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Meta-perception for pathological personality traits: Do we know when others think that we are difficult?

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Abstract

The self allows us to reflect on our own behavior and to imagine what others think of us. Clinical experience suggests that these abilities may be impaired in people with personality disorders. They do not recognize the impact that their behavior has on others, and they have difficulty understanding how they are seen by others. We collected information regarding pathological personality traits—using both self and peer report measures—from groups of people who knew each other well (at the end of basic military training). In previous papers, we have reported that agreement between self-report and peer-report is only modest. In this paper, we address the question: Do people know that others disagree with their own perceptions of themselves? We found that expected peer scores predicted variability in peer report over and above self-report for all 10 diagnostic traits. People do have some incremental knowledge of how they are viewed by others, but they do not tell you about it unless you ask them to do so; the knowledge is not reflected in ordinary self-report data. Among participants who expect their peers to describe them as narcissistic, those who agree with this assessment are viewed as being *less* narcissistic by their peers than those who deny being narcissistic. It therefore appears that insight into how one is viewed by others can moderate negative impressions fostered by PD traits.

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1. Introduction

Studies of interpersonal perception are concerned with inferences that people make about each other. Kenny (1994) outlined a number of fundamental questions involving ways in which people see themselves and others. These include issues such as *consensus* (do others agree on their assessment of a target person?), *accuracy* (does the perceiver's impression agree with the target person's actual behavior?), and *self-other agreement* (do others view the target person in the same way that she sees herself?). Another important issue is known as *meta-perception*, or the ability to view one's self from the perspective of other people. Do we know what other people think of us? If they think that we have problems, are we aware of those impressions? The literature on meta-perception for normal personality traits suggests that people do have some accurate knowledge of what others think of them. They are not particularly good at knowing what specific other people think of them, but they do have a *generalized* view of what most other people think of them (Kenny & DePaulo, 1993; Norman, 1969).

Although it has been studied primarily with regard to normal personality traits, meta-perception is also an important topic with regard to personality disorders (Damour, 1997; Westen & Heim, 2003). Personality disorders are defined in terms of enduring patterns of behavior and emotion that bring the person into repeated conflict with others or prevent the person from performing expected social and occupational roles. People with personality disorders often make their own interpersonal problems worse because they are rigid and inflexible, unable to adapt to the social challenges that they face (Chen et al., 2004; Johnson, Chen, & Cohen, 2004; Pagano et al., 2004).

Ten specific forms of personality disorder are listed in the official diagnostic manual for mental disorders (DSM-IV). They are organized into three clusters on the basis of broadly defined characteristics. Cluster A includes three disorders: paranoid, schizoid, and schizotypal forms of personality disorder. The behavior of people who fit the subtypes in this cluster is typically odd, eccentric, or asocial. Cluster B includes antisocial, borderline, histrionic, and narcissistic personality disorders. According to DSM-IV-TR, these disorders are characterized by dramatic, emotional, or erratic behavior, and all are associated with marked difficulty in sustaining interpersonal relationships. Cluster C includes avoidant, dependent, and obsessive–compulsive personality disorders. The common element in all three disorders is presumably anxiety or fearfulness. This description fits most easily with the avoidant and dependent types. In contrast, obsessive–compulsive personality disorder is more accurately described in terms of preoccupation with rules and with lack of emotional warmth than in terms of anxiety.

Most forms of mental disorder, such as anxiety and depression, are considered to be ego-dystonic; that is, people who have these problems are distressed by their symptoms and would prefer to change something about their behavior or their experience. In contrast, personality disorders are usually ego-syntonic (Hirschfeld, 1993). In other words, the characteristics or behaviors with which they are associated are acceptable to the person. They see these characteristics as being an important part of their own personality, perhaps even one of their strongest features. People with

personality disorders frequently do not see themselves as being disturbed; they do not have *insight* into the nature of their own problems. Many forms of personality disorder are defined primarily in terms of the problems that these people create for others rather than in terms of their own subjective distress.

The ego-syntonic nature of many forms of personality disorder raises important questions about the limitations of self-report measures (interviews and questionnaires) that provide the basis for their assessment in clinical as well as research settings. Many people with personality disorders are unable to view themselves realistically and are unaware of the effect that their behavior has on others. Therefore, assessments based exclusively on self-report may have limited validity (Grove & Tellegen, 1991; Klonsky, Oltmanns, & Turkheimer, 2002; Westen, 1997).

Our research group has collected data designed to compare self-report with peer-report measures of pathological personality features (Clifton, Turkheimer, & Oltmanns, 2005; Oltmanns & Turkheimer, in press; Oltmanns, Turkheimer, & Strauss, 1998; Thomas, Turkheimer, & Oltmanns, 2003). The study is concerned with several elements of interpersonal perception as it applies to characteristics that are used to define personality disorders. We are studying ways in which people see themselves, ways in which they are seen by other people, and their beliefs about what other people think of them. We collected information using peer nominations and self-report measures in a large, non-clinical sample of military recruits who were near the end of basic training (60% male). This sample was chosen for our study because it allowed us to obtain self-report and peer-report data simultaneously from groups of people who had been assigned randomly to the groups and who had all known each other for the same length of time. Members of the training groups had been through basic military training (a demanding and stressful experience) together, and they were all relatively well acquainted. The challenging circumstances of this experience increased the opportunities for each recruit to observe characteristic response styles that were exhibited by his or her training colleagues over a period of 6 weeks.

Although the military recruits were a non-clinical sample, we did expect to find people who would qualify for a diagnosis of personality disorder. Previously reported epidemiological data suggest that approximately 10–13% of adults living in the community (i.e., people who are not selected because they are seeking psychological treatment or living in an institution) would qualify for a diagnosis of at least one DSM-IV personality disorder (Mattia & Zimmerman, 2001; Weissman, 1993). A similar rate is found in our military sample. We conducted semi-structured diagnostic interviews with 433 of the recruits (Jane, Turkheimer, Fiedler, & Oltmanns, unpublished manuscript), a subsample selected in part because they had demonstrated evidence of personality pathology on either the self-report or peer nomination measures. The exact prevalence rate in the overall sample is difficult to compute because we did not select people for interviews using a specific cut-off score on any of our screening measures. Nevertheless, we estimate that approximately 9.4% of the overall military sample would have qualified for a definite PD diagnosis (Oltmanns & Turkheimer, in press). Using various assessment methods, this sample of military recruits did include people who exhibited features of a wide range of personality problems.

The first element of interpersonal perception that we examined in this study was consensus. Did the peers agree with each other when they identified members of their group who exhibited features of personality disorders? We found very high levels of agreement among peers with regard to the people whom they nominated as exhibiting features of personality disorders. The median reliability (coefficient α) for peer scores across all PD features was .74 in the military sample

(Thomas et al., 2003). These data support the conclusion that peers develop meaningful perspectives on the personality problems of other group members, and there is a relatively high degree of consensus across the peer group regarding which members exhibit these characteristics.

The second issue that we examined was self-other agreement. In both our military and college samples, correlations reflecting self-other agreement for pathological personality features are typically in the range from .25 to .35 (Clifton, Turkheimer, & Oltmanns, 2004; Oltmanns & Turkheimer, in press). In other words, when the target people were asked to describe their own personality problems, their perceptions of themselves were quite different than those provided by the other members of their groups. The magnitude of these correlations is influenced by several factors. For example, self-other agreement is somewhat higher for subgroups of people who are better acquainted, and self-other agreement is higher for positive personality traits than for more negative traits, such as those that define personality disorders. Nevertheless, the most important element of our findings with regard to self-other agreement is that the target person's impressions of their own personality problems disagreed substantially with the descriptions provided by their peers.

The apparent discrepancy between self and other perceptions raises the important question of the accuracy of these scores (Funder, 1999; Kenny, 1991). Which perspective is most useful or valid? There are, of course, many ways to examine the issue of accuracy. We have completed one comparison of self-report scores and peer nominations which has focused on the predictive validity of these scores. Four years after we began to collect personality data in our military sample, we examined the job status of all participants (Fiedler, Oltmanns, & Turkheimer, 2004). All of the recruits had enlisted for a period of four years. At the time of follow-up, we divided them into two groups: (1) those still engaged in active duty employment, and (2) those who had been given an early discharge from the military (after completion of basic training but before the end of their expected four-year tour of duty). An early discharge is typically granted by a superior officer on an involuntary basis, and is most often justified by repeated disciplinary problems, serious interpersonal difficulties, a poor performance record, or some combination of these considerations.

The predictive validity data were analyzed using survival analysis because the recruits had not completed our initial personality assessment process simultaneously. The self-report measures and the peer nominations both revealed meaningful connections between personality problems and early separation from the military. The self-report measures emphasized features that might be described as internalizing problems (subjective distress and self-harm) while the peer-report measure emphasized externalizing problems (especially antisocial personality features). When they were considered together, the peer nomination scores were more effective than the self-report scales in predicting occupational outcome (i.e., who remained on active duty).

The next question regarding interpersonal perception and personality disorders involves meta-perception. We have already reported that descriptions of personality problems based on self-report measures are often in disagreement with descriptions based on the perceptions of peers. Furthermore, there is relatively good consensus among the peers about which members of the group exhibit pathological traits, and there is also reason to believe that, in some circumstances, the peers' perceptions are more accurate than the self-report scores. Is the target person aware of what other people think of him or her, even if those two perspectives are at odds with each other? That question is the focus of the analyses to be presented in this paper.

2. Methods

2.1. Participants and design

Participants were 2026 Air Force recruits at Lackland Air Force Base in San Antonio, Texas (1265 males; 761 females) who agreed to participate in the current study 1 day before the end of basic military training. Basic training lasted for 6 weeks during which recruits lived and trained together in flights (groups) of 27–55 individuals (Median = 41; Mean = 41.3). Most of the 49 flights that participated were mixed gender flights (31 flights; 52.5% male on average), but 14 flights consisted only of males and 4 flights consisted only of females. Participants ranged in age from 18 to 35 years, with a median age of 19 years; and were predominately White (64.4%), followed by Black (17.2%), Other (10.5%), Bi-racial (3.7%), Asian (3.4%), and Native American (0.8%).

All participants were asked to describe their own (self-report) and their fellow flight members' (peer report) level of personality pathology using the *Multi-Source Assessment of Personality Pathology* (MAPP). In addition, they were asked to indicate how they thought their fellow flight members had rated them (expected peer report). Participants completed all three scales on a computer. The self- and expected peer report versions of the MAPP were added to the experimental protocol 6 months into the study, resulting in a sample of 1503 recruits (61% male; 39% female) for the present analyses.

The MAPP consists of 79 items based on the features of the 10 personality disorders identified in DSM-IV and 24 additional positively toned supplemental items. Each of the 78 criteria for personality disorders listed in DSM-IV was translated into a single question except for Narcissistic criterion 8 which was split into two questions. One personality disorder item referred to sexual behavior (''has little, if any, interest in sexual experiences with another person'') and was dropped due to military regulations. The following analyses use only the 78 remaining personality disorder items.

2.1.1. MAPP (peer-report)

Our peer nomination procedure, developed for this project, represents a hybrid nomination and rating scale (Kane & Lawler, 1978). Participants were not required to rate each person in their group. They were required to nominate *at least* one fellow flight member as showing the trait or characteristic in question before moving on to the next item. For each nomination, the judge was asked to indicate using a 0-to-3 scale (0 = never like this, 1 = sometimes like this, 2 = usually like this, and 3 = always like this) how much the target person exhibited that trait. The default selection was *zero* for each recruit. If participants did not believe that any of their fellow recruits exhibited a given characteristic, they were asked to click a button indicating that the item was difficult, but they still had to select at least one person who came closest to exhibiting that characteristic. Participants used the full range of the scale, and correlations between the items that were rated as difficult and those that were not difficult ranged from .63 to .80 within personality disorder diagnoses.

Item scores were calculated by summing across judges for each target and then dividing by the number of judges in the group. Scales were calculated by summing the items associated with each PD and dividing by the number of items for that PD. The α reliabilities for all the scales ranged

from .76 (Schizoid) to .96 (Narcissism), and the α reliability across all items was .97. The means of the 10 PD scales ranged from 0.09 (Avoidant) to .13 (Narcissism); the mean across scales was 0.10 (see Table 1 for all means and standard deviations). The items and scales were highly positively skewed and a natural log transformation of the scaled scores was used in all regression analyses to normalize the regression residuals.

2.1.2. MAPP (self and expected peer)

After each participant had completed the peer section of the MAPP, he or she was taken back through the entire set of items one more time. They were asked two more questions about each item: (1) "How do you think most other people in your group rated you on this characteristic?" And (2) "What do you think you are really like on this characteristic?" They were required to select a response from four options: Never like this ("0"), sometimes like this ("1"), usually like this ("2"), or always like this ("3"). These questions provided two more measures to be used in the following analyses. One is a "self" score, based on the recruit's answers to the questions "what are you really like" with regard to each item on the inventory. The other is an "expected peer" score, based on the recruit's predictions about the way in which most other people in the flight would describe him or her. We asked the person to indicate what most other people in the group would say about him or her rather than what each specific person would say because previous studies have shown that these generalized impressions are more accurate than differentiated impressions of how they are uniquely viewed by particular others (Kenny & DePaulo, 1993). The α reliabilities for the self scales ranged from .57 (Schizoid) to .82 (Borderline) and for the expected peer scales ranged from .59 (Schizoid) to .86 (Narcissism).

For both self and expected peer scales, only the Schizoid and Obsessive–Compulsive personality disorder scales had α reliabilities below .70. Across all PD items the α reliabilities were .96 for both self and expected peer reports. The means of the 10 PD scales ranged from 0.26 (Anti-Social) to .74 (Obsessive–Compulsive) for the self report and from .31 (Borderline) to .68 (Schizoid) for the expected peer report; the overall mean for self-report was .43 ($SD = .32$) and for the expected peer report it was .45 ($SD = .35$) (see Table 1 for scale means and standard deviations).

Table 1
The means and standard deviation for all ten personality disorders for the peer, self, and expected peer report scales (N(peer-report) = 2026; N(self and expected peer report = 1503))

	Paranoid *M* (*SD*)	Schizotypal *M* (*SD*)	Schizoid *M* (*SD*)	Anti-Social *M* (*SD*)	Dependent *M* (*SD*)
Peer	0.09 (0.09)	0.09 (0.10)	0.11 (0.08)	0.10 (0.12)	0.09 (0.11)
Self	0.51 (0.48)	0.40 (0.42)	0.68 (0.44)	0.26 (0.37)	0.28 (0.37)
Expected peer	0.49 (0.46)	0.41 (0.42)	0.68 (0.45)	0.33 (0.43)	0.34 (0.43)
	Narcissistic *M* (*SD*)	Borderline *M* (*SD*)	Histrionic *M* (*SD*)	Avoidant *M* (*SD*)	OC *M* (*SD*)
Peer	0.13 (0.16)	0.09 (0.09)	0.11 (0.12)	0.09 (0.10)	0.11 (0.10)
Self	0.30 (0.38)	0.29 (0.38)	0.41 (0.40)	0.42 (0.45)	0.74 (0.43)
Expected peer	0.39 (0.45)	0.31 (0.40)	0.44 (0.42)	0.44 (0.45)	0.65 (0.43)

3. Results

Table 2 displays the correlations between self, expected peer, and peer scores on all ten personality disorders. As can be seen both self and expected peer ratings have small, but significant, associations with peer ratings. To explore the associations further we conducted a series of partial correlations. The correlations between self and peer ratings when controlling for expected peer ratings become much smaller and a majority become negative. Conversely the correlations between expected peer and peer ratings when controlling for self ratings attenuate slightly, but remain positive and significant.

To further explore this pattern, we ran a series of hierarchical linear regressions in which we regressed peers' mean ratings of individuals' personality pathology on three variables: (1) individuals' mean-centered self ratings of personality pathology, (2) individuals' mean-centered ratings of expected peer ratings, and (3) the simple cross-product (interaction) between them. As mentioned above, peer mean ratings of personality pathology were positively skewed and were log transformed. This process resulted in normalized residuals, suggesting that linear regression is an appropriate analysis for these data. Self ratings and expected peer ratings were entered into the model in the first block and the interaction term second—allowing for proper interpretation of the model (Cohen & Cohen, 1983).

Table 3 displays the B values and standard errors from both blocks over all 10 personality disorders; Table 4 displays R^2 values for all ten models. In all models, expected peer ratings positively predicted actual peer ratings, whereas in those models where self ratings have predictive value they tend to be negatively related to actual peer ratings. The interaction term in all models was negative and explained a statistically significant, albeit small, portion of the variance of actual peer ratings (all the R^2 change scores for the interaction model are significant, see Table 4 for values).

Given the similarity across different types of personality disorder, we combined all the items and ran a hierarchical regression on the combined data. Again expected peer ratings were positively associated with actual peer ratings ($B = .814$, $SE = .090$), self ratings were negatively associated with peer ratings ($B = -.306$, $SE = .103$), and the interaction term was negative ($B = -.180$,

Table 2
The correlations between peer, self, and expected peer reports (N(peer report) = 2026; N(self and expected peer = 1503))

	Peer with expected peer	Peer with self	Self with Expected peer	Peer with expected peer, self partialed out	Peer with self, expected peer partialed out
Paranoid	**0.210**	**0.145**	**0.794**	**0.158**	−0.036
Schizoid	**0.233**	**0.215**	**0.791**	**0.101**	**0.052**
Schizotypal	**0.285**	**0.232**	**0.887**	**0.176**	**−0.046**
Antisocial	**0.296**	**0.229**	**0.773**	**0.193**	−0.001
Narcissistic	**0.272**	**0.165**	**0.766**	**0.230**	**−0.071**
Avoidant	**0.261**	**0.213**	**0.775**	**0.155**	0.018
Dependent	**0.264**	**0.184**	**0.774**	**0.196**	−0.034
OC	**0.239**	**0.142**	**0.785**	**0.209**	**−0.077**
Histrionic	**0.256**	**0.174**	**0.830**	**0.203**	**−0.070**
Borderline	**0.267**	**0.198**	**0.838**	**0.189**	−0.049

Note. All correlations in bold are significant at $p < .05$.

Table 3
Hierarchical regression unstandardized coefficients (standard errors in parentheses) predicting actual peer scores ($N = 1503$) across all 10 personality disorders

	Paranoid *B* (*SE*)	Schizo-typal *B* (*SE*)	Schizoid *B* (*SE*)	Anti-Social *B* (*SE*)	Dependent *B* (*SE*)
Main effects model					
Self	−0.063 (0.064)	**−0.220** (0.092)	0.102 (0.052)	−0.023 (0.097)	−0.059 (0.078)
Expected peer	**0.403** (0.067)	**0.703** (0.091)	**0.226** (0.051)	**0.751** (0.084)	**0.501** (0.068)
Interaction model					
Self	−0.021 (0.065)	−0.139 (0.095)	**0.133** (0.054)	0.195 (0.110)	0.017 (0.087)
Expected peer	**0.457** (0.069)	**0.752** (0.092)	**0.242** (0.052)	**0.809** (0.085)	**0.526** (0.069)
Interaction	**−0.147** (0.051)	**−0.183** (0.056)	**−0.098** (0.047)	**−0.288** (0.069)	**−0.118** (0.058)
	Narcissistic *B* (*SE*)	Borderline *B* (*SE*)	Histrionic *B* (*SE*)	Avoidant *B* (*SE*)	OC *B* (*SE*)
Main effects model					
Self	**−0.226** (0.094)	−0.157 (0.088)	**−0.184** (0.090)	−0.002 (0.061)	**−0.162** (0.058)
Expected peer	**0.745** (0.078)	**0.618** (0.083)	**0.679** (0.084)	**0.383** (0.061)	**0.481** (0.058)
Interaction model					
Self	−0.077 (0.107)	0.063 (0.100)	−0.099 (0.094)	0.049 (0.064)	**−0.146** (0.058)
Expected peer	**0.781** (0.079)	**0.703** (0.085)	**0.721** (0.085)	**0.424** (0.063)	**0.525** (0.060)
Interaction	**−0.218** (0.075)	**−0.250** (0.056)	**−0.183** (0.063)	**−0.150** (0.051)	**−0.142** (0.049)

Note. All coefficients in bold are significant at $p < .05$.

Table 4
The amount of variance accounted for by the main effect and interaction models across all PD's

	Model	R^2	R^2 change
Paranoid	Main effect	.048	
	Interaction	.053	.005
Schizotypal	Main effect	.091	
	Interaction	.097	.006
Schizoid	Main effect	.062	
	Interaction	.064	.003
Anti-Social	Main effect	.113	
	Interaction	.123	.010
Dependent	Main effect	.071	
	Interaction	.073	.002
Narcissistic	Main effect	.090	
	Interaction	.095	.005
Borderline	Main effect	.075	
	Interaction	.087	.012
Histrionic	Main effect	.082	
	Interaction	.087	.005
Avoidant	Main effect	.061	
	Interaction	.066	.005
OC	Main effect	.066	
	Interaction	.071	.005

Note. All R^2 values are significant at $p < .05$.

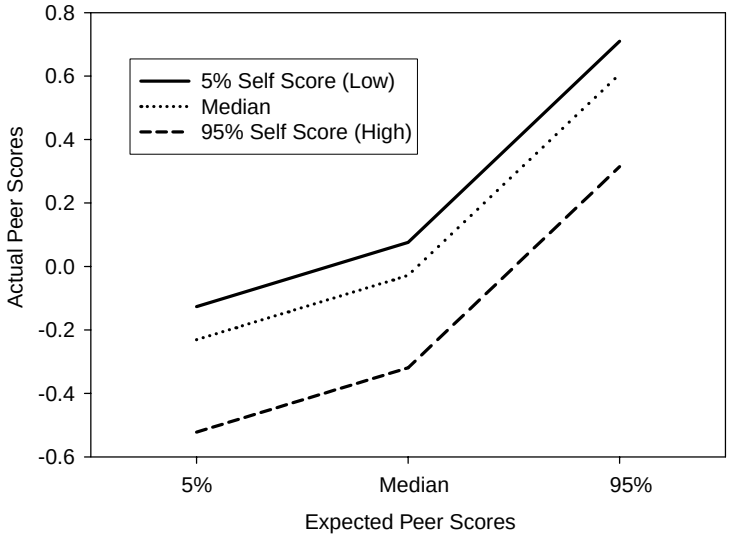

Fig. 1. Peer-report collapsed across all personality disorders predicted by self and expected peer report.

$SE = .056$). The combined model explained 8.3% of the variance in peer ratings (main effects model $R^2 = .076$, $p < .001$; interaction model $R^2 = .083$, $p < .001$; R^2 change $= .007$, $p < .001$). Fig. 1 displays the predicted regression lines for individuals who are high, low, and average on both expected peer ratings and self ratings. Since actual peer ratings have been log transformed, they can have negative values (low in personality pathology) and positive values (high in personality pathology).

As can be seen in Fig. 1, expected peer ratings are positively associated with actual peer ratings in that the more pathology you think your peers think you have (meta-perception) the more they rate you as having pathological personality traits even when controlling for self ratings. In other words, individuals have some knowledge, beyond their own beliefs about themselves (self-ratings), of what their peers think of them. Self ratings, when expected peer ratings are in the model, are negatively related to actual peer ratings. Individuals who rate themselves as high in personality pathology are viewed as being lower in personality pathology by their peers when you adjust for what they think their peers think about them.

The interaction term, although significant, has a very slight effect which is difficult to discern in Fig. 1. People who are low in self-rating, but high in expected peer ratings are rated as having more pathological traits by their peers than those who are low in both self ratings and expected peer ratings. The opposite is true of those with high self-ratings: being high in both self ratings and expected peer ratings is associated with being rated as slightly less pathological by peers than those who are high in self ratings and low in expected peer ratings.

4. Discussion

Cognitive science has recently been concerned with a variety of processes involved in knowledge about the self and knowing what others think (e.g., Nickerson, 1999). The ability to take the

perspective of others plays an essential role in many aspects of our lives. Errors that are made in generating estimates of the beliefs of others can disrupt our relationships with other people. Conversely, the ability to recognize the negative impact that our behavior can have on others may mitigate the extent to which we are viewed as being demanding, exploitative, self-absorbed, or paranoid. The phenomenology of personality disorders is intimately related to the interface of self knowledge and person perception (Westen & Heim, 2003). Specifically with regard to the theme of this special volume, our results suggest that insight into the way others see us can be beneficial in the sense that it moderates the impressions that we create in others.

Our own impressions provide only one limited (and often biased) view of personality pathology and interpersonal difficulties. Self-other agreement is low for the assessment of features of personality disorders. In other words, the information that we obtained using a peer nomination method was found to be relatively independent of that obtained from self-report (see Table 2, second column). Previously reported findings from our study suggest that both sources of information—self and peer—are useful in predicting the ability of these recruits to succeed in their first year of active duty (Fiedler et al., 2004). Although the correlation between self-report and peer-report is consistently low (range from .15 to .24 in this sample), the independent information in peer reports does seem to be telling us something important. It must be useful information, especially in the sense that personality disorders are frequently defined and experienced in terms of interpersonal conflict (Haslam, 2004).

The primary motivation for the present paper was to explore the phenomenon of meta-perception. Do people know what others think of them, even if they disagree with others' point of view? Based on results reported by other investigators, we expected to find a very high correlation between self scores and expected peer scores, and that is, in fact, what we found (see Table 2, column 3). These correlations ranged from .77 to .87 in the present sample. To a large extent, people believe that others share the same view that they hold of their own personality characteristics. Symbolic interactionists (e.g., Stryker, 1980) have argued for many years that the self is based on "reflected appraisal." In other words, our views of ourselves depend upon our observations of the way that other people see us. The large correlations that we obtained between self and expected peer scores are consistent with this point of view. On the other hand, the fact that self and expected peer scores independently predict peer scores also suggests that expected peer scores are not the same as self scores.

To explore the meaning of expected peer scores in more detail, they were analyzed in relation to actual peer scores. For each category or group of PD traits, the correlation between expected peer scores and actual peer scores is higher than the correlation between self scores and peer scores (see Table 2, columns 1 and 2). The fact that the expected peer scores are more closely related to peer scores than self scores are related to peer scores suggests that people do, in fact, have some knowledge in this regard. They are at least partially aware of the ways in which other people think about them, above and beyond their views of themselves. When we computed partial correlations between expected peer scores and actual peer scores, controlling for self, the correlations remained significant. These values represent information that the person holds *above and beyond* whatever he or she believes about the self. When we looked at these relations the other way around (partial correlations between self and peer, controlling for expected peer), the correlations were essentially zero or even slightly negative. This pattern suggests that any information in the self score that is independent of expected peer is, if anything, negatively related to actual impressions that peers

hold of the self. Given a particular expectation of what your peers think of you (i.e., controlling for expected peer scores), your own view of your personality problems is inversely related to that of your peers. If you think you have fewer problems, your peers think you have more.

When self-report and expected peer-report are used simultaneously as predictors of actual peer report in a multiple regression, expected peer-report contributes unique variance for every diagnostic category. Self-report generally does not. As can be seen in Tables 3 and 4, the joint prediction of peer report from self report and expected peer report is modest, but it is statistically significant for each category. To the extent that this prediction can be uniquely attributed to one or the other source, it is almost always expected peer-report that is doing the work. The effect size for expected peer is substantially higher than that for the self score, so to whatever extent we are interested in knowing about what the peers actually think of the person, we learn more from the expected peer scores. This again shows, using another statistical approach, that people do have some incremental insight into what other people think of them, but they do not tell you about it if you only ask them for their own description of themselves.

These patterns obtain to varying degrees for all of the different forms of personality disorder. Correlations between self scores and actual peer scores are low across all of the categories listed in Table 2, and the correlations between expected peer scores and actual peer scores are somewhat higher in each case. At the outset of this study, we expected that self-report scores might eventually turn out to be especially discrepant from peer scores for specific types of personality pathology, such as narcissistic and antisocial PDs. Our findings suggest that, although there may be some small variations in the amount of disagreement between these sources, there is not a single form of personality pathology for which self scores provide a close approximation of the impressions provided by peers.

Our data also suggest that the extent to which people do have some knowledge of their peers' impressions of themselves does not vary substantially as a function of the level or extent of the target person's own personality pathology. There is a significant interaction (see Fig. 1), but it is responsible for a very small proportion of the variance. People do have some small amount of knowledge of what others think of their personality problems, and the extent of that knowledge is fairly consistent regardless of the degree to which people seem to have personality disorders. Of course, we should be cautious about this conclusion because of the non-clinical nature of our sample. Our sample of military recruits did include a substantial number of people who would qualify for a diagnosis of personality disorder, but it was nevertheless not a clinical sample. People who exhibit more extreme forms of personality disorder might be more substantially impaired with regard to their insight regarding the views of others.

Self-report measures provide an opportunity for the person to reflect deliberately about his or her own personality characteristics. Unfortunately, impressions that people have of their own abilities and behavior are often inaccurate (Dunning, 2005; Leary, 2004). One important consideration in this regard is that much of what we know is out of awareness. The adaptive unconscious—including a variety of motivational, perceptual, and cognitive processes that function rapidly and without effort—is responsible for guiding many important elements of our behavior (Wilson, 2002; Wilson & Dunn, 2004). When we are instructed to think consciously about ourselves, especially when we try to imagine whether other people believe that we are the source of interpersonal conflicts or difficulties, we may focus on thoughts and feelings that are not the most important factors that actually guide our behavior in interpersonal situations.

Other people may hold a very different view of our own behavior because they have an opportunity to observe directly those elements of our actions that are guided by unconscious mechanisms (which we do not recognize). Our own data and many findings reported by other investigators indicate that there are times when the perspectives of others are more accurate than descriptions that are based on conscious deliberations about the self (Funder, 1999; Kenny, 1991). In the process of trying to understand ourselves, we would often be well served by taking the perspective of other people and imagining what they know about us. Laboratory studies have found that the accuracy of meta-perception can be increased if the person is provided with opportunities to observe carefully specific aspects of his or her behavior in group situations (Albright & Malloy, 1999). In clinical settings, this may be one of the most important elements of the therapeutic process, which may be guided by a therapist's observations or feedback from other people participating in group therapy. To the best of our knowledge, there have not been any direct attempts to measure changes in meta-perception skills as a function of therapeutic experience.

The results of the present study have at least one important practical implication regarding procedures used for the assessment of personality disorders. Current practice places primary emphasis on the use of self-report instruments (either questionnaires or semi-structured diagnostic interviews). Target persons are asked to provide their own impressions of the extent to which they meet descriptions of the various features of personality disorders. For example, with regard to one criterion for narcissistic PD, the person might be asked a question something like the following, ''Would you say that you are an arrogant person?'' An alternative format for the same item, and one that sometimes appears in existing measures, would be to ask, ''Have *other people* said that you are arrogant?'' Although most instruments seem to treat these questions as being essentially identical, our data suggest that they are not. If we want to know what other people think of the target person, we are better off asking the question in the latter form. Indeed, the fact that most people do hold some amount of knowledge about what others think of them suggests that it might be useful to ask each question in two different forms: (1) What do *you* think you are like?, and (2) What do *most other people* think you are like?'' We have developed a self-report instrument for this purpose and are currently collecting data regarding the predictive validity of information provided in response to the two kinds of questions.

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