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Respondent Self-Focus and the Internal Consistency of the Motivational Style Profile

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One of the underlying tenets of both personality and social psychological theory assumes that questionnaire respondents have access to their thoughts and feelings. The same tenet underlies the various reversal theory states (e.g., telic/paratelic, negativism/conformity, autic mastery/sympathy, alloic mastery/sympathy), so that individuals who are more internally focused should have better access to their internal states and have higher internal consistency ratings across all measures. To evaluate this tenet, 620 participants recruited from a community sample completed a questionnaire that included the Motivational Style Profile and three self-focus measures: self-monitoring, identity formation, and private self-consciousness. Participants were divided (by median split) into low and high self-focus categories for each measure. Results showed that highly self-focused individuals had significantly higher internal consistency estimates. Implications for the psychometric properties of the MSP are discussed, as are directions for future research.

Keywords: reversal theory, self-focus, reliability, psychometrics

Along with validity, reliability is one of the key underlying principles in measurement theory. Self-report inventories typically used by social science researchers (in various fields, including personality, motivation, and social psychology) are assumed to be reliable (Streiner, Norman, & Cairney, 2014). Scales that have low internal consistency are problematic because they indicate the constituent items differ substantially from one another so as to suggest they do not measure the same unitary construct (Miller, Lovler, & McIntire, 2013). Furthermore, low test reliability can reduce the magnitude of correlations and diminish their statistical significance (Siegrist, 1996; Streiner et al., 2014). Additionally, it is reasonable to speculate that internal consistency could be affected by individual difference (personality) variables, particularly those that render a person more in touch with his/her thoughts and feelings (hereafter referred to as “self-focus”). That is, the internal consistency (reliability) of a scale may be greater or enhanced for participants who are more self-reflective and introspective. To use an example, when research participants are asked to reflect on their psychological

state, attitude, or opinion (on for instance the death penalty), those with greater self-focus will be capable of reflecting thoughtfully on the question, and render more accurate and reliable data; less pensive or self-focused individuals are less inclined toward self-exploration of their thoughts and feelings; by this, their responses are rendered more variable, and less reliable. Establishing a link between self-focus and a scale’s internal consistency should invite researchers to select participants who possess this inward accessibility, so that scientific hypothesis testing is more precise.

Reversal theory offers a unique arena for an evaluation of this hypothesis. Reversal theory (Apter, 2001) is a meta-motivational framework that posits people alternate between opposing pairs of metamotivational states (e.g., telic/paratelic, arousal avoidance/seeking, negativism/conformity, autic mastery/sympathy, alloic mastery/sympathy); each can be assessed using the Motivational Style Profile (MSP; Apter, Mallows, & Williams, 1998). Whereas the retest reliabilities among the MSP scales are expected to be low (due to the transitory nature of reversal states over short and especially over long periods of time), the MSP subscales need still be internally consistent to offer researchers confidence in their reliable and valid measurement (Cramer, 2013). Most MSP subscales demonstrate good internal consistency (alphas $> .70$), but some in particular, such as conformity and autic mastery subscales, exhibit unacceptably lower reliability (Lafreniere & Cramer, 2006). The unreliability of these subscales casts doubt on their associations with other constructs, and may produce spurious empirical results in the form of false positive or negative out-

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comes (Type I and Type II errors respectively), and one could never know which (Field, 2014; Howell, 2012).

There are various means by which researchers can augment a scale's internal consistency (Miller et al., 2013). Whereas one may opt to develop a set of new items, this method can prove time consuming and in some cases even fruitless. A second option involves identifying what may be the systematic source for the unreliability, namely that the systematic error variance of an instrument is tied to a relevant internal disposition (personality trait). If we use this trait to identify and exclude participants for whom the scale has low reliability, we may find that the reliability of these scales has been rendered artifactually low. This raises the question: which traits can be used for this purpose?

One likely candidate is a family of traits known as self-focus (alternatively known as "self-awareness"). It is believed that individuals who are more self-focused have higher internal consistency ratings because they have better access to their internal states (Cramer, 2000; Hergenbahn, Olson, & Cramer, 2015). Answering items on a questionnaire that tries to measure a given attitude, opinion, attribution, state, or trait promotes an introspective quest for the answer, causing individuals to direct their attention inwardly, toward themselves (Siegrist, 1996). Research shows that self-focused attention increases awareness of internal states (Scheier & Carver, 1977). Situations too can promote self-awareness and reduce the likelihood of minor transgressions. Beaman, Klentz, Diner, and Svanum (1979) demonstrated that by placing a mirror behind an unguarded candy bowl, Halloween trick-or-treaters were more likely to observe the stipulated instruction to select only one candy. Finally, greater self-awareness allows individuals to focus on aspects of themselves that are relevant to the construct assessed by the questionnaire. This greater self-awareness enables individuals who are more self-focused to be able to respond to questionnaires in a more consistent manner.

There are three key conceptions of self-focus in the literature: self-monitoring, identity formation, and private self-consciousness.

Self-monitoring is defined as "self-observation and self-control guided by situational cues to social appropriateness" (Snyder, 1974, p. 526). It depends on having awareness of one's own internal states. Because of this, it is plausible that self-monitoring would be associated with responding in a more consistent manner.

From an identity formation perspective, Marcia (2010) suggests that self-focus has its roots in one's identity, which is gained through self-reflection (Erikson, 1963). Individuals who have a more established, committed identity are better able to engage in self-reflection when responding to items about traits and internal states. Presumably, individuals with a stronger sense of identity would respond more consistently.

Private self-consciousness is defined as a tendency to attend to one's inner feelings and thoughts (Fenigstein, Scheier, & Buss, 1975). Individuals scoring high on private self-consciousness have better access to their own internal states. Previous research (McFarland & Sparks, 1985; Hjelle & Barnard, 1994; Nasby, 1989; Siegrist, 1996) has shown that private self-consciousness is associated with greater reliability.

Several empirical investigations track the impact of respondent self-focus on scale psychometrics, specifically that self-focus relates to higher reliability. McFarland and Sparks (1985) found that private self-consciousness contributed unique variance in predicting consistency scores. However, because McFarland and Sparks did not use Cronbach's alpha, cautious interpretation is warranted. Results of two other studies (Hjelle & Bernard, 1994; Nasby, 1989) showed that retest reliability was higher for participants with high levels of private self-consciousness compared to low-level respondents. It is noteworthy that since these studies assessed retest reliability (not internal consistency), their findings are not directly relevant to the current investigation.

One study (Siegrist, 1996) showed that participants scoring high on private self-consciousness had higher internal consistency scores on measures of self-representation and satisfaction (alphas = .924 and .947 respectively) compared to participants scoring low on private self-consciousness (.766 and .829, respectively). On a measure of inner speech, there was a marginally significant difference between participants who scored high on private self-consciousness vs. those who scored low (.915 vs. .840). These results are alone in showing that greater self-focus is associated with higher internal consistency reliability as measured by Cronbach's alpha.

The present study extends this pursuit to the challenge of internal consistency estimates among reversal theory measures (Cramer, 2013). It was hypothesized that respondents who scored high on measures of self-focus should demonstrate significantly higher internal consistency estimates on the MSP state dominance measures compared to those who scored low.

Method

Participants

There were 214 male and 408 female members from the community who agreed to participate. The bulk of the sample ($n = 367$; 59%) was comprised of students in an introductory psychology class at the University of Windsor in southwestern Ontario, Canada who completed the study for partial course credit. However, in an effort to both increase sample size and to diversify the sample, each student had the option of recruiting someone from the community so as to earn an additional bonus credit. This snowball sampling method

augmented the sample, obtaining approximately 40% of the respondents. The sample as a whole had an average age of 24.7 years ($SD = 6.1$); 84.5% were self-identified as Caucasian, 3.2% Black, 4.5% Asian, 0.3% Native, and 7.4% of another category; 86.2% indicated that English was their first language. The student and community groups were not significantly different with respect to these demographic variables, nor with respect to the self-focus or reversal theory measures.

Measures and Procedure

After providing informed consent, respondents completed a series of self-report questionnaires in a pencil-paper booklet, consisting (in a random order) of the following measures. Upon completion, respondents were debriefed as to the procedure and hypotheses.

Motivational style was assessed using the 70-item MSP (Apter et al., 1998), where responses ranged from 1 = 'never' to 6 = 'always.' We examined 8 of the 14 subscales: telic, paratelic, negativism, conformity, autic mastery, autic sympathy, alloic mastery, and alloic sympathy. Whereas many of these subscales demonstrate adequate internal consistency, previous research (Ianni & Lafreniere, 2014; Lafreniere, Menna, & Cramer, 2013; Lafreniere & Cramer, 2006; Sit & Lindner, 2005) identifies two – the conformity and autic mastery subscales – with unacceptably low reliabilities.

Self-focus was assessed with three questionnaires (all unitary constructs) designed to measure different facets of the construct, namely self-monitoring, identity formation, and private self-consciousness.

Self-monitoring was assessed using the 18-item Lennox and Wolfe Scale (1984). High scorers are able to monitor and adjust their behaviour in social situations. Internal consistency estimates from several sources (Cramer & Gruman, 2002; Deeter-Schmelz & Ramsey, 2010) reveal adequate reliability (.75), with a stable and replicable factor structure (sample item: "In social situations, I have the ability to alter my behavior if I feel that something else is called for").

Identity formation, based on Erikson's model of psychosocial development, was assessed using the 5-point, 19-item Identity Formation Scale (Ochse & Plug, 1986; see also Darling-Fisher & Klein Leady, 1988; Domino & Affonso, 1990). Internal consistency estimates range from .75 to .83, and correlate with other measures of identity growth (sample item: "I wonder what sort of person I really am").

Private self-consciousness was assessed using the 4-point, 7-item Private Self-Consciousness subscale of the Fenigstein Self-Consciousness Scale (Fenigstein et al., 1975). Scheier and Carver (1985) supported the internal consistency (.79) and retest reliability after 4-weeks (sample item: "I'm always trying to figure myself out").

Results

A significance level of .05 was utilized for all statistical analyses. Table 1 shows the descriptive statistics (mean, standard deviation, alpha values, and scale intercorrelations) for all measures. Results showed mild nonnormality among all variables; however, conversion to standardized ranked variables did not alter the study's conclusions. A preliminary analysis of the three self-focus variables by age and gender show several interesting but inconsistent correlations ($p < .05$). For females, age was positively correlated with identity formation, $r(339) = .29$ but negatively correlated with self-consciousness, $r(326) = -.17$. For males, age was negatively correlated with both self-monitoring, $r(184) = -.38$ and private self-consciousness, $r(192) = -.45$.

Table 1 offers a lower-triangle correlation matrix of all measures. Despite measuring seemingly comparable constructs, the three self-focus measures were only modestly correlated. This suggests the three measures (while arguably inter-related) tap relatively unique components of self-focus. It is particularly noteworthy that some measures of self-focus correlated significantly with most measures of both the autic and alloic dominances, as one might predict.

For each of the three measures of self-focus, participants were divided by median split into low vs. high self-focus categories. Though some critics (see MacCallum, Zhang, Preacher, & Rucker, 2002) argue against using this technique, we maintain that the sample is sufficiently large to suffer little reduction in power via this procedure. So too, because distinct groups are necessary for this analysis, one alternative is to divide the sample into thirds, deleting the middle section of respondents. Despite the loss of sample size (by approximately 200 respondents), the results (and conclusions) remained the same. The internal consistency of each subscale was calculated separately for high self-focus and low self-focus participants.

Differences in internal consistencies (as measured using Cronbach's alpha coefficients) between the high and low groups were evaluated using Feldt's (1969) test statistic (see also Hakstian & Whalen, 1976). Table 2 shows the 1-tailed comparison test between high and low self-focus participants by each measure.

Participants scoring higher on self-monitoring had significantly higher internal consistencies (by approximately .04 points) than participants scoring lower for the paratelic, autic mastery, and alloic mastery MSP subscales.

Participants scoring higher on identity formation had significantly higher internally consistencies (again by approximately .04 points) than participants scoring lower for the telic, negativism, conformity, and alloic mastery MSP subscales.

Participants scoring higher on private self-consciousness had significantly higher internal consistencies (by approx-

Table 1
Correlation Matrix with Means, Standard Deviations, and Alphas for each Scale (n = 622)

Scale	Self-Monitoring	Identity Formation	Private Self-Consciousness	Telic	Paratelic	Negativism	Conformity	Autic Mastery	Autic Sympathy	Alloic Mastery	Alloic Sympathy
Self-Monitoring	1.00										
Identity Formation	.28*	1.00									
Private Self-Consciousness	.01	.06	1.00								
Telic	.21*	.31*	.16	1.00							
Paratelic	.26*	.19*	.01	.14*	1.00						
Negativism	.12*	-.05	.14*	-.08	.54*	1.00					
Conformity	.14*	.05	-.07	.29*	.05	-.08	1.00				
Autic Mastery	.35*	.16*	.08	.45*	.30*	.29*	.15*	1.00			
Autic Sympathy	.18*	.04	.18*	.14*	.20*	.14*	.50*	.30*	1.00		
Alloic Mastery	.20*	.42*	.02	.42*	.32*	.07	.40*	.25*	.21*	1.00	
Alloic Sympathy	.24*	.39*	-.04	.39*	.18*	-.11*	.51*	.14*	.30*	.62*	1.00
Mean	45.8	70.1	14.7	16.8	14.5	7.81	15.2	14.5	15.6	17.1	18.7
SD	7.61	7.97	4.17	3.60	3.50	4.43	3.11	3.47	4.25	4.03	3.49
Alpha	0.84	0.85	0.71	0.70	0.68	0.83	0.51	0.61	0.74	0.83	0.73

Note. * = p < .05

Table 2
Internal Consistency of Cronbach's α Values for Participants with High and Low Scores on Self-Monitoring, Identity Formation, and Private Self-Consciousness, with Sample Sizes and p -values of Differences.

<i>n</i>	Self-Monitoring			Identity Formation			Private Self-Consciousness		
	Low	High	p^a	Low	High	p^a	Low	High	p^a
	286	336		281	341		294	328	
Telic	.68	.68	n.s.	.64	.71	.014	.68	.73	.033
Paratelic	.65	.71	.025	.66	.69	n.s.	.69	.70	n.s.
Negativism	.82	.83	n.s.	.81	.84	.032	.79	.84	.004
Conformity	.50	.49	n.s.	.47	.55	.037	.46	.54	.039
Autic Mastery	.53	.62	.015	.59	.62	n.s.	.50	.67	.001
Autic Sympathy	.73	.76	n.s.	.76	.78	n.s.	.71	.78	.004
Alloic Mastery	.75	.88	.001	.77	.84	.001	.81	.85	.009
Alloic Sympathy	.71	.72	n.s.	.69	.68	n.s.	.70	.75	.027

Note. ^a one-tailed p values using Feldt's (1969) test statistic for comparing Cronbach's alphas

imately .07 points) than participants scoring lower for all MSP subscales except paratelic.

These findings provide support for the underlying assumption of self-focus as a dimension in various reversal orientations.

Discussion

Our results supported the hypothesis that greater self-focus was associated with more consistent responding on the MSP. Across all three measures, self-focused individuals had significantly higher internal consistency estimates for most of the MSP subscales. The difference in alpha coefficients between high and low self-focused individuals was particularly robust and consistent for the autic mastery and alloic mastery subscales. There was a significant difference in alpha scores between low and high-self focus for all three self-focus measures for the alloic mastery subscale. For four subscales (telic, negativism, conformity, and autic mastery), there was a significant difference in internal consistency coefficients for two of the three self-focus measures. Although significant, these differences were generally of relatively small magnitude (approximately .05). However, the magnitude of the difference was particularly high using the private self-consciousness measure for autic mastery, where the alpha was .17 points higher for those scoring high on private self-consciousness. It appears that individuals with higher self-focus did not exhibit higher reliability than low-scoring respondents for the alloic sympathy (with a difference only noticeable for private self-consciousness) and paratelic subscales (with a difference only noticeable for self-monitoring). It is not clear why the private self-consciousness groups had more and larger differences in reliabilities. Future researchers would do well to delve deeper into the nomological network and theoretical basis of still other self-focus constructs.

Our results are similar to those of Siegrist (1996). However, our study is an important addition to the literature as it is the first to test whether the apparent reliability-enhancing effects of self-focus extend to reversal theory. Another strength of the present study was the addition of two other measures of self-focus: self-monitoring and identity formation. Future research might consider Langer's (1989; Carson & Langer, 2006) concept of mindfulness as an additional avenue toward testing the self-focus hypothesis.

Of greatest interest were the conformity and autic mastery subscales, due to their low reliability (Lafreniere & Cramer, 2006). These findings suggest that self-focus (or lack thereof) may account for the low internal consistency reliability of the autic mastery subscale. For the participants who scored high on private self-consciousness, the autic mastery subscale had an adequate alpha value of .67. Consistent with reversal theory, individuals "cannot be in the mastery state unless [they] are regularly experiencing self-awareness" (Fontana, 1988, p. 353). This suggests that self-awareness is prerequisite for being in the autic mastery state. Highly self-focused individuals have more self-awareness, so it is plausible that they would be better able to answer the autic mastery questions in a consistent manner.

In contrast, reliability remained low for the conformity subscale – even for individuals high in self-focus. Even for the participants who scored high on identity formation, the conformity subscale had an alpha value of only .55. Thus, self-focus does not appear to account for the low reliability of the conformity subscale. Unlike autic mastery, conformity is an other-oriented state characterized by the need to obey rules and meet the demands of others (Apter et al., 1998). In a conformity state, individuals turn their focus away from themselves, rendering the benefit of self-focus minimal. This may explain why self-focus appears to have a relatively small impact on participant responding to conformity items.

It is reasonable to speculate that the low reliability of some MSP subscales (especially autistic mastery) may occur because they are particularly susceptible to low self-focus. Low levels of self-focus may reduce the reliability of these subscales. The low reliability of these subscales may be improved by screening out participants who are low in self-focus.

Our results raise several additional questions. Do respondents higher in self-focus make better research participants? That is, might we expect – when using these participants – to see significantly higher correlations between measures, or more powerful statistical tests with augmented sensitivity. Should researchers prescreen the participants in studies (particularly reversal theory studies) in hopes of recruiting those highly self-focused individuals to ensure a greater likelihood of significant results? Are highly self-focused respondents less likely to be yea-sayers? Certainly, more research is needed to answer these questions.

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