

The Nature and Power of Interests

James Rounds and Rong Su

University of Illinois at Urbana-Champaign

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Abstract

Despite their significance to both individuals and organizations, interests are often misunderstood, and their predictive power is often overlooked. In this article, we discuss the nature of interests, describe several key features of interests, and, contrary to the received knowledge of many, explain how interests can be used to predict career and educational choice, performance, and success. Finally, we discuss the continuity of interests across the life span and explain how evidence of stability supports conceptualizations of interests as being distinct dispositions rather than simply extensions or workplace instantiations of basic personality traits.

Keywords

interests, performance, success, careers, education

Every child faces the question, “What do you want to do when you grow up?” from parents, teachers, and friends. The answer to that question becomes more important as children age and make educational and occupational choices that may constrain their later participation in the labor force. Interest inventories were developed early in the 20th century to help young people make these important decisions. Although pioneers in interest research predicted that, in the words of Walter Bingham, “the developments with regard to the diagnostic meaning of interests would prove to be one of the great, if not the greatest, contributions to applied psychology” (as quoted in Strong, 1943, p. vii), interests are often misunderstood and overlooked by modern psychologists. In this article, we discuss the nature of interests and explain how they are powerful predictors of educational and career choice, performance, and success.

We define interests as traitlike preferences for activities, contexts in which activities occur, or outcomes associated with preferred activities that motivate goal-oriented behaviors and orient individuals toward certain environments (Rounds, 1995; Su, Rounds, & Armstrong, 2009). This definition highlights several key features of interests.

First of all, interests are traitlike. Whereas interests have traditionally been conceptualized in two ways—as situational states (i.e., the “curious emotion” and momentary motivation; Silvia, 2008) or relatively stable dispositions (Low, Yoon, Roberts, & Rounds, 2005)—in keeping with the tradition of vocational psychology, we discuss interests solely from an individual-differences trait perspective. We review research on the continuity and

change of interests across the life span and, against this background, provide evidence for the traitlike nature of interests.

Second, and most importantly, interests are contextualized. By *contextualized*, we mean that interests always have an object. Individuals are not “interested” in the same way that they may be “extraverted” or “conscientious.” They are interested in something, be it a certain activity that implies a kind of environment or a kind of environment (e.g., an educational program or occupation) that implies a certain activity. Thus, an item from an interest inventory involves two parts: an activity and an object of interest. A leisure or work activity is either directly stated (e.g., teaching children to read, tracking inventory) or, as is the case with occupational titles and school subjects (e.g., air traffic controller, mathematics), implied by the object of interest. By indicating how much they like or dislike items, respondents reveal their preferences for shared properties of activities (e.g., researching, teaching, building) and objects of interest (e.g., data, people, tangible things). In research studies, these items are organized in basic interest scales that capture interest in domains such as mathematics, physical science, or engineering (Liao, Armstrong, & Rounds, 2008). These basic interest scales can be further organized into Holland’s (1997) general interest scales, which distinguish types of

Corresponding Author:

James Rounds, Psychology Building, 603 East Daniel St., Champaign, IL 61820

E-mail: jrounds@illinois.edu

people and environments: realistic, investigative, artistic, social, enterprising, and conventional.

Contextualization sets interests apart from other individual-difference variables such as cognitive ability and personality traits. Interests directly capture the relationship, or the fit, between a person and certain types of environments (Su, Murdock, & Rounds, in press). This is the primary reason why interests are predictive of human behaviors in particular environments, and why interest categories have been proposed as a framework for organizing and integrating individual-difference variables (Ackerman & Heggestad, 1997; Armstrong, Day, McVay, & Rounds, 2008).

A third feature of interests is their motivational functions. Figure 1 demonstrates how interests influence human behaviors and outcomes through motivation: Interests (a) direct activities and goals toward specific domains, (b) energize goal-striving efforts, and (c) provide a context that helps sustain persistence on a goal until the objective is achieved (Nye, Su, Rounds, & Drasgow, 2012). Because interests affect the direction, vigor, and persistence of goal-oriented behaviors, it is expected that interests will predict goal attainment in educational and work settings.

Within this theoretical framework of interests, motivation, goal-oriented behaviors, and goal-attainment outcomes, the influence of interests on direction (generally operationalized as “choice”) has been the most recognized and well researched. For example, interests have long been found to robustly predict choice of college major and occupation (Kuder, 1977; Strong, 1943). As a result, interest measures have become an indispensable part of the career-counseling process, and, each year, millions of interest inventories help individuals make evidence-based decisions about educational and occupational opportunities. In contrast, the role of interests in predicting outcomes beyond career or educational choice has been overlooked. Despite early investigations linking interests to superior school and work performance

(Strong, 1943), lack of comprehensive meta-analytic evidence led contemporary scholars to conclude that

the prediction issue in interest measurement is not how well someone will do but which among several alternative choices they will choose. In a real sense, vocational interest measurement is about binary choices . . . [and not] about predicting continua of behavior or performance. (Ployhart, Schneider, & Schmitt, 2006, p. 469)

Next, we provide counterevidence from recent meta-analyses and a large-scale longitudinal study that reestablishes the predictive power of interests in post-choice outcomes. It is our contention that interests are dispositions that determine not only what individuals choose but also how individuals behave and (therefore) what they achieve. The available evidence suggests that interests are no less important than other highly acclaimed individual-difference predictors of performance and career success, namely, cognitive ability and personality traits; in some cases, interests are much more powerful.

Interests Predict Performance and Career Success

In 1943, E. K. Strong published his seminal book, *Vocational Interests of Men and Women*, which showed that occupational-interest scores were correlated with measures of superiority across a wide range of occupations, from life-insurance salesperson to engineer, as well as a variety of academic majors. Strong contextualized and defined occupational interest as the similarity of an individual's preferences to the preferences of incumbents in various occupations. Thus, Strong's research demonstrated that an individual's preferences *in relation to the environment*, as measured by interest scales, are highly relevant to the success of the individual's behaviors in that environment.

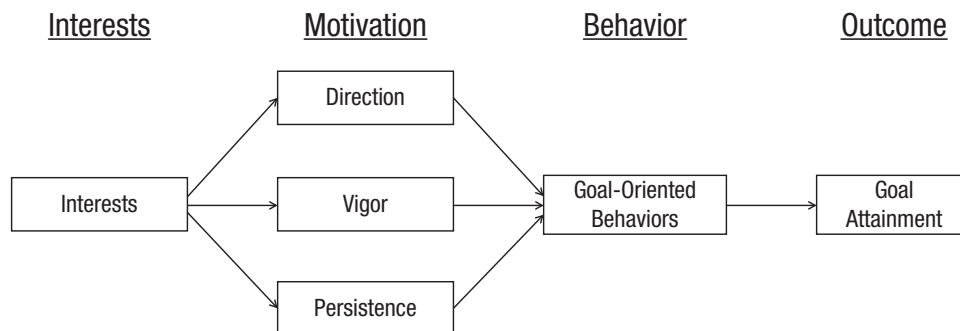


Fig. 1. Theoretical relationships among interests, motivation, goal-oriented behaviors, and goal-attainment outcomes.

To quantitatively evaluate the effect size of this interest-performance relationship, we conducted a meta-analysis on studies that examined the correlation between interests and performance over the past 70 years, dating from Strong's pioneering work up to the present time (Nye et al., 2012). We included studies that measured interests in two ways: (a) interest-scale scores that represent the level (or strength) of interests, and (b) interest-congruence indices that reflect the fit between an individual and his or her environment. Overall, interests were found to be moderately correlated with academic and job performance. The baseline correlation between interest-scale scores and job performance was .20, comparable to the size of the personality-performance relationship (Barrick & Mount, 1991). Importantly, when interest congruence was used, the interest-job performance correlation was much higher at .36. Similarly, the correlations of interest-scale scores and interest congruence with academic performance were .23 and .32, respectively.

These findings support our assertion regarding the unique value of interests, as contextualized information (interest congruence) enhanced prediction of individuals' behaviors and performance across a variety of outcomes, including students' grades ($r = .30$) and persistence in school ($r = .34$), as well as employees' task performance ($r = .30$), organizational citizenship behaviors ($r = .37$), and persistence in jobs ($r = .36$). In other words, as predicted by the model shown in Figure 1, students who are interested in their major of study are more likely to perform better, to persist longer in school, and to stay in their majors than are their disinterested peers; employees who are interested in their occupations perform better, contribute more to their organizations and coworkers, and persist longer in their jobs. Using a different methodology, another meta-analysis reviewed 74 studies on interests and performance and found interests to be predictive of a range of job-performance criteria (Van Iddekinge, Roth, Putka, & Lanivich, 2011). Compared with other important effect sizes in the field of psychology (i.e., $r = .32$ between psychotherapy and subsequent well-being; Meyer et al., 2001), the relationship between interests and performance is substantial and far from negligible.

In addition to predicting performance in school and at work, interests also appear to contribute to important long-term outcomes such as educational attainment and career success (Su, 2012). Using a large-scale, longitudinal data set that included 400,000 high school students from 1,300 schools across the nation, Su (2012) demonstrated that interests uniquely predict academic and career success over and above cognitive ability and personality. Specifically, Su examined the role of interests in predicting three criteria of academic success (college grades, persistence in college, and highest degree attained

11 years after high school graduation) and two criteria of career success (income and occupational prestige 11 years after high school graduation). Figure 2 illustrates the percentage of the total variance accounted for (VAF) that was contributed by interests, personality, and cognitive ability in explaining these five criteria.

As shown in Figure 2, interests were the most powerful predictor of income (83.3% of VAF) and greatly exceeded the contributions of ability and personality (12.0% and 4.7% VAF, respectively). This finding had not been reported previously and was the most notable finding in the study. Furthermore, Su (2012) showed that interests predicted income within occupational groups after controlling for the contribution of ability and personality, which indicates that equally able individuals do better or worse depending on their interests. Consistent with past reports, ability mattered most for occupational prestige and for all of the educational-success outcomes, accounting for over half of the VAF in each. Personality also played a role. However, interests were more important than personality in every case, particularly for degree attainment and occupational prestige. These results evidenced that the contextualized nature of interests provides a unique source of information—information about people's preferences in relation to their environment—for understanding educational and career success.

Interest Continuity and Change

Interests are viewed as relatively stable dispositions that facilitate fit (e.g., congruence) between people and their environments. The appropriateness of using interest assessments in career counseling is contingent on this assumption of stability. Importantly, relative stability does not mean that interests never change for any individual over the life span. Rather, it means that the relative standing of any individual in a population remains consistent to a certain degree.

To examine the continuity and change of interests across the life span, Low et al. (2005) conducted a meta-analysis of 66 longitudinal studies on interest stability. This yielded 107 samples comprising a total of 23,665 participants who were studied from early adolescence (age 12) to middle adulthood (age 40). Low et al. estimated interest stability at different life stages using rank-order stability, that is, the relative placement of an individual in a group, expressed as a correlation between two time points. During adolescence, the rank-order stability of interests was in the upper .50s. It increased markedly during the college years (ages 18.0–21.9), rising to close to .70 before appearing to plateau for two decades. More importantly, Low et al. compared the rank-order stability of interests to that of personality traits during each period of life and found interests to be more

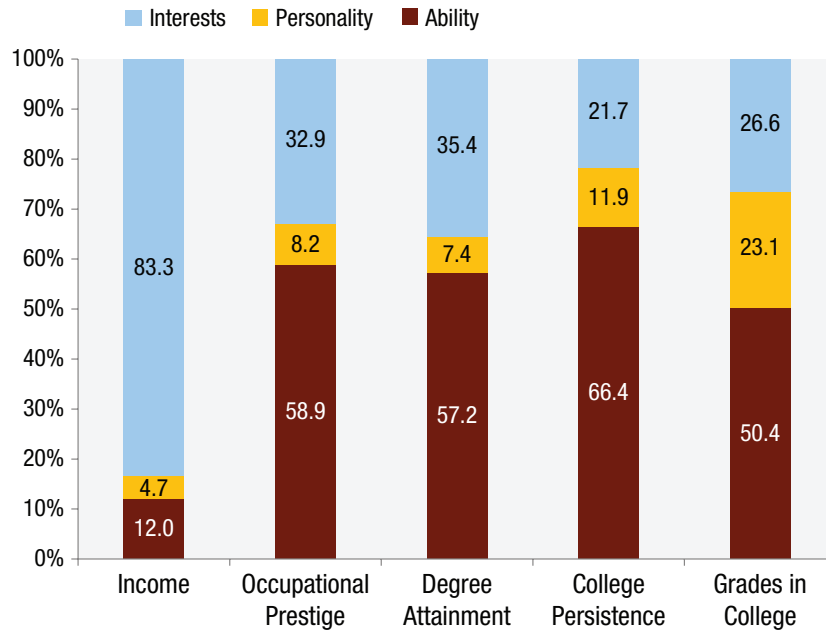


Fig. 2. The relative importance of interests, personality, and ability for educational and career success. The graph shows the percentage of total variance accounted for by interests, personality, and cognitive ability in explaining the five educational- and career-success criteria. The total amount of variance accounted for (R^2) for each criterion is 25% for income (25% \times 83.3% = 20.82% by interests, 25% \times 4.7% = 1.18% by personality, 25% \times 12.0% = 3.00% by cognitive ability), 33% for occupational prestige (10.86% by interests, 2.70% by personality, 19.44% by cognitive ability), 40% for degree attainment (14.16% by interests, 2.96% by personality, 22.88% by cognitive ability), 22% for college persistence (4.77% by interests, 2.62% by personality, 14.61% by cognitive ability), and 19% for grades in college (5.05% by interests, 4.39% by personality, 9.57% by cognitive ability).

stable across all age periods before middle adulthood (see Fig. 3). The peak of interest stability also occurred much earlier in life than the peak reported for personality traits. These findings provide support for the assumption that interests are relatively stable and are therefore suitable for use in academic and career guidance and prediction.

The greater stability of interests compared with personality brings us back to our discussion of the nature of interests. The findings from Low et al. (2005) support the dispositional nature of interests and indicate that interests are not simply “downstream” constructs derived from basic personality traits or workplace instantiations of basic personality traits as previously thought (e.g., Holland, 1997; McCrae & Costa, 1990). Interests describe a person in relation to the environment, which, as shown above, appears to enhance their predictive utility. The development of interests is an iterative process of increasing fit between person and environment: A person chooses preferred environments and avoids, leaves, or changes disliked environments; in turn, compatible environments reinforce a person’s interests and goal pursuits (Low & Rounds, 2006). Because trait continuity is facilitated by (a) the propensity

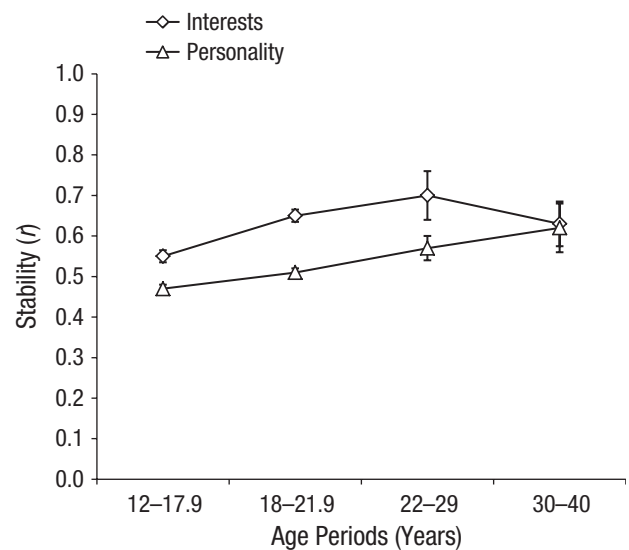


Fig. 3. Stability of interests versus personality as a function of age group. Error bars indicate 95% confidence intervals. Adapted from “Interest Change and Continuity From Early Adolescence to Middle Adulthood,” by K. S. D. Low and J. Rounds, 2007, *Journal of Educational and Vocational Guidance*, 7, p. 32. Copyright 2007 by Springer. Adapted with permission.

of a person to select roles and environments that best fit his or her identity and (b) the manipulation and change of existing environments to better suit one's preferences (Caspi, 1998; Low & Rounds, 2007), interests reflect stable, traitlike components of individuals' identities that both reflect and predict successful adaptation to the environment.

Current and Future Directions in Interest Research

It is time to rethink the nature of interests and the role of interests in human behaviors and outcomes. Although meta-analysis has revealed the power of interests to predict educational and occupational choice, performance, and success, more research is needed to determine the mechanisms through which interests influence these outcomes. The situational perspective, which is typically taken in studies of the effect of interests on learning and development in the classroom, may be advantageous in this pursuit (Renninger & Hidi, 2011). Additionally, because interests predict important life outcomes yet stabilize early in the life course, research aimed at understanding their development should focus on younger individuals. Therefore, as with temperament (Rothbart, 2007), measures need to be developed and validated to suit the cognitive development and perceptiveness of children. Finally, longitudinal studies that begin in these earlier life stages would be immensely beneficial to understanding the antecedents and outcomes of interests as well as the bridge between individuals and environments (Low & Rounds, 2006).

Recommended Reading

- Armstrong, P. I., Su, R., & Rounds, J. (2011). Vocational interests: The road less traveled. In T. Chamorro-Premuzic, S. von Strumm, & A. Furnham (Eds.), *Handbook of individual differences* (pp. 608–631). Oxford: Wiley-Blackwell. A chapter highlighting recent research that shows how interests can be the foundation for integrating values, personality traits, and skills and abilities.
- Holland, J. L. (1997). (See References). A book that is the best available source for the theory, measures, and models of J. L. Holland, which have dominated the study of interests since the 1970s.
- Liao, H.-Y., Armstrong, P. I., & Rounds, J. (2008). (See References). A monograph in which, following the lead of Leo R. Goldberg, an argument is presented for the development of public-domain interest measures.
- Savickas, M. L., & Spokane, A. R. (Eds.). (1999). *Vocational interests: Their meaning, measurement and use in counseling*. Palo Alto, CA: Davies-Black. An edited volume devoted to the theory and measurement of interests and applications of interest inventories.
- Strong, E. K., Jr. (1943). (See References). A seminal work on vocational interests that exhibits a contemporary understanding of the relation of interests to satisfaction and performance.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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