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Aberrant social relations in the personality disorders

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Research on the interpersonal aspects of personality disorders (PDs) has generally sought to describe them in terms of behavioural dispositions, often mapping these dispositions onto the interpersonal circumplex. The present study, in contrast, tested a theory that accounts for PDs as systematic disturbances in relationships between people. Self-reports of 57 participants experiencing significant interpersonal difficulties showed many predicted associations between PD symptoms and aberrant enactment of four elementary forms of social relationships (Fiske, 1991). Symptoms were associated with aberrant motivations for, and cognitive implementations of, these 'relational models', and with difficulties conducting them. These associations were comparable in strength to, but largely independent of, those obtained with a circumplex measure. Aberrations of authority- and equality-based relationships were central to many PDs, but not captured well by the circumplex. A relational analysis affords a fruitful and largely unexplored perspective on PDs.

It is widely accepted that PDs are to a large degree disorders of interpersonal life, and have characteristic patterns of interpersonal disturbance. Interpersonal features figure prominently in clinical descriptions of many PDs, including the DSM-IV's diagnostic criteria. Dependent personalities go 'to excessive lengths to obtain nurturance and support from others', narcissists are 'interpersonally exploitative', borderlines have 'a pattern of unstable and intense interpersonal relationships', schizotypals 'lack . . . close friends or confidants', and avoidants are 'preoccupied with being criticized or rejected in social situations' (American Psychiatric Association, 1994).

Most theories of PD do not address these interpersonal features directly or systematically. Neurobiological theories emphasize disturbances in intrapersonal processes such as affect regulation and behavioural inhibition, whereas psychodynamic theories emphasize intrapsychic conflicts and deficits. The inflexible schemas and strategies

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invoked by cognitive accounts of PD often have interpersonal content (Pretzer & Beck, 1996) but are rarely framed in interpersonal terms. For example, borderline PD is attributed by neurobiological theorists to defective modulation of emotion-related neurotransmitter systems; by psychoanalytic theorists to primitive ego defences, weak superego structure and early developmental fixation; and by cognitivists to poor emotion regulation and stress tolerance. None of these explanatory variables are intrinsically social, although all of them might influence someone's interpersonal relations indirectly.

The main tradition that has systematically investigated the interpersonal aspects of PDs is based on the interpersonal circumplex (Kiesler, 1986; Wiggins, 1982). The circumplex represents interpersonal behaviours, traits and problems as falling around the perimeter of a circular plane, the axes of which are control (dominance vs. submissiveness) and affiliation (warmth vs. coldness). In theory, any interpersonal characteristic can be represented as a blend of these dimensions. Many researchers (e.g. Sim & Romney, 1990; Soldz, Budman, Demby, & Merry, 1993; see Widiger & Hagemoser, 1997, for a review) have found that several PDs occupy replicable locations within the circumplex, corresponding to characteristic interpersonal patterns.

Circumplex research has shown the importance of many PDs' interpersonal aspects, but they have several limitations of scope. First, it has been unable to reliably capture the interpersonal style of several PDs — antisocial, borderline, obsessive-compulsive (O-C) and schizotypal — which may need to be accounted for by other personality dimensions or data structures (Romney & Bynner, 1997; Widiger & Hagemoser, 1997). Moreover, several PDs that do project onto the circumplex have very similar locations, although they are clinically quite distinct. For instance, narcissistic and paranoid PDs share similar locations, as do schizoid and avoidant PDs.

A second limitation of circumplex research on PDs is that the circumplex is used as a descriptive schema, not as an explanatory theory. The circumplex itself is grounded in the theoretical contributions of Sullivan and Leary, but PD research has simply sought to locate the circumplex position and associated descriptive features of PDs. It does not specify the psychological structures, mechanisms and processes underlying these interpersonal features. A circumplex description such as 'submissiveness' might have several distinct sources: strong dependency needs, weak dominance striving, attributing hostile intentions to authorities.

A third limitation of scope is that the circumplex depicts behavioural attributes of individuals, and neglects patterns of relationships. Some PDs may be characterized by distinctive ways of construing, conducting, investing in and experiencing relationships, not merely distinctive traits. This level of analysis concerns patterns of relationship *between* people rather than dispositions *within* individuals. The circumplex can, in principle, represent relational patterns (i.e. complementarities between the behaviour of two people, represented by two circumplexes), but circumplex research on PDs has adopted an exclusively monadic, non-relational approach.

One theoretical approach that superficially resembles the circumplex but largely avoids these limitations is the 'interpersonal octagon' (Birtchnell, 1996). Although this approach rests on a quasi-circular model with similar axes to the circumplex — close vs. distant and upper vs. lower — it embeds PDs in an explanatory context of interpersonal objectives and competencies rather than serving simply as an organizing schema for descriptive trait terms. Research (Birtchnell & Shine, 2000) suggests that all PDs are associated with at least one octagon octant, generally consistent with hypothesis, whereas several have no robust circumplex location. Like the circumplex, however, the octagon's focus is primarily non-relational in our sense, addressing forms of

interpersonal behaviour rather than forms of interpersonal relationship. For example, 'upwardly directed' activity in the octagon's terms refers to an individual's submissive behaviour rather than to a form of dyadic interconnection in which complementary upward and downward behaviours are exchanged. Despite the early promise the octagon has shown, the circumplex remains the prevailing interpersonal account of PDs and is therefore this study's focus of comparison.

In view of the limitations of circumplex models, the time is ripe for a theory-guided examination of the relational aspects of PDs. Relational models (RMs) theory (Fiske, 1991) offers one, proposing four elementary cognitive models with reference to which people generate, represent, coordinate and evaluate social relations. Communal sharing (CS) relationships are based on an understanding that people in a group or dyad are essentially equivalent and undifferentiated, as is common in kinship and love relationships. Authority ranking (AR) relationships involve asymmetry among people who are ordered on a hierarchical social dimension, such as rank or status. Equality matching (EM) relationships are egalitarian, based on a model of even balance and reciprocity in-kind, and are common among non-intimate peers, acquaintances and colleagues (e.g. car-pools, baby-sitting cooperatives, eye-for-an-eye feuds). Market pricing (MP) relationships are based on a model of proportionality and organized with reference to ratios and rates, such as wages and cost/benefit calculations. RM theory argues that these models are universally available for people to organize their interactions, the (usually unreflective) choice of which model(s) to implement being determined by cultural norms, social demands and personal dispositions.

RM theory has several strengths that recommend it as a way to account for PDs relationally. It is well supported by psychological research, which demonstrates the reality of the models and their wide-ranging influence on social cognition and behaviour (Fiske & Haslam, 1996). The RMs correspond well to people's implicit representation of relationships (Haslam & Fiske, 1992); account for interpersonal slips and intentional substitutions (Fiske & Haslam, 1998; Fiske, Haslam, & Fiske, 1991); and organize person memory (Fiske, 1995). Consistent with the theory, they are discrete categories (Haslam, 1994a, 1999), predict people's intuitions about relationships better than relationship dimensions or complementarity rules (Haslam, 1994b), and are empirically coherent (Haslam & Fiske, 1999).

A second strength of RM theory as a basis for a relational account of PDs is that it avoids two limitations of circumplex models. First, research has shown that the RMs capture a distinctly relational level of analysis that is irreducible to the attributes of individuals (e.g. personality, gender, ethnicity; Fiske & Haslam, 1996). Secondly, RM theory goes beyond the description of interpersonal behaviour, offering an explanation of what goes wrong. It posits that aberrations in the structure, intensity or implementation of the RMs could underlie interpersonal disturbance. Thus, it may offer an account of the interpersonal aspects of PDs that complements the circumplex and is both relational and explanatory.

How PDs might be accounted for in RM terms has been sketched by Fiske and Haslam (1997). We argue that the extreme, inflexible and maladaptive interpersonal behaviour that characterizes PDs is underpinned by aberrant implementations of, and motivations for, the four fundamental kinds of relationship. We propose that when a person enacts a relationship in a way that is discrepant with the expectations of others — by implementing a discrepant RM or implementing a shared model in a deviant manner — the relationship will be disturbed and the person judged negatively (Fiske & Tetlock, 1997). Someone who has a trait-like tendency to enact relationships in

discrepant ways will experience a consistent pattern of interpersonal disturbance, perhaps to the point of PD. For instance, people who approach relationships with a tendency to over-implement AR and under-implement EM—because of aberrant motives or cognitive biases—will fall foul of interactants in predictable ways. By introducing culturally inappropriate elements of rank and hierarchy into their relationships, and neglecting reciprocal egalitarian obligations, they will appear narcissistic (i.e. 'grandiose', 'entitled', 'pretentious', 'arrogant', 'exploitative', and lacking 'reciprocal interest'; American Psychiatric Association, 1994, pp. 658–659).

The interpersonal styles of many PDs may be explained by similar patterns of discrepant implementation of RMs, discrepancies that violate others' normative expectations and lead to poorly coordinated relationships. Hypotheses for specific PDs are summarized in Table 1. Unusually *low* CS motivation should be observed in antisocial, paranoid and schizoid PDs. Antisocial PD is marked by disregard for the needs and feelings of others, neglect of dependants, and an alienated sense of not belonging. Paranoid PD is associated with a distrust and avoidance of close, confiding relationships, and with a solitariness, self-sufficiency and apparent lack of tender feelings also seen in schizoids. Unusually *strong* CS motivation should be observed in avoidant, borderline, dependent and histrionic PDs. Avoidant individuals have strong but thwarted desires for close relationships, and like dependent individuals often become deeply attached to others. Dependent personalities appear to have more extreme CS-related clinging and fears of abandonment. Borderlines share these fears and seek intense, merging relationships, and the histrionic's intrusiveness, dependency and presumption of greater intimacy than their relational partners may reflect an unusually powerful investment in CS relationships. We hypothesize that all of these motivational aberrations are associated with corresponding tendencies to cognitively construe relationships in CS terms. Avoidant and dependent personalities should also tend to construe their relationships in AR terms: they are sensitive to rank and the disapproval of superiors, and thus behave in a submissive, passive, inhibited or deferential fashion.

Table 1. Hypothesized associations between PDs and motivations for, and cognitive implementation of, the RMs ($N = 57$)

	Relational models			
Personality disorder	CS	EM	AR	MP
Antisocial	low			
Avoidant	high		high	
Borderline	high			
Dependent	high		high	
Histrionic	high			
Narcissistic		low	high	
O-C			high	
Paranoid	low		high	high
Schizoid	low			

We hypothesize that several PDs are associated with AR aberrations. Narcissistic, O-C and paranoid PDs should be associated with unusually strong investment in AR

relationships and a tendency to cognitively over-implement them. Narcissists desire to take dominant, admired positions in relationships, and are very cognisant of rank and status. Paranoid individuals are also 'attuned to issues of power and rank' and need 'a high degree of control over those around them' (American Psychiatric Association, 1994, p. 635). O-C PD is characterized by AR themes of interpersonal control, deference and stubborn insistence that others comply with the person's wishes.

Aberrations in the implementation of EM relationships are hypothesized only for narcissistic PD. Narcissistic individuals should have unusually low motivation for egalitarian relationships that demand strict reciprocation, and a weak tendency to construe relationships in terms of balance, manifested in entitlement, arrogance and exploitation of interactants.

MP aberrations are predicted for paranoid PD alone. Paranoid individuals have a callous, 'rational', self-sufficient and autonomous interpersonal style, and are vigilant to the possibility that others are exploiting or competing with them. These features are consistent with strong MP motives, and with seeking to construe relationships in MP terms in contexts where others do not.

In sum, we propose a variety of speculative hypotheses about the relational aspects of some PDs, based on a well-supported social-cognitive theory of RMs. To test them, new measures of people's relational tendencies — difficulties, motives and cognitive construals — were developed and correlated with a measure of PD symptomatology. The study also compared the prediction of PD symptoms afforded by the RMs with that afforded by the interpersonal circumplex, hypothesizing that the former would offer a complementary perspective.

Method

Participants

We recruited participants experiencing interpersonal difficulties, in the hope of obtaining a sample with high levels of PD symptoms. A non-clinical sample was recruited to assess personality disturbance as it occurs in the general community, without potentially confounding peculiarities of the help-seeking population (e.g. comorbid Axis I disorders). A newspaper advertisement solicited 'individuals with difficulties relating to others in their work or personal lives'. Respondents who were not native English speakers or high school graduates were excluded, yielding 57 participants, 37 women and 20 men, who ranged in age from 18 to 53 ($M = 29.8$) and were ethnically diverse (35 White, 15 Black, four Asian, three Hispanic). Most (51) were single, and their occupations were varied.

Materials

Inventory of Interpersonal Problems (IIP)

The IIP (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988) is a popular 127-item self-report measure of interpersonal problems based on verbatim complaints of patients in psychotherapy. Items concern behaviours that the person regards as difficult or performs excessively, and are related on a scale from 0 (not at all) to 4 (extremely). We used a scoring system developed by Alden, Wiggins, and Pincus (1990) that uses eight-item scales to represent circumplex octants. Scale alphas ranged from .72 to .89, with a mean of .82.

Personality Diagnostic Questionnaire—4th Edition (PDQ-4)

The PDQ-4 (Hyler, 1994) is a 99-item self-report inventory that assesses the 10 DSM-IV PDs. Items

are rated true or false, apart from two omnibus items based on DSM-IV threshold criteria, and scales contain seven to nine items. Self-report measures of PDs have significant limitations, often having low specificity and yielding many false positives, but the PDQ-4 is a quick, standardized and repeatedly refined measure. Unlike many of its alternatives, it is not embedded in a long personality measure, and its scales have no item overlap. Previous versions of the PDQ-4 have been widely used in PD research, as has the current version (e.g. Birtchnell & Shine, 2000).

Modes of Relationship Questionnaire (MORQ)

The MORQ is a self-report measure developed by Fiske and Haslam (Haslam & Fiske, 1999) for assessing personal relationships in terms of RM theory. The 32-item measure contains four scales organized around eight social domains: decision-making, distribution and use of resources, exchange, identity, moral evaluations, social influence, work, and other. For instance, in the exchange domain, items are 'If either of you needs something, the other gives it without expecting anything specific in return' (CS); 'you keep track of what you give each other, in order to give back the same kind of thing eventually' (EM); 'One of you has to turn over some things to the other, who doesn't necessarily have to give them back' (AR); and 'If one of you gets something from the other, they would pay the other accordingly (even if you don't necessarily pay with money)' (MP). Items are rated from 0 ('not at all true of this relationship') to 6 ('very true of this relationship'). Confirmatory factor analyses (Haslam & Fiske, 1999) support the coherence and internal consistencies of the scales.

The MORQ was previously used to assess differences between relationships rather than people, so in the present study, its use was modified. As before (e.g. Haslam, 1994a; Haslam & Fiske, 1992), participants listed 40 personal acquaintances and rated a representative sample of 10 acquaintances on the 32 items. We used this sampling procedure to obtain as broad a range of relationships as possible. Participants' scores on the four scales were calculated by taking the mean of the scale totals across the 10 relationships. These scores represent participants' tendencies to construe their relationships in terms of each of the four RMs.

Relationship Profile Scale (RPS)

Developed for the present study, this scale assessed participants' difficulties with, and motivational investment in, the four RMs. Participants read one-paragraph descriptions of relationships governed by each of the RMs (see Haslam & Fiske, 1992), followed by five questions regarding relationships of each kind. First, participants rated the percentage of their relationships that were of that kind from 0 to 100 ('Of all the people you interact with, estimate how many of your relationships would fit this description'). Then, on tailored 1–7 scales, they rated 'How important is it to you to have relationships of this kind?', 'How satisfied are you with your relationships that are like this?', 'In this kind of relationship, how often do you find it difficult to know how to behave?', and 'How often do you find that you try to have this kind of relationship with someone but it doesn't work out?'

Results

High levels of symptom endorsement were evident on the PDQ-4: 14–65% of participants reached suggested diagnostic thresholds on the 10 scales. These findings indicate a mean of 3.8 PDs per participant, comparable to a previous study's mean of 4.0 for a sample of prisoners selected for having a PD (Birtchnell & Shine, 2000). This rate inflates the frequency of diagnosable PDs given the excess of false positives yielded by self-report measures. Nevertheless, only six participants (10.5%) receiving PDQ total scores in the range typical of normal controls (Hyler, 1994). Thus, the selection procedure was

successful in yielding a sample with elevated levels of diverse forms of PD symptoms. Scale reliabilities were modest, alphas varying from .51 (schizoid) to .73 (avoidant), with a mean of .63.

We used the various RMs measures to assess aspects of social relations that might be linked to the interpersonal features of PDs. The RPS assessed *difficulties* enacting each RM—using items tapping satisfaction, difficulty knowing how to behave, and lack of success in each kind of relationship—and therefore described each PD's profile of interpersonal disturbance. The RPS also assessed *investment* in, or *motivation for*, each of the models, using items tapping the subjective importance and proportion of relationships of each kind. The MORQ, in contrast, assessed tendencies to *cognitively construe or implement* each RM in their relationships. Hypotheses addressed only the cognitive and motivational measures.

Relational difficulties and PD symptoms

The RPS items concerning relational difficulties were combined into RM-specific indices by subtracting the satisfaction item from the summed difficulties and failure items. Participants reported most difficulties with AR relationships, followed by MP, EM and CS. Table 2 presents Pearson correlations between the difficulty indices and PDQ-4 scales. Most PD scales and all DSM-IV clusters were associated with self-reported relational difficulties, consistent with our relational approach. Only scales assessing socially detached PDs—schizoid, antisocial and narcissistic—did not show elevated levels of difficulty and dissatisfaction. Borderline, schizotypal and dependent PD scales were most strongly associated with relational difficulties. CS, EM and AR relationships were equally associated with difficulties. Only MP relationships presented few problems for those reporting high PD symptoms levels. Dependent PD symptoms were particularly associated with difficulties in close CS relationships, and avoidant PD symptoms with difficulties in hierarchical AR relationships. Schizotypal and borderline symptoms were associated most strongly with difficulties in egalitarian relationships.

Relational investment and PD symptoms

The two RPS items concerning investment in particular RMs were combined into indices by adding their standardized scores. Table 2 presents correlations of the indices with the PDQ-4 scales. Overall PD symptomatology was associated most strongly with greater investment in MP and AR relationships, which are typically least close. Anxious cluster symptoms were most strongly associated with strong motives for close CS relationships. Odd cluster symptoms were most strongly associated with investment in more distant, instrumental MP relationships. As predicted, antisocial symptoms were (marginally) associated with low CS motivation, and avoidant, borderline, dependent and histrionic symptoms with high CS motivation. As hypothesized, narcissistic symptoms was associated with strong AR motivation. Contrary to prediction, they were not associated with weak investment in EM relationships, nor were O-C PD symptoms associated with high AR motivation. Paranoid symptoms were strongly correlated with investment in MP relationships, consistent with the hypothesized motivation for instrumental rationality and social detachment but not, as was predicted, with CS or AR motivation. Schizoid symptoms were linked, as predicted, to low CS motivation.

Table 2. Correlations between RM-specific difficulties, investment, and cognitive implementation and PDQ-4 scales (decimal omitted; hypothesized associations in bold; $N = 57$)

	Difficulties				Investment				Implementation			
	CS	EM	AR	MP	CS	EM	AR	MP	CS	EM	AR	MP
Antisocial	22	23	18	04	**−21**+	−04	14	12	−16	−03	20	−07
Avoidant	25	27*	30*	19	**26***	17	**16**	24	−**04**	−21	**23***	−02
Borderline	41**	52**	42**	29*	**26***	27*	27*	30*	**14**	−21	33*	−04
Dependent	42**	31*	35**	26	**32****	05	**25***	16	**01**	−15	**16**	−04
Histrionic	24	31*	32*	26	**25***	21	18	25	−**03**	05	09	−15
Narcissistic	14	19	23	10	04	**03**	**28***	22	−04	−**30***	**35****	−07
O-C	35**	33*	34**	16	14	18	**16**	12	02	−27*	**25***	−04
Paranoid	34**	32*	28*	05	−**13**	05	**02**	**51****	−**30***	−30*	**38***	**16**
Schizoid	01	−02	09	−16	−**31****	−14	−12	20	−**14**	−28*	21	19
Schizotypal	37**	53**	31*	17	31*	08	50**	36**	−02	−28*	34*	−10
Anxious	45**	40**	43**	27*	32*	17	25	23	−01	−27*	28*	−04
Dramatic	34**	42**	39**	23	12	16	30*	30*	−12	−18	33*	−11
Odd	34**	40**	32*	04	−04	01	20	49**	−21	−39**	42**	11
PDQ Total	45**	49**	46**	23	17	15	31*	40**	−13	−32*	41**	−03

**$p < .01$; *$p < .05$; +$p < .10$.

Note. ps one-tailed for hypotheses, two-tailed for others.

Aberrant cognitive implementation and PD symptoms

Scores on the MORQ scales were calculated for each of the participants' 10 rated relationships. To assess tendencies to cognitively implement each RM, we calculated mean scores across the relationship sample. Scores were consistent across these samples — alphas ranged from .77 (CS) to .90 (MP) — supporting the existence of trait-like variation in implementing relationships. Because implementation was conceptualized as a relative preference variable — the relative strength of the person's tendency to implement four alternative RMS — participants' mean MORQ scale scores were ipsatized (i.e. represented as deviations from the person's mean standard score measured in sample SD units). Ipsatization is controversial, but was necessary for this measure to capture each participant's distinct preference profile. The intercorrelations of the ipsatized scores indicated that the scales formed opposed pairs: AR and EM implementation were negatively correlated ($r = -.78$), as were CS and MP implementation ($r = -.67$).

Table 2 presents correlations between ipsatized MORQ scores and the PDQ-4 scales. Despite the latter's modest reliabilities and the moderate sample size, several significant associations emerged. Strikingly, overall personality disturbance was associated with high implementation of AR and a corresponding under-implementation of EM. Personality disturbance is associated with construing relationships in terms of rank, asymmetry and hierarchy.

Consistent with prediction, avoidant PD symptoms were associated with relative over-implementation of AR, but they were not associated with over-implementation of CS. As hypothesized, narcissistic symptoms were significantly associated with

over-implementation of AR and under-implementation of EM. The former association was also obtained for O-C PD symptoms. Paranoid symptoms were well captured, with the predicted pattern of CS and AR implementation obtained, but not the predicted MP over-implementation. Neither schizoid nor antisocial PD symptoms were associated with under-implementation of CS, although both associations were in the predicted direction. Borderline, dependent and histrionic symptoms were not associated with their predicted implementation patterns.

The hypothesis-related findings can be summarized briefly. First, all of the 14 hypotheses were supported for at least one of the relevant measures: motivation or cognitive implementation. Secondly, 10 of the 13 hypothesized associations that were not obtained were in the predicted direction, implying that some would be supported with greater statistical power. Some null effects might equally reflect real disjunctions between relational implementation and motivation, such that one but not both is associated with a particular PD. Avoidant PD might be characterized by strong motives for close CS relationships without any accompanying tendency to construe relationships in CS terms, and by a tendency to construe relationships in asymmetric AR terms without a strong corresponding desire. This picture of conflicted sociality seems plausible.

Interpersonal problems and PD symptoms

The many associations between measures of relational aberration and PD symptoms imply that RM theory captures important elements of personality disturbance. If the theory is to be valuable, however, it should capture PD symptoms in ways that are not redundant with alternative theories. Table 3 presents correlations between the PDQ-4 and the IIP scales (ipsatized to show participants' relative elevations on circumplex octants). Several distinctive associations between PD symptoms and interpersonal problems are evident, consistent with circumplex research (Widiger & Hagemoser, 1997). Avoidant PD is associated with problems in the socially avoidant octant (FG), histrionic and narcissistic PDs with intrusiveness (NO), O-C PD with being domineering (PA), paranoid PD with vindictiveness (BC), and schizoid PD with coldness (DE). These associations are not consistently stronger than those noted between the PDQ-4 scales and the RM measures. Four PDQ-4 scales were not associated with any IIP scale, three of these (borderline, schizotypal and dependent) being the most strongly associated with self-reported relational difficulties, suggesting a large interpersonal component that the circumplex does not capture. Furthermore, some RM measures *were* associated with these PDQ-4 scales.

As expected, the IIP and RM scales were not highly redundant. Of 96 possible correlations, only 13 were significant, and these were generally modest (median $r = .33$). EM and AR measures had very few associations with the IIP — four of a possible 48 — indicating an interpersonal domain that the circumplex does not capture. The few significant correlations show real but limited intersections between RMs and the circumplex. For example, cognitively over-implementing CS was associated with problems with self-assertion and exploitability and the absence of problems with vindictiveness, and investing highly in CS is associated with excessive nurturance. These findings point to some overlap between the CS–MP model pair and the circumplex's warmth–coldness dimension. However, this overlap was limited in magnitude, and measures of the two RMs aligned more with warm submissiveness and cold dominance rather than with warmth–coldness *per se*. Moreover, any overlap is

Table 3. Correlations of ipsatized IIP scales with PDQ-4 scales (decimal omitted; $N = 57$)

	IIP Octant							
	PA	BC	DE	FG	HI	JK	LM	NO
Antisocial	– 03	18	– 02	– 03	– 15	– 07	– 08	17
Avoidant	– 28*	– 07	00	45**	21	16	05	– 40**
Borderline	– 03	09	– 18	06	– 06	– 04	06	10
Dependent	– 14	– 15	– 16	05	09	21	16	– 01
Histrionic	08	– 05	– 32*	– 32*	– 11	11	07	48**
Narcissistic	20	20	– 02	– 05	– 38**	– 23	– 18	35**
O-C	31*	08	06	02	– 23	– 22	– 13	03
Paranoid	– 06	43**	21	12	– 16	– 22	– 30*	– 04
Schizoid	– 11	24	44**	21	– 22	– 30*	– 15	– 13
Schizotypal	13	26	– 09	13	– 25	– 19	01	00
Anxious	– 06	– 07	– 05	23	04	08	04	– 17
Dramatic	08	15	– 17	– 11	– 25	– 09	– 05	37**
Odd	– 02	41**	24	21	– 28*	– 31*	– 19	– 07

**$p < .01$; *$p < .05$.

empirical only, because conceptually the RM measures are referenced to dyadic relationships rather than individual ways of behaving.

Discussion

The present study, although preliminary, points to some promising links between implementations of and motivations for social relationships and PDs. It supported several hypothesized associations and discovered several other links, and allows a cautious relational characterization of the PDs, which follows.

Avoidant PD was associated with difficulties in asymmetrical and egalitarian relationships, with strong motivation for communal relationships, and with a tendency to construe relationships in terms of status and hierarchy. Dependent PD was associated with high levels of non-specific relational difficulties, but especially with difficulties in close communal relationships. It was also associated with high investment in these relationships, suggesting a disturbance in which excessive communal motivation brings with it interpersonal conflict. O-C PD was associated with non-specific relational difficulties, and a tendency to construe relationships in asymmetrical terms.

Antisocial PD was not associated with high levels of self-reported relational difficulties, but was associated with low investment in close communal relationships. Borderline PD was linked strongly but non-specifically with relational difficulties, especially in egalitarian relationships, and with high investment in relationships in general. Its one distinctive association was with the tendency to construe relationships in asymmetrical terms. Histrionic PD was linked to difficulties in authority- and equality-based relationships, and to strong motivation for communal relationships. Narcissistic PD was weakly associated with self-reported relational difficulties, but was marked by strong motives for authority relationships and a tendency to implement these while failing to construe relationships in egalitarian terms.

Paranoid PD was associated with strong motivation for 'rational' instrumental relationships, and with tendencies to construe relationships in terms of dominance and rank rather than belonging or equality. Schizoid PD was associated with disinterest in close communal relationships, low implementation of egalitarian relationships, and the lack of self-reported relational difficulties. Schizotypal PD was associated with high levels of relational difficulties, strong investment in non-egalitarian relationships, and tendencies to construe relationships in terms of authority and rank rather than equality and balance.

Altogether, our findings support many hypotheses derived from RM theory. However, the ultimate test of the RM account is the descriptive richness, explanatory parsimony, and replicability of the links between RM-related variables and PDs. Despite the lack of an established vocabulary for describing the relational aspects of PDs, their links with the RMs seem consistent with existing characterizations. The RM framework goes beyond these and begins to reveal relational aspects of PDs that have not been recognized previously. For instance, our findings reveal relational components of antisocial, borderline, dependent, O-C and schizotypal PDs, while circumplex-based research has failed to yield robust interpersonal profiles for them. Although some researchers have concluded that such PDs are not 'interpersonal' (Romney & Bynner, 1997), our research suggests that they may be interpersonal in ways that elude the circumplex. Moreover, the RMs differentiate some PDs that the circumplex does not. Narcissistic and paranoid PDs have similar hostile-dominant circumplex locations. However, in relational terms, the former is a disturbance of AR and EM (high investment in, and implementation of, the former and low implementation of the latter), whereas the latter is largely a disorder of MP and CS (strong motives for rational, calculative relationships and low implementation of close communal relationships). Schizoid and avoidant PDs also have similar circumplex locations, but the former is distinguished from the latter on investment in CS relationships (low for schizoids, high for avoidants) and level of self-reported relational difficulties (higher for avoidants). The relational approach thus enlarges and differentiates the interpersonal component of the PDs.

The findings of this preliminary study point to several linkages between RMs and specific PDs, and suggest some general conclusions about personality disturbance that future research should explore. Foremost among these is the unexpected and rather general role of the AR model. Overall, PD symptomatology was strongly associated with implementation of and investment in AR relationships, a major domain of relational difficulties. These findings are important because the AR model, and the EM model with which it has complex links, are largely independent of the interpersonal circumplex. Asymmetrical relationships may be central to personality disturbance but are neglected by the pre-eminent interpersonal scheme for describing PDs. One contribution of our RM account may be a recognition of the pivotal role of authority relations.

The nature of this role remains uncertain. One explanation invokes cultural norms. Studies suggest that authority relations are problematic in American society; AR relationships were the least satisfying in this study, and AR elements in personal relationships are disavowed by American participants (Haslam, 1994a; Haslam & Fiske, 1992). A strong tendency to implement or desire authority relations may therefore produce interpersonal conflict in the American cultural context. Alternatively, as Alfred Adler and Erich Fromm proposed, psychological disturbance may spring from or manifest exaggerated concerns with dominance and submission, superiority and inferiority, and power and prestige, all of which reflect AR preoccupations.

The present study may also point the way to new theoretical developments. To the extent that PDs are characterized by aberrations in the use of RMs, and that these models have distinct developmental origins, aetiological accounts might focus on these origins. Fiske (1991) argued that the RMs emerge at characteristic ages in a fixed order (CS → AR → EM → MP), and developmentally oriented theorists might pay attention to the pathogenic role of relational patterns established at these stages. Our approach to PDs may also help to account for some associated features of PDs. For instance, the RMs appear to distinguish PDs that are more commonly diagnosed in one gender. PDs that are more prevalent among men (antisocial, narcissistic, O-C, paranoid, schizoid) tend to be associated with lower investment in CS relationships, lower implementation of EM relationships, and higher implementation of AR relationships than PDs that are more prevalent among women (borderline, dependent, histrionic). This pattern indicates a direction in which an explanation of sex differences in PDs might proceed.

Although the present study's findings are promising, our assessment instruments and sample have limitations. Self-report assessment of the PDs is problematic, and the modest reliabilities obtained in the study reduced its capacity to detect relational correlates of PDs. Our sample size was also quite small. Future studies should use clinician assessments of PD symptoms, develop better measures of relational difficulties and motives, and employ large samples. It is also important to test whether our findings generalize to clinical samples. Our sample was quite disturbed, but its rate of diagnosable PD is unclear.

Much work remains to be done in refining interpersonal accounts of the PDs. We do not know, for instance, whether relational aberrations are merely correlated aspects of PDs, indirect effects of more basic pathologies, or true underlying causes and constitutive features of the disorders, as a strong version of our relational theory would argue. In addition, the links among alternative interpersonal formulations of PDs—the interpersonal circumplex, the interpersonal octagon (Birtchnell & Shine, 2000), the Structural Analysis of Social Behaviour (Benjamin, 1996) and RM theory—need to be determined, and their redundancies and complementarities noted. Nevertheless, the present study makes a preliminary case that relational aberrations in general, and aberrations in the use of the RMs in particular, are important factors in explaining PDs that complement circumplex accounts.

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