

Resilience: Distinct Construct or Conglomerate of Existing Traits?

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Since its inception into mainstream scientific psychology, resilience has emerged as a popular, yet controversial, construct. As evidenced in the target article, this controversy can be attributed, at least in part, to current conceptual and methodological difficulties hampering understanding of the construct. Chief among these concerns is the discriminant validity of resilience with respect to conceptually similar individual differences constructs, such as hardiness, mental toughness, adaptability, and even the five-factor personality dimensions. Advances in research on resilience, and ultimately the utility of the construct in applied settings, hinge on its distinction from related concepts.

In this commentary, we extend Britt and colleagues' (Britt, Shen, Sinclair, Grossman, & Klieger, 2016) brief discussion of dimensional redundancy, maintaining that the demonstration of discriminant validity is a necessary first step toward the conceptual clarification of resilience. We first provide an overview of the "jangle" fallacy, which serves as a basis for discussing the importance of construct discrimination to construct validity. We thereafter briefly review existing literature on the distinction, or lack thereof, between resilience and conceptually analogous constructs. Our commentary closes with a reevaluation of the potential contribution of resilience to organizational science.

### **The Jangle Fallacy**

The issue of distinguishing among closely related constructs resurfaces from time to time. It is usually triggered by the emergence of a new term that captures the imagination of the wider public. Kelley (1927) used the term "jangle fallacy" to describe the tendency of psychologists to "discover" new traits without checking to see whether a similar construct already existed. Specifically, the jangle fallacy refers to the assumption that two constructs are dissimilar simply because they have different names (Marsh, 1994). The separation of psychology into subdisciplines increases the chances of similar constructs appearing under different labels. Even within subdisciplines, research tends to be conducted within silos (Britt

et al.). The result, as observed by Watson and Clark (1984), is that separate literatures have developed around some personality constructs that, when brought together, turn out to be so highly correlated that they must be considered measures of the same construct. This warning about conceptual confusion, whether its source lies in a silo mentality or simply a healthy growth in research interest in a construct, applies to any field of research in which the boundaries around popular constructs become blurred or are never articulated in the first place.

Britt and colleagues do not discuss methodologies that can be used to clarify the construct of resilience, but their first among six recommendations is to “Stop Calling Everything Good Resilience.” Under this heading, they call for studies that examine constructs such as resilience, tough mindedness, core self-evaluations, personality, and psychological capital simultaneously. The key question here is whether the constructs are at all dissimilar or whether correlations are sufficiently high to indicate dimensional redundancy. These questions can be rephrased in terms of discriminant and convergent validity and addressed using the methodologies appropriate for those studies.

In a good example of this type of research, Judge, Erez, and Bono (2002) presented four studies that sought to determine whether four of the most widely studied traits in psychology—namely, self-esteem, neuroticism, locus of control, and generalized self-efficacy—were indicators of a common core construct. They found that a single factor explained the relationships among measures of the four traits and proposed that the constructs were all indicators of the same higher-order concept, which they tentatively identified as general neuroticism.

In another example, this time from the field of sport and exercise psychology, Fogarty, Furst, Thomas, and Perera (2016) assessed the jingle and jangle among measures of dispositional optimism, confidence, and resilience. Using exploratory structural equation

modeling (ESEM) techniques, the authors were able to establish discriminant validity and to note conceptual differences among the constructs, with dispositional optimism scales capturing a tendency to expect positive outcomes, a resilience scale capturing an ability to overcome setbacks, and confidence acting as an overarching trait. This interpretation fits with suggestions emerging from the Judge et al. (2002) article in which they raise the possibility of a core trait underlying clusters of similar-sounding constructs.

The Fogarty et al. study is a reminder that fields of psychology other than those mentioned by Britt et al. have a long-standing interest in the construct of resilience. Sport and exercise psychology is one such field. The literature contains not only individual studies of resilience but also reviews and critiques of resilience and related constructs (Fletcher & Sarkar, 2013; Sarkar & Fletcher, 2014). One advantage enjoyed by researchers in the sport and exercise field is that some of the stressors experienced by elite athletes are unquestionably more severe than those experienced in typical work settings. Britt et al. expressed a concern that little can be learned about resilience by studying employees' reactions to relatively low-level work stressors. One advantage enjoyed by researchers in the sport and exercise field is that some of the stressors experienced by elite athletes are unquestionably more severe than those experienced in typical work settings. Sports are competitive and involve injuries and setbacks, and the consequences of success or failure extend well beyond the participants. Despite the advantages mentioned above, however, researchers in this field are similarly frustrated by the definitional and discriminant validity issues surrounding the construct of resilience.

### **Learning From Reviews of Other Constructs**

The fact that Kelley coined the term “jangle fallacy” back in 1927 is an indication that conceptual confusion is a long-standing problem in psychology. We can profit from the experiences gained by other researchers as they have attempted to disentangle various

constructs. A recent example is emotional intelligence (EI) in which the same confusion arose about conflicting definitions, dimensional redundancy with respect to personality and intelligence, measurement, and relationships with organizational outcomes such as leadership effectiveness and job performance (Cherniss, 2010).

The EI literature has made great strides in attempting to disentangle the affective construct from analogous individual differences constructs. Take, for instance, the trait conceptualization of EI (i.e., trait EI), which has now been distinguished from extant personality factors through a systematic program of research over the past 2 decades. This research involved investigating (a) the location of trait EI in existing personality frameworks via factor analytic studies (Petrides & Furnham, 2001), (b) the phenotypic and genetic associations between trait EI and established personality traits via behavior genetic studies (Vernon, Villani, Schermer, & Petrides, 2008), and (c) the role of trait EI in substantively important outcomes over and above personality traits (Perera & DiGiacomo, 2015). Taken together, these studies have shown that some dimensions of trait EI (e.g., sociability, dispositional well-being) are no more than “old wine in a new bottle” (i.e., the jangle fallacy), yet others (e.g., emotionality) represent unique components of EI that may add to the explanation of outcomes beyond existing personality dimensions (Matthews, Zeidner, & Roberts, 2012). Resilience researchers may learn a great deal from the process of construct discrimination undertaken in the EI field.

### **Resilience as a Process**

To resolve the debate about whether an individual must show growth or positive changes following a stressful event to be considered resilient, Britt et al. proposed a useful distinction between the *capacity* for resilience and the *demonstration* of resilience. In this framework, showing growth becomes a demonstration of resilience. The authors discuss this distinction as a means of reducing some of the confusion surrounding the definition of

resilience. The distinction has a direct bearing on the question of discriminant validity in the sense that it should be possible to possess the capacity for resilience without necessarily being able to demonstrate it in all circumstances. It is interesting to see that Cherniss (2010) proposed a similar partial solution to the EI definitional controversies. He supported a distinction originally made by Salovey and Mayer (1990) between EI and the emotional and social competencies (ESCs) that flow from EI. Thus, empathy is a competence (ESC) that depends on the ability to perceive how others feel (EI). One may perceive how others feel but not experience empathy. In the same way, personal growth (competence) could flow from a successful recovery from an adverse experience (resilience). Viewed in this light, personal growth following adversity need not be regarded as a conflicting definition of resilience but a competence that can emerge from it. Whether one thinks in terms of demonstrations or competencies, both terms emphasize the notion of reliance as a process. Sarkar and Fletcher (2014) were equally convinced of the importance of maintaining the focus on the processes underlying resilience in athletes.

### **Building a Resilience Ontology**

To this point in our commentary, we have talked about studies conducted both within and outside I-O psychology that amplify points raised in the Britt et al. review. We continue in this vein by returning to a point made earlier about the need for studies that include multiple measures of resilience (Recommendation 1 in the review). Such studies would satisfy the call in the review for research aimed at developing “a parsimonious nomological network of resilience constructs” (p. 23). The field of psychology contains some prominent instances of large-scale house-cleaning operations of the type requested in the commentary article. In order to understand how many personality traits were needed to describe a person, Raymond Cattell started with a list of 4,500 adjectives taken from the English dictionary, grouped these into 171 clusters, then used factor analysis and expert opinion to arrive at his

final list of 16 personality factors, which he then operationalized through his 16PF instrument. Goldberg (1990) also used factor analysis to arrive at the now-dominant Big Five model of personality. To overcome the fact that a consensus taxonomy of cognitive abilities was lacking, Carroll (1993) factor-analyzed 460 human ability cognitive datasets collected over 60 years, eventually arriving at what has become the most widely accepted model of human cognitive abilities, the Cattell-Horn-Carroll (CHC) theory. Carroll's publication was the first time that an empirically based taxonomy of human cognitive ability elements was presented in a single organized framework (McGrew, 2009, p. 2).

Factor analysis is not the only organizing methodology available to psychologists. Khoozani and Hadzic (2010) remarked on the proliferation of terms surrounding the construct of stress. Their solution was to present an ontology model "that captures and represents all current information related to stress, its causes, mediators, effects, treatments, and measurements" (p. 258). Ontologies came from the field of philosophy and have become popular because of the demands for search engines that are capable of identifying all instances of a concept, whatever name is used. In undertaking this task, Khoozani and Hadzic noted a degree of confusion that makes current concerns about the construct of resilience seem mild by comparison. For example, a search for the term "stress theories" in the OvidSP database produced over 12,900 hits. On closer investigation, the authors found that the same concepts had different meanings in different studies or that the same concept appeared under different names; the jingle and jangle referred to earlier in this commentary. Computer search engines do not handle this sort of situation effectively. An ontology, however, seeks to represent the meanings of words, not just their bare physical attributes.

The advantages of an ontological representation are many: They are machine-readable, which means that the concepts and relationships contained in an ontology framework can be retrieved, analyzed, and managed by researchers; they are modifiable,

which means that can benefit from new studies; they show all possible links and interconnections, including ones that are yet to be defined by new research. Ontologies are impressive, but they rely on a lot of accumulated knowledge in order to sketch the nodes, hierarchies, and relations that form the ontology. Khoozani and Hadzic had Fink's (2007) *Encyclopedia of Stress* as a starting point. There is, as yet, nothing similar for the construct of resilience, although Fletcher and Sarkar (2013) have made a start, and Figure 1 in Britt et al. represents the beginnings of an ontology.

### **Reevaluating Resilience: What Can Resilience Contribute to Organizational Science?**

The arguments advanced and evidence reviewed in the preceding sections suggest that resilience may not be sufficiently distinguishable from known constructs to be scientifically meaningful. If resilience is a reconfiguration of existing constructs in the context of adversity, what can it contribute to organizational science? One possibility is that the resilience construct serves a unifying function, bringing together individual and social assets and resources relevant to positive adaptation under a common construct domain (Windle, 2011). There are two ostensible advantages of this type of integration for organizational research. First, it may be that variance in substantively meaningful outcomes (e.g., work satisfaction) explained by a general resilience construct would otherwise require some cumbersome combination of existing intra- and interpersonal factors across several heterogeneous frameworks to attain a comparable degree of explanatory power (e.g., low neuroticism, high self-efficacy, internal locus of control, social support). Second, from a practical viewpoint and assuming true effects of resilience, the use of resilience measures as screening tools to detect those at risk of maladjustment in the face of adversity is likely to be more efficient than administering multiple measures of relevant constructs constituting the resilience content domain.



Despite these apparent benefits, there are inherent conceptual dangers in conglomerate factors that reflect the repackaging of existing constructs. First, if the resilience construct represents an integrative taxonomy of existing individual and social factors relevant to positive adaptation, it may be that the construct is merely a “convenient fiction” designed to systematize the study of factors involved in positive adaptation to adversity. Here we distinguish between scientific utility and scientific meaning. Resilience is scientifically useful to the extent that it provides a convenient constellation of adaptation-related constructs. However, resilience may not be scientifically meaningful beyond its constituent parts. A second, related danger is not unique to resilience and generally pertains to any construct reflecting a conglomerate of existing traits. The high bandwidth of the resilience construct, spanning multiple psychological systems and variables, may obfuscate the conceptual meaning of observed relations of resilience with valued life outcomes. Certainly, one solution to this bandwidth-fidelity-type issue is to examine resilience at lower levels of conceptual aggregation (Saucier & Goldberg, 2003; Saucier & Ostendorf, 1999). However, insofar as resilience is a conglomerate of existing dispositions and resources given some adversity, any subdimensions of resilience may not show sufficient discriminant validity against established constructs to warrant a new label.

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