Differing emotional sensitivities in the two factors of personal need for structure

Jenel Taylor Cavazos [a,*], Nicole Judice-Campbell [b], Christopher P. Ditzfeld [b]

[a] Department of Psychology, Cameron University, 2800W. Gore Blvd., Lawton, OK 73505, United States
[b] Department of Psychological Science, 216 Memorial Hall, Fayetteville, AR 72701, United States

ABSTRACT

The current project examines dispositional orientations toward positive or negative stimuli based on individual differences in personal need for structure (PNS). Although Neuberg and Newsom (1993) describe PNS as stemming from two sources of simple structure, desire for structure (DFS) and response to lack of structure (RLS), the two subscales are commonly combined. The current study found that high DFS (but not high RLS) was associated with a tendency to create more positive words in a word-fragment-completion task, generate more positive content in a story-completion task, and remember more positive words in a free-recall memory task. High-RLS (but not high-DFS) was associated with the opposite tendency (i.e., oriented toward negatives). Possible revisions to previous conclusions involving PNS are discussed.

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1. Introduction

Personal need for structure (PNS) is an index of people's reliance on simple (as opposed to complex) cognitive structures (Neuberg & Newsom, 1993; Thompson, Naccarato, Parker, & Moskowitz, 2001). High PNS individuals tend to prefer straightforward, distinctive, well-bounded structures, as opposed to structures that are multi-faceted, integrated, and complex. Additionally, high PNS individuals tend to display rigid, black-and-white thinking and a strong dependence on their existing cognitive structures, such that they often shun information that may prove ambiguous or present a challenge to their existing organizational system. Previous research has shown that high PNS is associated with right-wing authoritarianism (Jugert, Cohrs, & Duckitt, 2009), dogmatism (Crowson, 2009), political orientation (Crowson & DeBacker, 2008; Hodson, MacInnis, & Rush, 2010), sensitivity to threats of terrorism (Routledge, Juhl, & Vess, 2010), and even with negative attitudes toward modern art (Landau, Greenberg, Solomon, Pyszczynski, & Martens, 2006).

PNS research has often focused on the tendency of high PNS individuals to use simple structures when more complex viewpoints are available, which is especially true in studies dealing with stereotyping (e.g., Clow & Esses, 2005; Moskowitz, 1993; Schaller, Boyd, Yohannes, & O'Brien, 1995). Recently, Landau and others have begun to look at the tendency of high PNS individuals to use simple structures under the conditions of high self-threat (i.e., mortality salience; Crowson, DeBacker, & Thoma, 2006; Landau et al., 2004; Vess, Routledge, Landau, & Arndt, 2009). These

studies suggest that high PNS individuals have particularly intense negative responses to threats, which lead them to disproportionally use "simple" representations of the self (Landau, Greenberg, & Sullivan, 2009) and others (Landau et al., 2004; McGregor, Haji, & Kang, 2008). In the present study we reexamine Neuberg and Newsom's (1993) original conceptualization of need for structure, which involves two emotionally-driven subscales of the PNS scale, in order to better understand how differences in needs for "simple" structures may arrive from different orientations (or sensitivities) to positive and negative emotional information.

1.1. Revisiting the two subscales of PNS

The 12-item personal need for structure scale is commonly calculated using a single factor that captures a person's overall tendency to prefer simple structure (see Thompson et al., 2001). However, Neuberg and Newsom (1993) provided evidence for (and advocated for the use of) a two factor model of the PNS scale. According to the authors, the *Desire for Structure* (DFS) factor captures the extent to which individuals seek to establish structure (e.g., "I find that a consistent routine enables me to enjoy my life more"), whereas the *Response to Lack of Structure* (RLS) factor measures individuals' response to the absence of structure (e.g., "It upsets me to go into a situation without knowing what I can expect from it"). Although these subscales have obvious qualitative differences, they are correlated ($rs = .54$–$.75$; Neuberg & Newsom, 1993). Presumably due to this fact, researchers often collapse the two subscales into a single PNS score.

Although research analyzing the PNS subscales separately is rare, the available research suggests a somewhat more complicated picture than that drawn by researchers using the composite

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exclusively (e.g., Blais, Thompson, & Baranski, 2005). For example, Neuberg and Newsom (1993) reported that although both conscientiousness and neuroticism were positively related to the overall PNS scale (r = .25 and .30, respectively), neuroticism was significantly positively correlated with the RLS factor (r = .32), but not the DFS factor (r = .17, ns); conversely, conscientiousness was positively related to DFS (r = .41), but not RLS (r = .09, ns). Additionally, although the composite PNS score was not significantly related to extraversion, the RLS (but not the DFS) factor was (r = −.23). Moreover, RLS (but not DFS) was associated with both trait and social anxiety (r = .19 and .25, respectively). Thus, not only are DFS and RLS related differently to a number of individual difference variables, but the pattern of findings suggests that people high in RLS may be particularly prone to negative affect (and are more apprehensive about situations that may evoke those sensitivities) than those who are high in DFS.

Other research examining the two subscales separately further suggests that the DFS factor may be associated with more positive affectivity and a lesser tendency to perceive a situation as potentially threatening. For example, Elovainio and Kivimaki (1999) reported that high DFS decreased the risk of psychological strain symptoms (difficulties in concentration, nervousness, and depression), but high RLS increased that same risk. Additional research conducted by Cavazos and Campbell (2008) revealed that DFS (but not RLS) was negatively related to procrastination and positively related to more adaptive elements of perfectionism (achievement-oriented and organizational). In contrast, the RLS (but not DFS) factor was related negatively to need for cognition and openness to experience, and related positively to worry, parental-influence perfectionism, and self-consciousness. Finally, research examining disassociation experiences in clinical and non-clinical populations found that DFS predicted positive disassociation experiences (such as fantasies and daydreaming), while RLS was associated with more negative, pathological disassociation experiences (such as depersonalization; Wolfradt & Engelmann, 2003).

1.2. An Emotional sensitivity framework

Nearly all *self*-structure models show that different kinds of structures are related to emotional experiences, wherein "simpler" structure usually corresponds with more intense affective responses; e.g., *self-complexity* (Linville, 1985, 1987), *evaluative self-organization* (Showers, 1992, 2002), and *multiple self-aspect framework* (McConnell, 2011). The PNS model is no different.[1] In fact, Neuberg and Newsom (1993) note, "... given their general noncomplexity and preference for routine, [high PNS] individuals may be especially emotionally reactive, experiencing both great amounts of emotion and larger swings in the valence of their emotions (pp. 127)." Hence, regardless of whether a person's need for structure stems primarily from DFS or RLS tendencies, this person should respond more negatively to threats to structure (as PNS research clearly shows). However, when threats to structure are absent and affect is naturally-occurring, it appears plausible that DFS individuals will show a tendency to experience positive emotions, while RLS individuals will display a tendency to experience negative emotions.

Research suggests that highly "emotional" people are more sensitive to emotional qualities of the stimuli surrounding them. For example, Noguchi, Gohm, and Dalsky (2006) found that extraversion, approach-orientation ("BAS"), and optimism were associated with greater attention to positive information, while neuroticism, avoidance-orientation ("BIS"), and negative trait-affectivity were associated with greater attention to negative information (for a review of

BIS/BAS, see Carver & White, 1994). Moreover, Gomez and Gomez (2002) showed that participants high in avoidance-orientation were more likely to generate, recall, and recognize negative words, while participants high in approach-orientation were more likely to generate, recall, and recognize positive words. Indeed, people whose emotions tend to polarize toward a particular valence also tend to orient attention toward like-valenced information (for a review, see Rusting, 1998). Following this pattern, the current study examines the tendency for high-DFS individuals to orient naturally toward positive emotional content and high-RLS individuals to orient toward negative emotional content in three emotion stimuli tasks: a word-fragment-completion task (Rusting & Larsen, 1998), a story-completion task (Rusting, 1999), and a free-recall task (Rusting, 1999).

To summarize, we propose that the growing number of studies showing important personal and social outcomes between people high and low on the PNS scale have overlooked potentially underlying qualitative differences between the DFS and RLS subscales; namely, a different orientation toward the positive and negative qualities of stimuli. We predict that high-DFS individuals are more sensitive to the positive emotional qualities of stimuli than low-DFS individuals, which will be shown in a tendency to (1) create more positive words in a word-fragment-completion task, (2) recall more positive-related words in a memory task, and (3) write stories about a fictional character that contain more positive tone. Conversely, we predict that high-RLS individuals are more sensitive to the negative qualities of stimuli than low-RLS individuals, which will be shown in the tendency to create and recall negative content in the same three tasks.

2. Method

2.1. Participants

A total of 485 undergraduate students participated voluntarily in exchange for credit toward a course requirement. Sample sizes after excluding people with incomplete measures are reported in Table 1. Although demographic information was not recorded in the present study, data from the University of Oklahoma's departmental prescreening (N = 1353) shows that the sample was drawn from a population with the following characteristics: Gender (61% female), age (M = 18.81, SD = 1.98), and ethnicity (76% white, 6% Native American, 6% Asian, 6% African American, 4% Hispanic, 2% other).

2.2. Measures

2.2.1. Personal need for structure scale

The personal need for structure scale (PNS; Neuberg & Newsom, 1993; Thompson et al., 2001) was included to measure participants' need for structure. The 12-item PNS scale is comprised of two factors, desire for structure (four items) and response to lack of structure (seven items). Per Neuberg and Newsom's suggestion, Item 5 ("I enjoy being spontaneous.") was excluded due to known social desirability effects. Respondents used a Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). High scores indicate a greater need for structure.

2.2.2. Trait affectivity

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was included to control statistically for positive and negative trait affect in the follow-up analyses. The PANAS consists of a list of 20 affect states (10 positive and 10 negative) on which participants rate the extent to which they generally feel each affect state on a 1 (very slightly or not at all)–5

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[1] Although PNS is not a self-structure model, it offers obvious similarities with these models and the RLS has been shown to be associated with simple (less complex) self-structure in Neuberg and Newsom (1993).