct. We explore whether the projection associated with a particular measure varies as a function of the similarity between the target and observer on that measure. Defined this way, similarity is not confounded with interpersonal or interdyadic differences because similarity along different constructs is explored for the same target-observer pairs.

Across the 20 measures used in Study 1b, we find that as the similarity between the target and the observer increased, the impact of the observer's current state on his or her description of the target, that is, projection, increased as well. Individuals seem more likely to assume that their spouses are like them when their spouses actually are like them. However, this practice makes them less responsive to their spouse's self-view. As similarity grows, the impact of the target's self-view on the observer's view of the target, that is, sensitivity, decreases. That is to say, with greater similarity, the observer's view of the other is more in line with the observer's self-view than with the other's self-view. These opposite tendencies do not reflect a statistical artifact, and neither are they trivial in

magnitude. We suggest that the common element in both processes is the trade-off between reliance on the self and reliance on the other when observers engage in evaluating others.

Specifically, we suggest that in domains in which observers were dissimilar to the target, they focused on episodes or experiences they could retrieve from memory about the target and drew inferences on the target based on these episodes. Moreover, because the degree of similarity was low, the interpretation of these episodes was relatively unbiased. As the similarity increased, observers tended to rely more on their own state in evaluating the target. We do not believe that this effect can be explained solely in terms of an anchor-and-adjust mechanism at the judgment level. On several measures (e.g., depression, relationship strain), observers evaluate the target by indicating the extent of specific behavioral symptoms. Such a response format is less likely to induce an inference from the observer's own symptoms. Instead, we think that the observer's own state colored the way that he or she interpreted the episodes from the target's past.

As expected, the impact of projection on the evaluation of the partners (targets) was the strongest when observers described their partners using measures that assess joint outcomes (e.g., financial strain). We believe that the impact of projection in these cases is compounded: it results from biased interpretation as well as a biased sampling process during retrieval. In contrast, in other cases, when the observer can easily distinguish between episodes or mood states that are relevant to the partner and those that are relevant to their own, such as in depression, projection results mainly from the way the observer interprets the episodes from the target's past.

Furthermore, in evaluating joint outcomes such as financial strain, a second kind of influence may take place. In this case, observers may fail to exclude episodes or experiences that are unique to them. This could happen either because they are unable to do so or because they do not feel compelled to do so in spite of being asked to focus on the target's state or point of view. Projection in this case is therefore augmented by the observer's sampling of experiences that reflect his or her past rather than the target's past. This failure to exclude the experiences that are unique to the observer, together with the tendency to interpret episodes from the target's past according to the observer's own state, can combine to produce the large projection effect found in some of the reports of observers in our study.

At first glance, these findings seem to support the traditional view whereby projection is seen as a bias, with the connotation that it leads the social perceiver astray. Our results, however, suggest that it might be more useful to view projection as a heuristic device that provides

shortcuts in the perception process (Davis et al., 1986). Like any heuristic device, it can lead observers to wrong conclusions, especially if they are operating in atypical situations. Still, our findings suggest that observers are fairly ingenious in using projection when they make everyday judgments about their spouse. They rely on projection heavily when it is useful (i.e., when they are similar to their spouse) and ignore it when it is not (i.e., when they are dissimilar to the spouse). It should be noted that the use of projection is not cost-free. Observers project their own view too much, above and beyond what might be expected on the basis of their similarity to the target. This can be seen most clearly in the analysis depicted in Table 2. Whereas 61% of the targets in the middle panel rated themselves below the median, the observers rated 75% of these targets below the median. Similarly, whereas 55% of the targets in the bottom panel rated themselves above the median, observers rated 70% of them above the median. As a result, whereas the below-median observers correctly classified 84% of the below-median targets, they correctly classified only 39% of the above-median targets. Similarly, the above-median observers correctly classified 82% of the above-median targets but only 45% of the below-median targets. In short, the tendency of observers to match the ratings of targets to their own depression goes well beyond the target's own depression.

The ingenuous use of projection makes it very resistant to extinction. Observers are rarely confronted with its shortcomings. In particular, consider the right-side column in Table 4, which depicts the agreement between the target's self view (T2) and the observer's view of the target (TO2). Agreement is very high, with an average correlation of .55. Thus, observers who act on the basis of their perception are not very likely to be confronted by inconsistent feedback from their spouses. Still, it is important to remember that the high agreement is obtained through two different routes. For some of the measures, especially those that are work-related, high agreement reflects in the main high sensitivity to the characteristic of the target person. For other measures (e.g., relationship involvement, economic hardship, relationship satisfaction), high agreement reflects reliance on the observer's self-view in describing the target, that is, on projection. However, because agreement is higher in the latter case than in the former case, observers are unlikely to be confronted by their inaccurate perceptions and are therefore unlikely to modify their reliance on themselves when reporting about the target.

Research on motivated cognition suggests that self-perception often accentuates one's virtues and minimizes one's faults. That is, biased self-perception may reduce threats to a positive self-concept (Kunda, 1990).

Models of motivated cognition in close relationships might suggest that individuals would be most likely to use projection in conditions where there are dissimilarities between them (Simpson, Ickes, & Blackstone, 1995). Specifically, dissimilarities might provide a threat to the stability of long-term relationships and may therefore motivate observers to minimize them by distorting perception of the spouse. From this perspective, a high level of projection should occur in conditions where dissimilarity between the spouses is maximal. Our findings are inconsistent with this prediction because projection was higher in domains of judgment in which the target and observer were similar rather than when they were dissimilar. It should be noted that the dissimilarity in our study was not threatening, whereas it was in Simpson et al.'s (1995) study. We therefore believe that in our study, projection was based on cognitive rather than motivational mechanisms. Moreover, we think that the impact of projection in our study was not dependent on conscious deliberation but was rather the outcome of the processes involved, namely, the interpretation and retrieval of episodes and experiences of the target.

It should be noted that our study involves judgments made by spouses. Because the observing spouses in our study have a long-term acquaintance with their partners, they probably have a great deal of knowledge about them. As a result, their judgments are influenced by selection mechanisms that retrieve only a subset of this information during formation of the judgment (Hastie & Park, 1986; Schul & Burnstein, 1990). Can one generalize this process to judgments that are made by casual acquaintances or even to snap judgments made by complete strangers? One major difference between judgments made by spouses and those made by casual acquaintances is that spouses have more information about the target. Still, even limited exposure to a person may provide an abundance of information and therefore may require sampling that information when evaluating the target (Ambady & Rosenthal, 1993). Future research should determine whether the impact of the observer's psychological state on his or her evaluation of the target differs as a function of the level of acquaintance and the amount of knowledge the observer has about the target.

When investigating factors that influence the perception of observers, the issue of the accuracy of observers' perception is often raised. The evaluation of the accuracy of person perception is complicated because there is no single criterion for defining accuracy (Funder, 1995). The practical solution used in many empirical investigations is to rely on some index of interjudge agreement, although, as Kenny and Albright (1987) convincingly argue, complete treatment of accuracy involves much more complicated procedures. The correlation

between the self-judgment of the target and the observer's judgment of the target (self-other agreement correlation) has been found particularly useful in the assessment of accuracy. For many practical purposes, this correlation is a satisfactory solution. For example, consider the case of depression. High agreement correlation indicates that there is a match between the self-view of targets and observers' view of the targets so that observers of highly depressed individuals view them as highly depressed and observers of nondepressed individuals view them as nondepressed. This may lead observers of highly depressed individuals to offer more support to their partners than observers of nondepressed individuals. Pragmatically, therefore, these observers are accurate. For theoretical purposes, however, it is inadequate to consider agreement correlation as an indicator of perceived accuracy because it could have been produced by reasons other than veridical perception (Cronbach, 1955; Kenny & Albright, 1987). For example, our findings show that observers of depressed individuals tend to be depressed themselves and that their view of their spouse partly reflects their own level of depression rather than their perception of their spouse's level of depression. Thus, a high degree of agreement between the observer's view of the target and the target's self-view is not necessarily a reflection of high sensitivity of the observer to the target.

There is another good reason to be on guard when interpreting agreement correlation. It has been noted that a high degree of agreement in terms of correlations tells us little about the discrepancy between the reports of the target and the observer (Cronbach, 1955; Funder, 1980; Hayes & Dunning, 1997; Murray et al., 1996). To illustrate, the reports of observers and targets about the targets' depressive symptoms might be perfectly correlated yet the observers might consistently view the targets as less depressed than the targets view themselves (Funder, 1980). Instances of systematic discrepancy of this kind often are reported in the literature. For example, Wolchik, Sandler, Braver, and Fogas (1986) reported that parents rated their children's stress from various divorce-related life events as higher than the children rated their own stress. For various practical purposes, therefore, it might be critical for future research to investigate the sensitivity of observers to their targets as reflected in absence of discrepancy, that is, a systematic over- or underestimate of the target's state in observers' report.

Finally, the assumption that the target's self-report provides the standard for judging accuracy must be considered. This assumption has been questioned on the ground that the unique perspective people have about themselves interferes with the accuracy of their self-perception (Kolar, Funder, & Colvin, 1996). Schwarz and

Wellens (1997) point out that targets and observers commit different decision errors in making personality judgments. Therefore, deciding who is more accurate more often involves the choice of criteria that are sensitive to one type of error or another. Future investigations could benefit from incorporating valid external measures of the target's characteristics so that the effects of similarity and projection on the accuracy of the observers' evaluation could be ascertained for various types of target's characteristics.

NOTES

1. Similar to Murray, Holmes, and Griffin (1996) and others (e.g., Krueger & Clement, 1997), we use the term "projection" to denote the use of the self-views or judgments in viewing and evaluating another person. This use does not carry the psychoanalytical connotation of attributing one's own anxiety to the external world rather than to one's own forbidden impulses.

2. Our analyses assess the contribution of two additional potential influences on the proxy reports. These are the effects of the states of the observer and the target at Time 1. Because our measurements are separated by a long time interval—significantly longer than a year—direct effects due to earlier experiences are likely to be small. Still, because of their theoretical importance and their potential influence on the interpretation of results, they must be considered explicitly in the statistical model employed to estimate the two concurrent influences on the observer's description of the target at Time 2 (TO2).

3. Because even minute differences in a large sample tend to produce a statistically significant χ^2 , other measures, such as the Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), and Comparative Fit Index (CFI), are used as indicators of goodness of fit. For example, Hayduk (1987) suggested that the χ^2 is instructive primarily for samples ranging from about 50 to 500 cases (p. 169). After adjusting for missing data, the size of the sample used for testing our model was 627; therefore, the statistical significance of the χ^2 is ignored in favor of the other fit measures.

4. The sample consists of couples responding at Wave 4 (Time 2). The overall *N*s larger than that used in the structural equation modeling (SEM) analysis because EQS excluded those couples in which one of the five data points (target's self-description at Time 1 [T1], target's self-description at Time 2 [T2], the observer's self-description at Time 1 [O1], the observer's self-description at Time 2 [O2], and TO2) was missing.

5. Only 1 of the 10 coefficients linking Time 1 measures to the Time 2 observer's report was significant. When targets viewed themselves as having a great desire to work at Time 1, they were seen (by the observer) as having a greater desire to work at Time 2, above and beyond their actual desire at that time. We hesitate to elaborate on this effect because it is the only instance of an effect of the Time 1 measure in the six analyses we have run.

6. For the multiple-item measures, the two path coefficients and the correlation were estimated simultaneously using SEM modeling. Because these estimates could not be computed for single-item measures or count measures, we do not report them in Table 4. They are available from the authors on request. None of our conclusions were modified by consideration of the SEM analyses.

7. Means, standard deviations, and the matrix of correlation among T2, O2, and TO2 for each measure in Table 4 are available from the authors on request.

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