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## Profile 53

### Rational-Experiential Inventory–40 (REI-40)

(Pacini & Epstein, 1999)

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### Construct

Cognitive-Experiential Self-Theory (CEST) asserts that individuals process information through two independent but interactive systems, the preconscious experiential system and the conscious rational system (Epstein, 1994). The *rational processing system* is inferential, guided by culturally transmitted rules, characteristically slower, more systematic, primarily verbal, and relatively emotion-free. The *experiential system* is a preconscious system that is more rapid and automatic, holistic, primarily nonverbal, and emotional. The employment of these systems is thought to be partially a function of individual predispositions captured by the Rational-Experiential Inventory (REI-40), which captures four factors underlying these two processing modes: Rational Ability, Rational Engagement, Experiential Ability, and Experiential Engagement (Epstein, Pacini, & Norris, 1998; Pacini & Epstein, 1999).

### Instrument Type

Self-Report

### Description

The current form of the Rational-Experiential Inventory (REI-40) (Epstein *et al.*, 1998; Pacini & Epstein, 1999) is a 40-item self-report instrument measuring two independent dimensions of human information processing—rational and experiential. Each dimension is assessed using two subscales composed of 10 items each under the factors Rational Ability, Rational Engagement, Experiential Ability, and Experiential Engagement.

*Sourcebook of Listening Methodology & Measurement*, First Edition.

Edited by Debra Worthington and Graham Bodie.

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## Administration

Administered via paper or online, the measure employs a 5-point response scale ranging from 1 (*definitely not true of myself*) to 5 (*definitely true of myself*). The survey takes approximately 10 to 15 minutes to complete.

## Scoring

Subscale scores are computed by averaging the 10 composite items. Thus, each respondent receives four scores, one each for Rational Ability, Rational Engagement, Experiential Ability, and Experiential Engagement. Ability and Engagement scores can be further averaged to form two composite scores for Rationality and Experientiality.

## Development

A key tenet of CEST is that individuals process information through two parallel, interactive systems: rational and experiential (Epstein, 1991; Epstein, Pacini, Denes-Raj, & Heier, 1996; Pacini & Epstein, 1999). The original REI was developed with this framework in mind (Epstein *et al.*, 1996). The original measure was constructed as a 31-item, self-report instrument with two unipolar scales measuring individual differences in the tendency to employ these two systems. The original scale was composed of 19 items from the Need for Cognition (NFC) scale, representing rational processing, and 12 items from the Faith in Intuition (FI) scale, representing experiential processing.

The REI-40 was developed to address limitations of the original scale, among them a lack of parallel content and internal consistency issues with the NFC items. The NFC items address cognitive activities (engagement), and the FI items refer to making effective intuitive judgments (ability). In addition, the FI items refer to social activities, whereas the NFC items do not. The REI-40 addressed these issues by proposing ability and engagement subscales for each processing model, resulting in two dimensions and four subscales: Rational Ability, Rational Engagement, Experiential Ability, and Experiential Engagement (Epstein *et al.*, 1998; Pacini & Epstein, 1999).

Rational Ability refers to an ability to think logically and analytically. Rational Engagement refers to a reliance on and enjoyment of thinking in an analytical manner. Experiential Ability refers to the ability to trust one's intuition and feelings. Experiential Engagement refers to reliance on and enjoyment of using intuition in decision making.

## Reliability

In general, reliability estimates of the REI-40 improved over the original scale, supporting developers' notion that the REI-40 is the preferable scale. The REI-40 has shown evidence of reliability for the two general constructs, Rationality ( $\alpha$  ranging from .86 to .91) and Experientiality ( $\alpha$  ranging from .87 to .90), and the four subscales: Rational Ability ( $\alpha$  ranging from .80 to .85), Rational Engagement ( $\alpha$  ranging from .78 to .87), Experiential Ability ( $\alpha$  ranging from .77 to .80), and Experiential Engagement ( $\alpha$  ranging from .78 to .84).

## Validity

The REI began as a construct validation investigation of CEST (Epstein *et al.*, 1996). In Epstein and colleagues' original study, the goal was to develop an individual-difference measure of the rational and experiential processing modes. The 31 items of the original REI were examined with principal component analysis (PCA) across two studies. All items loaded on the appropriate component with item loadings  $> .30$ . The NFC and FI scales were not significantly correlated ( $r = -.07$  for the first study and  $.08$  for the second), suggesting that the components are orthogonal. A replication of this procedure with the REI-40 found similar results (Handley, Newstead, & Wright, 2000). Because PCA was utilized, model fit estimates were not provided in either article.

Epstein and Meier (1989) also examined the convergent validity of the original REI, comparing it to the Constructive Thinking Inventory (CTI). NFC was significantly associated with the CTI factors of Global Constructive Thinking, Emotional Coping, and Absence of Negative Overgeneralization and Nonsensitivity. For men, NFC also was related to the Behavioral Copying facet of Positive Thinking, which the authors interpreted as men placing greater importance on NFC to determine coping ability. For female participants, Distrust was more strongly related to NFC and FI. NFC and FI also displayed predictive validity, accounting for significant variance in Action Orientation and Conscientiousness. NFC also was significantly correlated with Dominance ( $r = .39$ ), Modern Racism ( $r = -.26$ ), Depression ( $r = -.24$ ), State-Trait Anxiety ( $r = -.30$ ), Self-Esteem ( $r = .35$ ), stress in college life ( $r = -.13$ ), drinking ( $r = .09$ ), SAT scores ( $r = .55$ ), and GPA ( $r = .13$ ). FI was significantly correlated with Dominance ( $r = .12$ ), Depression ( $r = -.09$ ), State-Trait Anxiety ( $r = -.17$ ), Self-Esteem ( $r = .18$ ), and stress in college life ( $r = -.11$ ).

The REI-40 has shown evidence of convergent and divergent validity. Pacini and Epstein (1999) reported rational thinking as positively correlated with Ego Strength ( $r = .44$ ), Openness ( $r = .44$ ), and Conscientiousness ( $r = .32$ ), and negatively correlated with Neuroticism ( $r = -.38$ ) and Conservative Ideology ( $r = -.20$ ). In the same study, the experiential thinking style was positively related to Extraversion ( $r = .21$ ), Agreeableness ( $r = .18$ ), Favorable Relationship Beliefs ( $r = .34$ ), and Emotional Expressivity ( $r = .27$ ) and negatively correlated with Categorical Thinking ( $r = -.29$ ), Distrust of Others ( $r = -.23$ ), and Intolerance ( $r = -.19$ ).

There is evidence of the reliability and validity of the REI-40 in other languages, including Slovak (Mikusková, Hanák, & Cavoiová, 2015) and Swedish (Björklund & Bäckström, 2008).

Although the developers advocate for using the REI-40, Akinci and Sadler-Smith (2013) found evidence for a two-dimensional model (rather than four dimensions) in a study of police organizations.

## Availability

The REI-40 (Pacini & Epstein, 1999) is presented here, with permission; the original version is located in the initial article published in the *Journal of Personality and Social Psychology* (Epstein *et al.*, 1996). The instrument is free to use for research purposes.

## Sample Studies

The REI has been used in a wide range of research. Ares and colleagues (Ares, Mawad, Giménez, & Maiche, 2014) reported that rational and experiential thinking styles affect consumer food choices and dietary patterns. In one study on schizotypy and beliefs about the paranormal, participants scoring higher on both rational and experiential thinking also scored higher on cognitive aspects of schizotypy and self-efficacy (Wolfradt, Oubaid, Straube, Bischoff, & Mischo, 1999). Further, intuitive thinkers scored highest on interpersonal aspects of schizotypy and interpersonal tolerance of ambiguity. Genovese (2005), in a follow-up study, reported similar findings, and concluded that teachers may transmit paranormal beliefs to their students, suggesting a relationship between social learning and thinking style.

The REI-40 also has been used in a variety of research. Feng and Lee (2010) reported that thinking styles (rational and experiential) had an effect on the perceived quality of supportive messages. In particular, more highly rational individuals were likely to positively respond to advice, whereas those with a stronger experiential thinking style rated emotionally supportive messages as greater in quality. Concerning education, McLaughlin and colleagues (2014), using a sample of student pharmacists, found that rational scores were higher than experiential scores, and that rational scores for students under 30 years of age were significantly higher than for those over 30. Buzdar, Ali, and Tariq (2014) administered an adapted version of the REI for adolescents (REI-A), reporting that religious orientations explained a moderate amount of variance in rational thinking of Hindu and Muslim students; the religious orientation of Christian students affected their rational choices minimally.

Berger, Lee, and Johnson (2003) found that men assign greater importance to more specific, base-rate explanations (of increasing world population) than more general, less specific explanations for both positive and negative accounts of the problem. Women were only likely to favor base-rate explanations for negative explanations. High rationals assessed negative non-base-rate accounts of increasing world population (i.e., less specific, more general) as less important. When asked to produce their own examples, rationals tended to bring forth more specific, base-rate explanations for negative explanations (of increasing world population).

Berger (2005) investigated the effects of rational thinking style and variations on the magnitude of threat escalation (shallow, moderate, and steep increases of campus theft) on people's judgments. Highly rational individuals reacted with less apprehension and judged the problem as less substantial, and their responses demonstrated greater variability in response to the different degrees of campus theft. A follow-up experiment confirmed that "high rationals" are more likely to pay attention to evidence that serves to reduce apprehension.

## Critique

The two processing systems proposed by CEST seem related to listening styles. Rational processing types call to mind analytical and critical listeners, whereas experiential types seem representative of relational listeners. The REI-40 could be easily applied to listening contexts. Listening researchers interested in education or social support should consider using the REI-40, as it is solidly based in theory. Although there is evidence of convergent validity for the REI-40, however, investigations into the construct

validity reviewed in this profile have not included confirmatory factor analysis for model fit. Future researchers are urged to conduct and report findings of their own confirmatory factor analyses.

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## Scale

### Rational-Experiential Inventory–40 (Pacini & Epstein, 1999)

Instructions: Using the following scale, please rate the extent that these items refer to you.

1	2	3	4	5
<i>Definitely true of myself</i>				<i>definitely not not true of myself</i>

#### Rationality scale

##### **Rational Ability**

- 1) I'm not that good at figuring out complicated problems\*
- 2) I am not very good at solving problems that require careful logical analysis\*
- 3) I am not a very analytical thinker\*
- 4) Reasoning things out carefully is not one of my strong points\*
- 5) I don't reason well under pressure\*
- 6) I am much better at figuring things out logically than most people
- 7) I have a logical mind
- 8) I have no problem thinking things through carefully
- 9) Using logic usually works well for me in figuring out problems in my life
- 10) I usually have clear, explainable reasons for my decisions

##### **Rational Engagement**

- 11) I try to avoid situations that require thinking in depth about something\*
- 12) I enjoy intellectual challenges
- 13) I don't like to have to do a lot of thinking\*
- 14) I enjoy solving problems that require hard thinking
- 15) Thinking is not my idea of an enjoyable activity\*
- 16) I prefer complex problems to simple problems
- 17) Thinking hard and for a long time about something gives me little satisfaction\*
- 18) I enjoy thinking in abstract terms
- 19) Knowing the answer without having to understand the reasoning behind it is good enough for me\*
- 20) Learning new ways to think would be very appealing to me

Experientiality scale***Experiential Ability***

- 21) I don't have a very good sense of intuition\*
- 22) Using my gut feelings usually works well for me in figuring out problems in my life.
- 23) I believe in trusting my hunches
- 24) I trust my initial feelings about people
- 25) When it comes to trusting people, I can usually rely on my gut feelings
- 26) If I were to rely on my gut feelings, I would often make mistakes\*
- 27) I hardly ever go wrong when I listen to my deepest gut feelings to find an answer
- 28) My snap judgments are probably not as good as most people's\*
- 29) I can usually feel when a person is right or wrong, even if I can't explain how I know
- 30) I suspect my hunches are inaccurate as often as they are accurate\*

***Experiential Engagement***

- 31) I like to rely on my intuitive impressions
- 32) Intuition can be a very useful way to solve problems
- 33) I often go by my instincts when deciding on a course of action
- 34) I don't like situations in which I have to rely on intuition\*
- 35) I think there are times when one should rely on one's intuition
- 36) I think it is foolish to make important decisions based on feelings\*
- 37) I don't think it is a good idea to rely on one's intuition for important decisions\*
- 38) I generally don't depend on my feelings to help me make decisions\*
- 39) I would not want to depend on anyone who described himself or herself as intuitive(-)
- 40) I tend to use my heart as a guide for my actions

*Note:* Labels should be removed and items randomized prior to administration. Items marked with an asterisk (\*) should be reverse coding prior to scoring. Subscale scores are computed by averaging the 10 composite items.