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Autotelic personality through a five-factor lens: Individual differences in flow-propensity

Scott R. Ross [a,*], Heidi N. Keiser [b]

[a] DePauw University, Greencastle, IN, United States
[b] University of Minnesota – Twin Cities, Minneapolis, MN, United States

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ABSTRACT

Autotelic personality represents an individual difference factor believed to have an increased propensity to experience flow. In 316 young adults, we administered the Dispositional Flow Scale-2 (DFS-2; Jackson & Eklund, 2002) targeted to general life activities to capture cross-situational consistency in the propensity to experience flow, and a well-established measure of the Five Factor Model of personality (i.e., the NEO Personality Inventory Revised; NEO-PI-R; Costa & McCrae, 1992). NEO-PI-R domains of Neuroticism (−), Extraversion (+), Agreeableness (−), and Conscientiousness (+) predicted global flow propensity, accounting for 38% of the measured variance. Canonical correlation analysis highlighted these domains in relation to DFS-2 components of flow with the first canonical correlation ($R = .73$) accounting for 53.4% of the shared variance between NEO domains and DFS-2 subscales. Individually, DFS-2 subscales were variously predicted by NEO domains (e.g., Time Transformation at 4%; Clear Goals at 44%). NEO Openness was notably lacking in predicting flow components. These findings emphasize the strong and substantial relationship of FFM personality traits to flow-propensity.

1. Introduction

Csikszentmihalyi (1975) first coined the term "flow" to describe 'peak experiences' in a wide array of activities. In his analysis, he found that these optimal experiences could be characterized by a sense of being 'in the zone' where subjective absorption in typically challenging activities is accompanied by intense enjoyment and fulfillment. Phenomenological studies have highlighted key components of flow, which include distorted passage of time, loss of self-consciousness, intense concentration, clear goals and feedback, a balance of challenge and skill, merging of actions and awareness, a sense of control, and enjoyment in flow states. Collectively, these components have good consensus among researchers in describing the flow experience. Csikszentmihalyi (1990) further hypothesized that some may have an increased likelihood of experiencing this state—an "autotelic personality". In the current study, we examine flow-propensity through the lens of the Five Factor Model (FFM; Costa & McCrae, 1992), reflecting an established nomological network of personality traits.

1.1. Assessment of flow

Autotelic personality literally refers to the tendency to engage in an activity for its own sake (Csikszentmihalyi, 1975, 1990, 1996) and can be defined as the propensity to experience flow (e.g. Asakawa, 2004, 2010). An experience sampling method (ESM) has often been used to assess flow. However, due to the extensive time and resources needed to obtain ESM estimates, other measures have been employed. Using the 9 components of flow earlier identified by Csikszentmihalyi (1997), Jackson and Eklund (2002) developed the Dispositional Flow Scale 2 (DFS-2) to assess flow-propensity within a specified activity (e.g., music, sports, surfing the internet). As a measure of flow-propensity, the DFS-2 is a prime candidate for assessing autotelic personality. The factor structure is sound, subscales have adequate reliability, and it appears to have high construct comprehensiveness in assessing the phenomenological aspects of flow (Jackson & Eklund, 2002). Directions can easily be modified to assess flow within the context of any particular activity, including a general propensity to experience flow in life. As Massimini and Carli (1988) point out, the flow 'condition' can cut across any particular activity. In the current study, we modified the DFS-2 to assess the 9 components of flow experience in everyday life, thus providing a measure of the cross-situational consistency of flow and a putative measure of autotelic personality.

1.2. Autotelic personality and the Five Factor Model

One means of measuring autotelic personality in a vernacular common among personality theorists is by means of the well-established domains of the Five-Factor Model (FFM; Costa &

* Corresponding author. Address: 7 Larabee Street, DePauw University, Department of Psychology, Greencastle, IN 46135, United States.
E-mail address: srross@depauw.edu (S.R. Ross).

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McCrae, 1992). An autotelic personality should be represented by standing on a particular constellation of personality traits within the FFM. To our knowledge, only two previous studies have investigated flow or autotelic personality within the context of the FFM. Johnson, Keiser, Skarin, and Ross (in press) assessed the FFM in a small sample of students and found that the FFM domains of Neuroticism, Conscientiousness, and Extraversion accounted for about 50% of the variance in global flow as assessed by aggregate ESM ratings. Additionally, Ullén et al. (2012) also found that Neuroticism and Conscientiousness were the major FFM factors related to flow, accounting for 22% of the variance, using a newly developed Swedish measure of flow in three major domains of life: work, maintenance (household work), and leisure. Neuroticism and Conscientiousness both bear conceptual ties to the initiation and maintenance of the flow state (see Ullén et al., 2012). Positive relationships for flow with self-esteem and life satisfaction (Asakawa, 2010) point to Extraversion in autotelic personality, to the extent that positive affect contributes to flow (Howell & Rodzon, 2011). Extraversion may further reflect a tendency toward increased engagement which would be expected in an autotelic personality style. However, Openness to Experience failed to contribute to flow propensity in both studies. This finding is unexpected as Openness to Experience is associated with absorption and immersion (Glisky, Tataryn, Tobias, Kihlstrom, & McConkey, 1991), which seem to be key components of the flow experience as measured by one of the first measures of individual differences in flow-propensity, the Flow Questionnaire (Csikszentmihalyi & Larson, 1984).

1.3. Current study

Using the FFM as a lens of focus, this study advances the research on flow in four ways. First, which personality traits predict flow and represent an autotelic personality? Until recently, previous studies had not examined flow within the context of an established nomological trait network such as the FFM. Johnson et al. (in press) and Ullén et al. (2012) suggest that Neuroticism and Conscientiousness from the FFM are important predictors of flow. Secondly, we examine which NEO-PI-R facets within each FFM domain drive the relationships of FFM factors with global flow. Third, we also examine flow at the componential level (e.g., Challenge–Skill , Clear Goals) in relation to FFM domains. As Ullén et al. notes, there is likely variation in the specific components that characterize flow between individuals. However, the ubiquity of this constellation of characteristics suggests that an analysis of these flow components through a Five Factor lens may help to further elucidate individual differences in the flow experience. Finally, locating the construct of flow-propensity or autotelic personality within an established nomological network such as the FFM may provide not only explanatory but also *predictive* power insofar as the network allows for connection to other nodes (i.e., constructs) that are uncommonly examined in flow research. Consequently, examining flow in the context of the FFM may open an extant knowledge-base of empirically-derived connections for application to flow theory.

2. Method

2.1. Participants

The study sample consisted of 316 undergraduate students at a small Midwestern liberal arts college. Most participants were Caucasian (74.7%) and were women (72.5%). Average age was 19.9 (*Sd* = 1.16) years and most had sophomore standing. All participants were at least 18 years of age.

2.2. Procedure

Participants were given packets to take home and complete independently, for which they received either course or extra credit. They were given at least one week to return their completed packets. The study was approved by a university Institutional Review Board.

2.3. Measures

2.3.1. Dispositional Flow Scale 2 (DFS-2; Jackson & Eklund, 2002)

The DFS-2 is a 36-item designed to measure an individual's flow propensity within a given activity. It was constructed based on Csikszentmihalyi's (1990) nine proposed components of flow, with each component assessed on a four-item scale, each item on a Likert scale ranging from 1 to 5. Coefficient alpha values for the nine scales range from .80 for Autotelic Experience (e.g., "I really enjoy the experience") to .91 for Clear Goals (e.g., "I have a strong sense of what I want to do"), with composite or global DFS-2 scores typically in the .90-range (Jackson & Eklund, 2002). Instructions for this scale were modified so that participants answer the questions regarding their "experiences in general". In the current study, coefficient alpha ranged from .68 for Merging of Action and Awareness to .90 for Concentration (Median alpha = .84), with an alpha of .93 for the global DFS-2 scale.

2.3.2. NEO Personality Inventory-Revised (NEO-PI-R, Costa & McCrae, 1992)

This is a 240-item questionnaire used to assess the FFM personality domains (e.g., Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness). Items are scored on a 5-point Likert scale ranging from *strongly agree* to *strongly disagree*. Sample items include "I am not a worrier" (Neuroticism) and "I like order" (Conscientiousness). In addition to higher-order traits within the FFM, the NEO-PI-R also assesses 6 lower-order traits or "facets" subsumed under each domain scale. For example, the Neuroticism domain scale includes the facet scales of Anxiety, Depression, Angry–Hostility, Impulsiveness, Self-Consciousness, and Vulnerability. In the current study, coefficient alpha ranged from .88 for Openness to .91 for Neuroticism.

2.4. Analyses

Data was carefully screened for bivariate and multivariate outliers. A correlation matrix for all variables of interest was determined and scatterplots for all relevant bivariate analyses were examined. One case was eliminated that was a bivariate outlier (>3.0 *Sds* above the mean of either variable) for NEO-Extraversion × DFS global score. Cook's distance and Mahalanobis distance were examined to identify multivariate outliers. Consistent with suggestions by Tabachnick and Fidell (2007), 0 cases were considered outliers using Cook's distance (>1.0) but 3 cases were identified using Mahalanobis distance (>3.0 *Sds* above the mean) and were eliminated from the final analyses. The analyses included: (1) Zero-order correlations of DFS-2 global flow with NEO-PI-R domains and facets; (2) selected use of multiple regression for NEO-PI-R domains and facets to predict global flow; (3) multiple regression using the NEO-PI-R domains to predict each of the 9 facets of flow as measured by the DFS-2; and, (4) canonical correlation analysis (CCA) of the NEO-PI-R domains and the DFS-2 subscales.