Ego-control and ego-resiliency: Generalization of self-report scales based on personality descriptions from acquaintances, clinicians, and the self[☆,☆☆]

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Abstract

Ego-control refers to the inhibition/expression of impulse and ego-resiliency (ER) to the dynamic capacity to contextually modify one's level of ego-control in response to situational affordances (Block, J., 1950, 2002; Block, J.H., 1951; Block & Block, 1980). This article investigates the generalization of brief *under* control (UC) and ER self-report scales across samples, measurement techniques, and data sources, utilizing personality descriptions provided by acquaintances, clinician-interviewers, and the self. Undercontrolled individuals were consistently described as self-dramatizing, unable to delay gratification, unpredictable, assertive, rebellious, moody, and self-indulgent. Overcontrolled individuals were consistently described as bland, consistent, dependable, and calm. Resilient individuals were described as having wide interests and a high aspiration level, assertive, socially poised and skilled, and cheerful; and *not* self-defeating, emotionally bland, nor lacking personal meaning in life. The definitive characteristics of both constructs were mostly consistent across data source, gender, and eth-

nicity, although ego-resiliency conformed more reliably with theoretical expectations among females than males, while ego-undercontrol may have more negative implications among Caucasians than other ethnic groups. Overall, the UC and ER self-report scales appear to offer effective, efficient, and accessible means for investigating these constructs.

1. Introduction

Ego-control (EC) and ego-resiliency (ER) are conceptualized as central personality constructs for understanding motivation, emotion, and behavior (Block, J., 1950, 2002; Block, J.H., 1951; Block & Block, 1980). Broadly conceived and summarily characterized, EC refers to a meta-dimension of impulse inhibition/expression and ER refers to a meta-dimension of the dynamic capacity to contextually modify one's level of control in response to situational demands and affordances. Overcontrolled individuals characteristically contain impulse and affect across situations, even when doing so may not be necessary. On the other hand, undercontrolled individuals characteristically express impulse and affect across situations, even when doing so may be inappropriate. Highly ego-resilient individuals are characteristically able to modify their level of control, either up or down, as may be appropriate or necessary according to the situational context. Individuals with a low level of ego-resiliency are more restricted to the same level of impulse containment or expression regardless of situational demands.

The main purpose of the current study is to present evidence of generalization of self-report scales of EC and ER, developed some years ago by Jack Block, across samples, measurement techniques, and data sources, and to create a richer nomothetic net surrounding these constructs. Block and Kremen (1996) reported evidence for the validity of the ER scale among participants in the Block and Block Longitudinal Study of Cognitive and Ego Development (Block & Block, 1980), at 18 and 23 years of age. The present study extends examination of the ER scale to a new cohort of participants assessed through different and diverse methods. The most recent ego-*under* control (*UC*) scale has not been examined before, so the present study provides first evidence for its convergent validity and generalizability.

Three types of evidence for generalization are presented. First, we examine generalization to samples, independent from and differing in many regards (i.e., age, cohort, and geographic location) from samples used for the original scale derivation (see Block & Block, 1980). Furthermore, the current sample is ethnically diverse, allowing for examination of generalization to ethnic groups (Caucasian, Asian-American, Hispanic, and African American). Second, we examine generalization to measurement techniques by comparing the self-report scale scores with scores derived from the traditional, labor-intensive method that employs descriptions of

prototypic exemplars of ego-undercontrol and ego-resiliency (Funder & Block, 1989). Finally, and perhaps most importantly, we examine generalization to data sources by examining the consonance of ego-control and ego-resiliency with personality characterizations stemming from three sources of personality information: acquaintances, clinician-interviewers, and self-reports.

1.1. Ego-control

According to theory developed by Jack and Jeanne Block over several decades, the individual difference dimension of ego-control varies from overcontrol to undercontrol (Block, 2002; Block & Block, 1980). Overcontrolled individuals are conceptualized as relatively inhibited in action and affect-expressiveness to the point of at times being excessively constrained. They have difficulty making decisions, may unnecessarily delay gratification or deny themselves pleasure, are tightly organized, are insulated from environmental distractions, and are able to continue even repetitive tasks for long periods of time. At the other extreme, undercontrolled individuals characteristically express affect and impulses relatively immediately and directly even when doing so may be socially or personally inappropriate. They are relatively unable to delay gratification, have fluctuating emotions, and are spontaneous, easily distracted, and relatively unbound by social customs (Block, 2002; Funder & Block, 1989).

The consequences of characteristic overcontrol or undercontrol may be adaptive or maladaptive depending on circumstances. Overcontrol may facilitate disciplined and directed behavior, which can be advantageous in some situations. In other contexts, where delaying gratification and pleasure is unwarranted or psychologically undesirable, overcontrol is likely to be detrimental to personal and often societal fruition. In parallel, undercontrol can facilitate the expression of warmth, friendliness, and spontaneity, which are likely to be advantageous in promoting intimacy and the enjoyment of life. However, undercontrol can be maladaptive when it leads to erratic, unorganized, or dangerous behavior.

The present conceptualization of ego-control contrasts fundamentally with that of other theorists (e.g., Metcalfe & Mischel, 1999; Mischel, Shoda, & Peake, 1988; Tangney, Baumeister, & Boone, 2004), who consider higher levels of control to be monotonically advantageous and adaptive under all conditions. This difference in theoretical interpretation may arise because these other investigators conceptualize EC as a variable that ranges from appropriate control to undercontrol, and therefore fail to theorize about or to measure the range between appropriate control and overcontrol. For example, the recently published "self-control" scale of Tangney et al. (2004) includes items reflective of an appropriate level of control and undercontrol, but not overcontrol. It is therefore not surprising that the correlates of this scale do not indicate maladaptive consequences associated with very high levels of control. In contrast, our conceptualization leads us to attempt to measure across the entire range between the two poles of this construct and therefore to enable identification of characteristics associated with overcontrol, at least some of which can be expected to be maladaptive.

1.2. Ego-resiliency

According to the Blocks' theorizing, ego-resiliency is the ability to adapt one's level of control temporarily up or down as circumstances dictate (Block, 2002; Block & Block, 1980). As a result of this adaptive flexibility, individuals with a high level of resiliency are more likely to experience positive affect, and have higher levels of self-confidence and better psychological adjustment than individuals with a low level of resiliency (Block & Kremen, 1996; Klohnen, 1996). When confronted by stressful circumstances, individuals with a low level of resiliency may act in a stiff and perseverative manner or chaotically and diffusely, and in either case, the resulting behavior is likely to be maladaptive (Block & Kremen, 1996).

1.3. Assessing EC and ER

1.3.1. CAQ prototype match

In past research, the most common technique for assessing EC and ER has been the relatively time-consuming and labor-intensive procedure of CAQ prototype matching. The procedure begins with the formulation of a complete personality description for each individual using the California Adult Q-set (CAQ; Block, 1961). The CAQ consists of a carefully developed, widely ranging set of 100 statements about personality and social characteristics. A person can be psychologically described by sorting the statements into a 9-step, fixed, quasi-normal distribution ranging from 1 (not at all characteristic) to 9 (extremely characteristic). Judges have been research staff, teachers, lay acquaintances, and even the participants themselves (Cramer, 2000; Funder, Block, & Block, 1983; Kremen & Block, 1998). The second step of the procedure invokes pre-existing, conceptual prototype definitions of ego-undercontrol and ego-resiliency, rendered in terms of the same CAQ items. These prototypes were derived some years ago by several psychologists who were attuned to the concepts of ego-undercontrol and ego-resiliency, and who used the CAQ to describe the prototypical individual exemplifying each concept. Ratings across the set of psychologists were reliable (αs = .95 for UC and .97 for ER; Funder & Block, 1989) and therefore were averaged to create composite ratings for each CAQ item (see Appendix A for prototype ratings). The similarity correlation between a personality description and the prototype, calculated across the 100 CAQ items, indicates the degree to which the description of the individual resembles the ideal exemplar of ego-undercontrol or ego-resiliency, and is conventionally used as the score for the individual on the respective construct. Scores obtained with this method are referred to as "prototype-derived scores."

Many researchers have used this prototype matching method to investigate UC and ER. For example, Funder et al. (1983) generated UC and ER prototype-derived scores using CAQ descriptions provided by teachers of 3–11-year-old children and found that UC was negatively related to delay of gratification behavior directly observed in the laboratory, while ER was positively related to delay of gratification among girls but not among boys. Cramer (2000) generated ER prototype-derived scores from a self-report CAQ and found that ER was pos-

itively correlated with measures of self-esteem and negatively correlated with anxiety and depression.

1.3.2. Klohnen's self-report ER scale

Klohnen (1996) developed a self-report scale for measuring ego-resiliency exclusively from items of the California Psychological Inventory (CPI; Gough, 1956), using a sample of couples from the San Francisco Bay area along with undergraduates from the University of California, Berkeley. Research staff members or interviewers used the CAQ to describe the participants, and ER prototype-derived scores based on these descriptions were correlated with each of the 472 CPI items. Items were retained for the self-report scale if they were highly correlated with the ER prototype-derived scores and were not more highly correlated with any other CPI scale. The α coefficients for the final, 29-item scale in several samples ranged from .81 to .88. In line with theorizing about ego-resiliency, Klohnen found that scores on her ER scale were related to the overall adjustment of women as assessed by the Index of Adult Adjustment (Picano, 1989).

1.3.3. Block's self-report scales of UC and ER

Separately from Klohnen's project, and over many years, Jack Block developed self-report scales for both ego-control and ego-resiliency. Items were drawn from the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1951) and the CPI (Gough, 1956), were written by Jack Block, or came from other sources that are at this time untraceable (see Block & Kremen, 1996). Block and Kremen (1996) administered the ER scale to longitudinal research participants at age 18 and again at age 23. The coefficient α reliability for this sample was .76, suggesting that the scale measures one main factor. Across the five years between assessments, the test–retest reliabilities were .67 and .51 (adjusted for attenuation), for females and males respectively. Block and Kremen summarized the overall findings for both genders by stating, "the (ER) scale describes a personally secure and vital individual who savors being" (p. 357). The ER scale was used recently by Tugade and Fredrickson (2004), who found that positive emotionality and appraisal of threat moderate the relationship between resilience and the duration of cardiovascular reactivity following the induction of a negative emotion.

The UC scale has not previously appeared in published research.

1.4. Overview

The present article aims to enrich the nomothetic net surrounding the constructs of ego-control and ego-resiliency by providing evidence of generalization to samples, measurement techniques, and data sources for the self-report scales developed by Jack Block. To this end, analyses of data gathered from an ethnically diverse sample will be used: (a) to compare scale scores and prototype-derived scores (the more traditional technique for measuring these constructs), (b) to compare scores on the UC and ER scales to each other, (c) to determine the degree to which personality correlates of the scales conform to theoretical predictions, and (d) to examine the scales in

relation to a variety of personality characteristics as described by the self, acquaintances, and clinician-interviewers. This broad investigation will allow us to examine the properties of these scales in an ethnically diverse sample as judged from a variety of perspectives. Of central concern will be the extent to which these data conform to theoretical expectations.

2. Methods

2.1. Participants

Participants were 188 undergraduate students (93 females, 95 males) at the University of California, Riverside, along with 346 acquaintances serving as informants (187 females, 159 males), who were paid $10.00 an hour for their time. The ethnic breakdown of the female target participants was 39% Asian-American, 18% Hispanic, 17% African American, 14% Caucasian, and 12% other or not specified. The ethnic breakdown of the male target participants was 40% Asian-American, 21% Hispanic, 7% African American, 17% Caucasian, and 15% other or not specified. About 65% of acquaintances were of the same ethnicity as their targets. The University of California, Riverside requires all international students to successfully pass an English proficiency test, either the Test of English as a Foreign Language or the International English Language Testing System Examination. Based on this criteria, all participants were proficient in the English language.

Participants were recruited via fliers posted on campus, announcements made in psychology classes, and direct recruitment by research assistants. The data were gathered as part of a much larger research project, the Riverside Accuracy Project-Phase II. While further projects will emerge, these are the first analyses of these data to be published and they do not overlap with future planned studies.

2.2. Measures

2.2.1. Ego-undercontrol (UC) and ego-resiliency (ER) self-report scales

The ego-undercontrol scale was empirically developed years earlier by Jack Block, partly based on the questionnaire responses of individuals who had been separately identified as undercontrolled via CAQ prototype-derived scores. High scores correspond with *under* control and therefore the scale and construct are referred to as UC. The items constituting the UC scale vary in their face validity; some rather directly describe behaviors relevant to the construct ("I like to stop and think things over before I do them," reverse keyed), while others are more indirect ("I am against giving money to beggars," reverse keyed). The 37 items appear in Appendix B.

The ego-resiliency scale was likewise empirically developed years earlier, partly based on the questionnaire responses of individuals who had been separately identified as resilient via prototype-derived scores. High scores correspond with high levels of resiliency. A few of the items have reasonable face-validity ("I quickly get over and recover from being startled."), but most are relatively subtle ("I like to take dif-

ferent paths to familiar places."). This scale, in its present version, was previously presented in a paper on the relation between ER and IQ (Block & Kremen, 1996). The 14 items appear in Appendix C.

Items from both measures were interspersed and presented to participants as a single paper-and-pencil measure, using a four-point response scale ranging from 1 (disagree very strongly) to 4 (agree very strongly). Final scores are obtained by reverse coding the appropriate items and computing a mean for each scale.[1]

2.2.2. The California adult Q-set

The California Adult Q-set (CAQ; Block, 1961) is a carefully developed and widely used set of 100 items that describe a broad range of important personality characteristics, such as "critical, skeptical, not easily impressed" and "sympathetic and considerate." The CAQ approach to personality description has repeatedly demonstrated its usefulness and validity in a variety of contexts (e.g., Block, Block, & Keyes, 1988; Funder & Block, 1989; Kremen & Block, 1998). The instrument has frequently been employed by clinical psychologists or other professional personality assessors, but has also been used effectively to gather judgments of personality by peers and the self (e.g., Funder, 1980; Funder, Kolar, & Blackman, 1995). The CAQ items used in the current study were slightly modified from the original set, with explanatory phrases added to assist in its use by non-professionals (Bem & Funder, 1978).

Using the *Q-sort* technique, each item is printed on a separate card and ipsatively placed within a quasi-normal forced-choice distribution on a scale ranging from 1 (not at all characteristic) to 9 (extremely characteristic). The Q-sort technique was used to obtain descriptions from clinical psychologists, following an hour-long life history interview (see Procedures section for a description of the interview). Using the *Q-item rating* technique, each item is separately rated on a Likert-like scale with the same range and labels as the Q-sort. This rating technique loses the ipsativity and built-in response normalization of the Q-sort method, but is vastly less time-consuming (i.e., approximately 10 min per set of ratings as opposed to 1 h or more per Q-sort), and was chosen for self and acquaintance ratings because of its greater feasibility in the current research context. The overall research design allows for a unique examination of the relationships between scores from the UC and ER self-report scales and a broad range of personality characteristics as perceived by the self, acquaintances, and clinician-interviewers. Conceptual convergence, if found, would offer support for the validity of the self-report scales.

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[1] All items on the ER scale are keyed "true." Although some researchers are sometimes concerned that a scale with all items keyed in the same direction may be problematic because of response sets or acquiescence; these concerns do not seem to apply to the current data. An examination of the standard deviations shows that the variability of the ER and UC scales are approximately equal (SD = .31 and .34, respectively), even though the latter scale includes some reverse coded items. Moreover, the external and independent evidence for the validity of these scales, to be presented shortly, speaks for itself (see also Block, 1965).

2.2.3. Prototype-derived scores for ego-undercontrol and ego-resiliency

As explained previously, prototype-derived scores are obtained by computing similarity correlations between CAQ personality descriptions and previously constructed prototypic ratings for ego-undercontrol and ego-resiliency. In the current study, prototype-derived similarity scores were computed using CAQ-item descriptions provided by all three data sources: the self, acquaintances, and clinicians, as well as an average rating across these data sources.

2.2.4. Measures of intelligence

Two measures of intelligence were obtained to test the discriminant validity of UC and ER. The first measure was the total score from one of two standardized tests, either the Scholastic Assessment Test (SAT) or the American College Testing (ACT) assessment (converted to SAT scores). The SAT covers topics in the areas of verbal and mathematical reasoning and the ACT covers topics in the areas of English, mathematics, reading, and scientific reasoning. These scores were obtained from the university registrar with permission from participants.

The second measure of intelligence was the Wonderlic Personnel Test (WPT: Wonderlic, Inc., 1999). The pencil-and-paper version of this 12-min timed test requires participants to solve problems, follow instructions, and apply knowledge. The overall correlation between the WPT and the Wechsler Adult Intelligence Scale, Revised (Wechsler, 1981) has been reported to range from .75 to .96 (Wonderlic, Inc., 1999). The reliability of the WPT in the current sample, as indexed with coefficient α, was .76, and the WPT scores correlated highly with total SAT/ACT scores ($r = .70$, $p < .001$).

2.2.5. Other measures

Participants completed other measures of personality and well-being that may be of interest to some readers, but are not the central concern of the current paper, including a measure of the "big five" personality traits (the BFI or Big Five Inventory; John, Donahue, & Kentle, 1991). These measures are described and their relevant correlates are presented in Appendix D.

2.3. Procedures

2.3.1. Target participants

Participation in the Riverside Accuracy Project-Phase II involved four separate laboratory sessions and the completion of several self-report measures outside of the lab (only some of which are relevant to the present project). At the first session, participants received information about the nature of the project and completed consent forms. They were given the first packet of self-report measures, which included the UC and ER scales and the self-report Q-item rating, and asked to provide names and contact information of the two locally available people who knew them best and could come to the laboratory to complete questionnaires (these people are referred to as "acquaintances"). Participants completed the Wonderlic Personnel Inventory during the third session.

2.3.2. Acquaintances

The acquaintances were contacted via phone and scheduled for a laboratory session, at which time they completed Q-item ratings of the target participant with whom they were acquainted. Two acquaintances provided information for 167 of the target participants, and the remaining 21 targets were described by a single acquaintance. The average profile agreement for the 100 items as rated by two acquaintances is $r = .41$ ($SD = .19$).[2] The average coefficient of internal consistency, or the dependability of the profile based on a composite of the two acquaintances, is .58. We deemed this degree of agreement sufficiently high to warrant the use of average ratings in subsequent analyses.

2.3.3. Clinician-interviewers

During the fourth session, participants individually participated in an hour-long life history interview conducted by one of six professionally trained clinical psychologists who had at minimum a Master's degree in clinical psychology or related field, licensure, and training and experience with clients of the same age as our college student sample. The participants were told that they would be interviewed by a "professionally trained interviewer" to diminish demand characteristics that might result from knowing they were being interviewed by a clinical psychologist.

The semi-structured interview was adapted from a protocol used for many years by the Institute of Personality Assessment and Research (IPAR; Craik et al., 2002). The protocol was revised to be applicable to college students and sought to capture a broad range of personality-relevant information without explicitly asking about sensitive topics and risky behaviors. Each interview started with the clinician asking the participant to "tell me something about yourself," and then covered a broad range of topics including college and academic experiences, future plans, interpersonal relationships, and childhood and family history.[3] Following the interview, the clinician completed a Q-sort description of the target participant.

To evaluate the consensual reliability of the clinician's ratings, the video-recordings of 47 interviews were watched by a second clinician who also completed a Q-sort description of the participant.[4] The average inter-clinician profile agreement was $r = .50$ ($SD = .17$)[5] and the coefficient of internal consistency based on a composite of the two raters was .67. When two ratings of a participant were available, a composite score was computed for each item and used in subsequent analyses.

The noise inherent in the descriptions provided by acquaintances and clinicians, primarily a result of the small number of raters per target participant, will attenuate

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[2] This number can be compared to 30 random pairing of ratings by acquaintances who described different targets, which yielded an average profile correlation of .24.

[3] The full protocol for the clinical interview is available on the Riverside Accuracy Project's website at http://www.faculty.ucr.edu/%7Efunder/lab/supplemental.htm.

[4] Clinicians were given the option to observe and rate a previously recorded interview when the participant scheduled for a live interview was unable to keep the appointment. In this manner, 47 interviews were observed and rated by a second clinician.

[5] This number can be compared to 30 random pairings of ratings by clinicians who described different targets, which resulted in an average profile correlation of .29.

any subsequent correlations into which these ratings enter, and thus the reported sample correlations are likely to underestimate their population values (Block, 1968). This information should be kept in mind when evaluating the results.

3. Results

In the analyses to be reported, the number of findings that would reach conventional levels of significance by chance is unknown due to complex interdependencies among CAQ items (Kremen & Block, 1998). Furthermore, many researchers are moving toward an emphasis on effect sizes, encouraged by evolving publication policies (Wilkinson & The Task Force on Statistical Inference , 1999), and the realization that the magnitude of an effect is more informative about the relationships among variables than is a dichotomous decision based on traditional notions of statistical significance, which depend heavily on arbitrary factors such as the sample size of the particular study. Therefore, our report will emphasize effect sizes and the consistency of findings across data sources, rather than statistical significance *per se*. However, conventional significance levels will be reported when appropriate, as they provide information many readers find useful.

3.1. Scale descriptives

Means, standard deviations, and reliabilities for each scale appear in Table 1. The internal reliabilities and an examination of the scree plots from factor analysis suggest that the items of each scale tap into a single factor. The means and standard deviations of the two scales did not differ substantially across gender and ethnicity.

Table 1
Descriptive statistics for self-report ego-undercontrol and ego-resiliency scales

	n	Mean	SD	Cronbach's α
Ego-undercontrol				
Total sample	188	2.64	.31	.63
Female	93	2.66	.33	.57
Male	95	2.62	.28	.68
Caucasian	29	2.69	.32	.68
Asian-American	74	2.61	.31	.67
Hispanic	37	2.60	.27	.53
African American	23	2.70	.29	.46
Ego-resiliency				
Total sample	188	3.05	.34	.72
Female	93	3.04	.36	.76
Male	95	3.05	.32	.68
Caucasian	29	3.09	.42	.81
Asian-American	74	3.01	.34	.72
Hispanic	37	3.05	.33	.69
African American	23	3.10	.34	.72

3.2. Differentiation from intelligence

Although intelligence could be expected to have some implications for impulse control and adaptive functioning, ego-control and ego-resiliency are conceptually distinct from intelligence (Block & Kremen, 1996; Funder & Block, 1989). Among males in our sample, UC was unrelated to SAT/ACT scores ($r = .09$) and the WPT ($r = .07$). However, among females UC was moderately positively related to SAT/ACT scores ($r = .28$, $p < .05$) and the WPT ($r = .20$, $p = .06$). These findings suggest that intelligent males are not more or less likely to be undercontrolled than less intelligent males, whereas intelligent females are somewhat more likely to be undercontrolled than less intelligent females, which opposes the theoretical conceptualization that higher levels of control are associated with cognitive skill and therefore always advantageous (Metcalfe & Mischel, 1999; Mischel et al., 1988; Tangney et al., 2004). As mentioned previously, this difference may arise because these other conceptualizations focus on the range between undercontrol and appropriate control, and do not theoretically describe nor measure the range between appropriate control and overcontrol.

The correlations between ER and SAT/ACT scores were small among both females and males ($r = .14$ and $r = -.07$, *ns*, respectively), as were the correlations between ER and the WPT ($r = .06$ and $r = -.12$, *ns*, respectively). These results suggest that the constructs of ego-resiliency and intelligence are empirically as well as theoretically distinct.

3.3. Generalization to measurement technique

Next, we examined generalization to measurement technique by evaluating the convergence of the self-report scales and prototype-derived scores based on descriptions provided by the self, acquaintances, and clinicians (see Table 2). The highest levels of agreement were found between scale scores and prototype-derived scores based on self-descriptions, which suggests adequate cross-method generalizability.

Moving beyond self-description, we examined the correlations between the scale scores and the prototype-derived scores based on descriptions provided by acquaintances and clinicians (see Table 2). For UC, the two modes of measurement were significantly and often highly correlated, regardless of data source or participant gender. For ER, descriptions of females provided by clinicians yield prototype-derived scores that converge nicely with the scale scores, but descriptions of males provided by clinicians and descriptions of females and males provided by acquaintances yield prototype-derived scores that have small, although still positive, correlations with ER scale scores. This lower correspondence suggests that a person's level of ego-resiliency is relatively difficult to ascertain from an outsider's perspective, or that casual acquaintances are not knowledgeable enough about the target to judge this construct very precisely. Convergence between the two methods of assessing resiliency is consistently lower among males than among females, regardless of the data source.

To seek the broadest and most stable data to compare with the scale scores, we first computed the average rating for each item of the CAQ across all raters: self,

Table 2
Correlations between UC and ER scale scores and prototype-derived scores

	UC	ER
Prototype-derived score based on self-descriptions		
Female ($N = 93$)	.52	.57
Male ($N = 95$)	.53	.26
Prototype-derived score based on descriptions from acquaintances		
Female ($N = 92$)	.46	.17
Male ($N = 94$)	.42	.08
Prototype-derived score based on descriptions from clinicians		
Female ($N = 93$)	.36	.41
Male ($N = 95$)	.54	.05
Prototype-derived score based on average rating across all raters		
Female ($N = 93$)	.53	.47
Male ($N = 95$)	.61	.16

Note. UC, ego-undercontrol; ER, ego-resiliency. Correlations greater than .25 are significant at $p < .05$.

acquaintances, and clinicians. The average profile reliability across the three raters for each participant, indexed with Cronbach's α, is .65 ($SD = .15$). The prototype-derived scores based on this average rating support the conclusion that the self-report scales and prototype-match method yield highly similar scores for ego-control among both females and males and for ego-resiliency among females (see bottom section of Table 2). The positive correlation for ER among males still failed to reach conventional levels of significance, reflecting the consistent finding that cross-method convergence is lowest among males regardless of the source of the personality ratings. Analyses to be detailed later suggest that this finding may arise from an unexpected ethnic difference, such that cross-method convergence is low among Asian-American and Hispanic males, while high among Caucasian and African American males.

3.4. Correlations between UC and ER

The constructs of ego-control and ego-resiliency have been described as theoretically independent, although the correlation among the definitional prototypic descriptions of ego-control and ego-resiliency is of moderate strength ($r = .21$, $p < .05$), which indicates at least some presumed theoretical relationship between the personality characteristics that are related to undercontrol and adaptive functioning. The degree of relatedness between the UC and ER scale scores for the total sample closely approximates the degree of relatedness of the prototype descriptions ($r = .22$, $p < .05$), although the correlation is somewhat higher among males ($r = .34$, $p < .05$) than females ($r = .14$, *ns*). Furthermore, the degree of relatedness between the UC and ER prototype-derived scores is similar to the relatedness of the scale scores ($r = .24$, $p < .05$), but does not differ among females ($r = .25$, $p < .05$) and males ($r = .24$, $p < .05$). These findings suggest that the degree of relationship be-

tween scores on the UC and ER scales is similar to the degree of relationship between the more traditional prototype-derived scores. Furthermore, the overall strength of the relationship between the scale scores is similar to the strength of the relationship between the definitional prototype descriptions.

3.5. Testing prototype-based predictions

We have presented evidence that the scale scores measure UC and ER in a manner largely consistent with the prototype-derived scores and general theoretical expectations. The next step is to examine the degree to which the personality correlates of the scale scores conform to specific expectations concerning the relationships of UC and ER with personality characteristics. The theoretically derived UC and ER prototypes can be regarded as comprising explicit predictions regarding the relative degree to which each of 100 important characteristics of personality should be related to UC and ER. For example, an item that received high placement on the UC prototype was, in effect, predicted to correlate positively with UC by the psychologists who constructed the prototype. An item that received low placement, by contrast, was implicitly predicted to correlate negatively with UC.

A qualitative way to determine the degree to which the actual correlations are in line with these prototype predictions is to examine the magnitudes of the actual CAQ correlates for the 10 items with the highest prototype ratings and 10 items with the lowest prototype ratings out of the 100 items (see Appendix A). For UC, descriptions provided by the self yielded 16/20 correlations in the predicted direction, of which 11 were significant at $p < .05$; descriptions provided by acquaintances yielded 18/20 correlations in the predicted direction, of which 11 were significant; and descriptions provided by clinicians yielded 19/20 correlations in the predicted direction, of which 16 were significant. For ER, descriptions provided by the self yielded 18/20 correlations in the predicted direction, of which 16 were significant; descriptions provided by acquaintances yielded 14/20 correlations in the predicted direction, of which 5 were significant; and descriptions provided by clinicians yielded all 20 correlations in the predicted direction, of which 7 were significant. This analysis shows that the vast majority of the items that were predicted to be relevant to UC and ER yielded correlations with the scale scores that were in the predicted direction, and many of these correlations exceeded conventional levels of significance (see Tables 4 and 5).

Theoretical consistency can be addressed more completely and precisely by determining the relationship between the full sets of observed and predicted correlations (Westen & Rosenthal, 2003). We correlated the Q-item rating correlates (computed using the average ratings across self, acquaintances, and clinicians) with the prototype-derived scores[6] for UC and ER. The Q-item correlates of the UC scale were positively related to the predicted values across gender and ethnic group (r's = .37–.79; see Table 3), as were the Q-item correlates of the ER scale

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[6] The Q-item rating correlates are computed for each item by correlating the scale score with the average rating across ratings provided by the self, acquaintances, and clinicians, for the item of interest, across persons.

Table 3
Relationships between average Q-set item correlates and prototype predictions

	UC	ER
Total sample	.79	.79
Female	.74	.82
Male	.75	.53
Caucasian	.44	.72
Asian-American	.76	.68
Hispanic	.50	.66
African American	.37	.37

Note. UC, ego-undercontrol; ER, ego-resiliency. All correlations are significant at $p < .05$.

(r's = .37–.82). These findings suggest that the average of the ratings provided by the self, acquaintances, and clinicians yields correlations with personality characteristics that are similar to the patterns that were predicted in the prototype descriptions, more or less regardless of the gender or ethnicity of the person being described.

3.6. Generalization to raters

To examine generalization to types of raters and the implications of control and resiliency in a fuller and richer context, correlations between the UC and ER self-report scale scores and each of the Q-item ratings provided by the self, acquaintances, and clinicians were computed. An inundating number of appreciable correlations result.[7] Fortunately, the reliability (Cronbach's α) of the individual items, averaged across the three raters (self, acquaintances, and clinicians), was sufficiently high to justify the use of these averages (across the 100 items, the mean $\alpha = .40$, $SD = .14$). For more efficient data presentation, we correlated these average item ratings with the UC and ER scale scores, as shown in Tables 4 and 5. We focus exclusively on the item-level findings based on this average rating that were of moderate to high magnitude ($r > .25$), though many more were statistically significant, to ensure an emphasis on items that were the most robustly and consistently associated with UC and ER. The tables also allow the reader to see the degree to which each correlation is consistent across data sources; as is evident, many are highly consistent.

3.6.1. Ego-undercontrol

Fifty-three out of the 100 correlates between UC and the average Q-item ratings were significant at $p < .05$, and of these correlations 24 were greater than $r = .25$, including several items that are definitive of undercontrol (bolded items in table), such as unable to delay gratification, unpredictable, moody, rebellious and non-conforming, self-indulgent, expressive, pushing and stretching limits, and hostile. UC was negatively related to several items that are definitive of overcontrol, such as

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[7] The complete table of results for these analyses, including all averaged items significant at $p < .05$, are available on the Riverside Accuracy Project's website at http://www.faculty.ucr.edu/%7Efunder/lab/supplemental.htm.

Table 4
Ego-undercontrol Q-set item correlations

#	Item	Average	Self	Acquaintance	Clinician
Positive correlations					
99	Self-dramatizing; histrionic	.43	.34	.33	.22
53	**Unable to delay gratification**	**.42**	**.28**	**.23**	**.32**
50	**Unpredictable and changeable in behavior and attitudes**	**.41**	**.31**	**.22**	**.30**
82	**Has fluctuating moods**	**.39**	**.37**	**.19**	**.22**
62	**Tends to be rebellious and non-conforming**	**.38**	**.34**	**.22**	**.25**
4	Talkative	.37	.36	.22	.28
52	Behaves in an assertive fashion	.37	.25	.32	.27
67	**Self-indulgent**	**.37**	**.29**	**.28**	**.15**
39	Thinks and associates ideas in unusual ways; has unconventional thought processes	.34	.26	.24	.16
57	Interesting, arresting person	.34	.23	.17	.26
43	**Facially and/or gesturally expressive**	**.32**	**.25**	**.24**	**.20**
15	Skilled in social techniques of imaginative play, pretending, and humor	.31	.25	.22	.20
65	**Pushes and tries to stretch limits**	**.30**	**.27**	**.26**	**.11**
94	**Expresses hostile feelings directly**	**.29**	**.10**	**.25**	**.26**
18	Initiates humor	.28	.34	.20	.12
37	Guileful and deceitful, manipulative, opportunistic	.26	.22	.09	.18
46	Engages in personal fantasy and daydreams	.26	.24	.15	.03
Negative correlations					
97	**Emotionally bland; has flattened affect**	**−.36**	**−.23**	**−.30**	**−.24**
70	Behaves in an ethically consistent manner	−.32	−.17	−.19	−.24
75	Has a clear-cut, internally consistent personality	−.30	−.19	−.15	−.26
2	**A genuinely dependable and responsible person**	**−.28**	**−.20**	**−.11**	**−.29**
25	**Tends toward over-control of needs and impulses**	**−.28**	**−.10**	**−.09**	**−.38**
33	**Calm, relaxed in manner**	**−.26**	**−.19**	**−.19**	**−.18**
14	Genuinely submissive; accepts domination comfortably	−.25	−.07	−.21	−.27

Note. $N = 188$. Average correlations were computed by first averaging the item ratings across raters and then correlating this average rating with the ego-undercontrol scale score. Items predicted via prototype ratings as among the 10 most characteristic or 10 least characteristic of the construct (see Appendix A) are presented in **boldface**; all of these correlations were in the predicted direction. Fifty-three out of the 100 Q-correlates were significant at $p < .05$; only those with average r's $\geqslant .25$ are included in the table.

Table 5
Ego-resiliency Q-set item correlations

#	Item	Average	Self	Acquaintance	Clinician
Positive correlations					
3	Has a wide range of interests	.47	.38	.37	.27
4	Talkative	.39	.40	.25	.28
57	Interesting, arresting person	.37	.48	.04	.20
66	Enjoys esthetic impressions; is esthetically reactive	.36	.37	.24	.14
71	Has high aspiration level for self	.35	.39	.23	.13
98	Verbally fluent; can express ideas well	.34	.39	.04	.22
92	**Has social poise and presence; appears socially at ease**	**.33**	**.40**	**.17**	**.15**
15	**Skilled in social techniques of imaginative play, pretending, and humor**	**.32**	**.36**	**.16**	**.16**
52	Behaves in an assertive fashion	.31	.34	.22	.15
20	Has a rapid personal tempo; behaves and acts quickly	.30	.21	.20	.20
51	Genuinely values intellectual and cognitive matters	.30	.26	.16	.22
8	Appears to have a high degree of intellectual capacity	.30	.33	.13	.15
29	Turned to for advice and reassurance	.26	.38	.08	.06
43	Facially and/or gesturally expressive	.26	.26	.16	.15
84	Cheerful	.26	.28	.16	.16
18	Initiates humor	.25	.29	.12	.17
28	Tends to arouse liking and acceptance	.25	.26	.14	.12
Negative Correlations					
55	**Self-defeating**	**−.30**	**−.23**	**−.22**	**−.17**
97	**Emotionally bland; has flattened affect**	**−.29**	**−.25**	**−.17**	**−.19**
22	Feels a lack of personal meaning in life	−.27	−.14	−.25	−.19
30	**Gives up and withdraws where possible in the face of frustration and adversity**	**−.27**	**−.20**	**−.11**	**−.24**
36	Subtly negativistic; tends to undermine and obstruct	−.26	−.15	−.18	−.18

Note. $N = 188$. Average correlations were computed by first averaging the item ratings across raters and then correlating this average rating with the ego-resiliency scale score. Items predicted via prototype ratings as among the 10 most characteristic or 10 least characteristic of the construct (see Appendix A) are presented in **boldface**; all of these correlations were in the predicted direction. Fifty-four out of the 100 Q-correlates were significant at $p < .05$; only those with average r's $\geqslant .25$ are included in the table.

being emotionally bland, dependable and responsible, over-controlling needs and impulses, and calm (see Table 4).

UC scale scores were also positively related to the "big five" factors of extraversion, neuroticism, and openness, while being negatively related to agreeableness and conscientiousness. UC was also positively related with some measures of psychological maladjustment including several scales of the MMPI-2 (see Appendix B).

3.6.2. Ego-resiliency

Fifty-four out of the 100 correlates between ER and the average Q-item ratings were significant at $p < .05$, and of these correlations 22 were greater than $r = .25$, including items that are definitive of ego-resiliency such as social poise and social skills. ER was also positively related to several other favorable characteristics, such as having a wide range of interests and a high aspiration level, being interesting, cheerful, expressive, and assertive, and valuing intellectual and cognitive matters. ER was negatively related to items that are definitive of a low level of ego-resiliency, such as being self-defeating, emotionally bland, and giving up when frustrated.

Among females, ER scale scores were positively related to the "big five" personality traits of extraversion, agreeableness, conscientiousness, and openness, and negatively related to neuroticism. Among males, ER was positively related to extraversion and openness, only. ER was also positively related to several measures of well-being and negatively related to several indicators of psychopathology (from the MMPI-2); these findings were particularly strong among females (see Appendix D).

3.7. Exploratory examination of the implications of ethnicity

Psychologists are becoming increasingly aware that not all psychological constructs have the same meaning and manifestation for people from different cultures (Funder, 2001, 2004, Chap. 14). Therefore, we conducted an exploratory analysis of generalization across the ethnic groups represented in the present sample. A couple of interesting preliminary findings emerged, although we stress that results should be interpreted with caution due to relatively small sample sizes and a lack of a priori predictions.

3.7.1. Cross-method convergence

We began by examining cross-method convergence for ego-resiliency within ethnic group, because of the finding that the correlation between ER scale scores and prototype-derived scores was smaller than expected among males (reported in Table 2). The correlations between ER scale scores and prototype-derived scores calculated using the average Q-item ratings are acceptably high among Caucasian and African American males (r's = .38 and .62, respectively), but are surprisingly low among Asian-American and Hispanic males (r's = .11 and −.17). The same pattern repeats within each source of rating data: self, acquaintances, and clinician. This finding indicates that the relatively low overall cross-method correlations for ER among males seen in Table 2 come about because of low convergence in two out of four ethnic groups examined. These differences were not anticipated and the reason for them

is not clear. Future researchers should be mindful of possible differences among ethnic groups in cross-method convergence for ER, particularly among males.

3.7.2. Q-item correlates of UC

For the UC scale, we examined the average Q-item correlates within each ethnic group for the 10 items with the highest and the 10 items with the lowest prototype scores. Across all ethnicities, UC was related to several definitive characteristics of undercontrol, such as an inability to delay gratification (r's = .42 to .53), fluctuating moods (r's = .22 to .48), and being self-indulgent (r's = .18 to .52), expressive (r's = .15 to .56) and *not* emotionally bland (r's = −.14 to −.46), nor dependable (r's = −.14 to −.44). We examined differences by computing Z-scores for the difference between correlations between all pairs of ethnic groups, with the realization that this is a conservative test that would only highlight relatively extreme differences. Among Caucasians, UC was related to being self-pitying (r = .63), having repressive tendencies (r = .41), feeling a lack of meaning in life (r = .37), and *not* having a high aspiration level (r = −.49) nor self-insight (r = −.46, all p's < .05). These correlations are significantly different from the ones found among Asian-Americans (r's = .05, −.10, −.23, .07, and .06, respectively; Z's = 2.35 to 2.97, p's < .05), and the correlations for these traits among Hispanics and African-Americans are small (r's = −.19 to .15), although only two correlations differ significantly from Caucasians (self-pitying, Z = 2.25; aspiration level, Z = 2.01). The remaining correlations do not differ significantly from the correlations among Caucasians (Z's = 0.90 to 1.94, p's > .05). These patterns indicate that ego-undercontrol may have more negative implications among Caucasians than other ethnic groups, most notably Asian-Americans. One implication is that research conducted in heavily Caucasian samples may exaggerate the benefits of overcontrol, a speculation that deserves to be tested in future research.

3.7.3. Q-item correlates of ER

Next, we examined the average Q-item correlates of the ER scale within each ethnic group, for the 10 items with the highest and 10 items with the lowest prototype scores. Across all ethnicities, ER was related to several definitive characteristics such as social poise (r's = .27 to .40), and *not* being emotionally bland (r's = −.14 to −.49), giving up when frustrated (r's = −.11 to −.45), fearful (r's = −.14 to −.31), nor self-defeating (r's = −.25 to −.33). There are also several definitive characteristics that yield different correlations across ethnicity, such as calm (r's = −.41 to .25; Z between most extreme groups = 2.74, p < .05), irritable (r's = −.29 to .40; Z = 2.45, p < .05), and has warmth (r's = −.17 to .29; Z = 1.82, p = .06). Eleven other characteristics yielded correlations that differed significantly between at least two ethnic groups. For example, the correlation between ER scale scores and being described as initiating humor was positive among Caucasians (r = .34) and negative among African Americans (r = −.27; Z = 2.14, p < .05), and the correlation between ER and being described as hostile was negative among Caucasians (r = −.50) and near zero among Hispanics (r = .06; Z = 2.35 p < .05). However, these differences did not lead to a discernible pattern indicating conceptual differences in relationships between ER and personality across ethnicity.

4. Discussion

4.1. Generalization to samples, measurement techniques, and data sources

The current paper extends previous work on ego-control and ego-resiliency by examining generalization across sample characteristics, measurement techniques, and sources of data, and enriches the nomothetic net surrounding these constructs. An ethnically diverse college sample allowed for examination of several cultural groups, including Caucasian, Asian-American, Hispanic, and African American. Across ethnic groups, the means on UC and ER were similar and the α reliabilities suggest that the scales are adequately reliable within each ethnicity. Furthermore, across ethnic groups UC is positively related to several characteristics that are definitional of undercontrol, including being self-dramatizing, moody, and unable to delay gratification, and ER is related to characteristics indicative of well-being, including social poise and presence and not being emotionally bland, generally fearful, nor self-defeating. Overall, the data suggest that UC and ER have similar relationships to personality in various cultures, but researchers should also be aware that there may be some cultural differences, as exemplified by our preliminary findings that undercontrol may be particularly disadvantageous for Caucasians. For example, it is possible that research conducted in samples dominated by Caucasian participants—perhaps, most research to date—may overestimate the advantages of overcontrol relative to undercontrol.

4.2. Personality descriptions associated with ego-control and ego-resiliency scores

The pattern of correlations between ego-undercontrol self-report scale scores and the Q-set personality characteristics were consistent with the theoretical conceptualization of this construct. Low levels of control were associated with impulse expression while high levels of control were associated with impulse containment. A person who scored high on UC was likely to be described by all three types of raters with a mix of favorable and unfavorable characteristics. When considering the correlations between the average Q-item ratings and the UC scale that reached significance at $p < .05$, UC was positively related to 20 items that are above average in favorability (according to item favorability ratings compiled by Funder & Dobroth, 1987) and 12 items that are below average, while being negatively related to eight items that are above average in favorability and six items that are below average. For example, UC was *positively* related to being described as socially skilled, interesting, and charming (favorable characteristics) as well as self-dramatizing and unpredictable and changeable in behavior and attitudes (unfavorable characteristics). UC was *negatively* related to being consistent, dependable, and calm (favorable characteristics) as well as emotionally bland, submissive, and over-controlling of needs and impulses (unfavorable characteristics). These findings are in line with Block's conceptualization of ego-control as related to a mix of positive and negative personality characteristics, which taken as a whole are adaptive in some situations and maladaptive in others (Block, 2002; Funder & Block, 1989).

The pattern of correlations between ego-resiliency self-report scale scores and the Q-set personality characteristics indicates that people who score high on ER are consistently described as having a wide range of interests and as not being uncomfortable with uncertainty and complexity, along with possessing many other favorable characteristics. Considering all correlations between the average Q-item ratings and the ER scale that reached significance at $p < .05$, 31 out of 34 positive correlations were with items that were above-average in favorability, and all 20 of the negative correlations were with items that were below-average in favorability (Funder & Dobroth, 1987). This evidence is consistent with the long-standing theoretical conceptualization of ego-resiliency as closely related to good psychological functioning and appropriate and adaptive behavior across social contexts (Block & Block, 1980; Klohnen, 1996).

4.3. Implications of gender

Some of the analyses in this article suggest that the patterns of relationships between personality characteristics and ER differ between females and males. In general, results among females consistently conformed to expectations while results among males sometimes did not. For example, among males the correlations between scale scores and prototype-derived scores using reports from clinicians and acquaintances were low, and the correlation between the UC and ER scale scores were somewhat higher than expected. In an attempt to explain these differences, we compared the correlations between the ER scale and characteristics of personality among males and females. First, we examined the CAQ item correlates and found that, in general, these correlates were consistent across gender. For example, both females and males who scored high on ER are separately described as possessed of wide interests and talkative. However, some interesting differences also emerged. For example, females who scored high on ER were described as valuing intellectual and cognitive matters and assertive and *not* lacking in personal meaning, generally fearful, nor self-defeating, while the correlations for these items among males were near zero. Furthermore, when looking at measures of well-being (see Appendix D) it becomes apparent that ER and well-being are strongly positively related among females, while the relationship among males is weaker. A preliminary explanation is that, at least in a college sample, measurement of ER may be more sensitive among females than males. Another possible explanation is that females in this age group may be further along in their psychological development than males, and therefore their personality characteristics relevant to ego-resiliency are more consistent, coherent, and judgable.

4.4. Limitations

4.4.1. Data limitations

The data presented in the current paper provide evidence that support the generalization of the ego-undercontrol and ego-resiliency self-report scales, but do not speak to some conventional validity criteria. Because the current data set was not

originally designed with the goal of testing the psychometric properties of these scales, it lacks some conventional types of validity evidence such as test–retest reliability and convergence with scales that measure highly similar constructs. Moreover, although the size of this study is large by comparison to many others, ratings by acquaintances are limited to 2 per participant, and ratings by clinicians limited to 1 or 2. The inevitable degree of unreliability thus entailed is bound to attenuate the correlation coefficients reported in this paper which, while by no means few or small, can be generally expected to be underestimates.

Notwithstanding these limitations, the data we do have and the analyses we did perform are useful for illuminating the theoretical basis of ego-control and ego-resiliency and the utility of the self-report scales herein used by creating a richer nomothetic net surrounding these constructs. The present data are rare and unique and allowed for the comparison of self-report scale scores to descriptions provided by acquaintances, clinicians, and the self in an ethnically diverse sample. These wide-ranging data enabled us to identify the characteristics that are stably related to UC and ER across gender and ethnicity, and therefore are likely to be the robustly definitive elements of each construct.

4.4.2. Sample limitations

The results concerning the relationships of UC and ER within ethnic groups must be interpreted with caution due to relatively small sample sizes. For example, our sample of Asian-American participants was largest ($n = 74$), but still too small to allow analyses within specific Asian sub-groups or degrees of acculturation. Still, the data do suggest that there are many similarities across ethnicities, especially when looking at the definitive characteristics of UC and ER, while at the same time there are a few interesting differences. Future researchers are encouraged to examine possible ethnic differences in larger samples in order to increase the understanding of the implications of UC and ER across cultural and ethnic contexts. We would draw particular attention to the preliminary indications in the present data that the disadvantages of undercontrol may be exaggerated in predominately Caucasian samples.

5. Conclusions

The current work illustrates the generalization of Block's self-report scales of ego-undercontrol and ego-resiliency to sample, measurement technique, and data source. Findings suggest that the self-report scales adequately measure ego-control and ego-resiliency and yield scores that are related to personality characteristics in a theoretically coherent manner. The potential usefulness and applicability of these scales is quite broad, as UC and ER are conceptualized as organizing constructs for the personality system (Block, 2002). Researchers studying self-control, self-regulation, ego depletion, delay of gratification, and related areas are likely to find the UC scale particularly useful, whereas researchers studying psychological adjustment and well-being are likely to find the ER scale especially applicable. We also encourage researchers to use these scales in combination to achieve a deeper understanding

of how ego-control and ego-resiliency work together and are related to personality characteristics, behavioral patterns, and important life outcomes.

Appendix A. Ego-undercontrol and ego-resiliency prototypes

Q-set item number	Ego-undercontrol	Ego-resiliency
1	3.75	5.50
2	1.87	7.62
3	7.37	7.12
4	7.25	5.12
5	5.12	6.50
6	1.75	4.62
7	2.87	4.62
8	4.87	7.12
9	2.25	1.62
10	4.75	2.87
11	4.12	5.87
12	4.12	2.75
13	5.25	3.00
14	2.50	3.00
15	6.62	7.75
16	3.37	6.12
17	4.12	6.25
18	7.25	7.37
19	4.12	3.75
20	8.12	5.37
21	5.00	5.12
22	4.50	2.50
23	5.75	3.50
24	2.37	5.50
25	1.00	3.37
26	3.25	8.00
27	4.37	3.75
28	5.12	7.50
29	3.25	6.87
30	5.12	2.12
31	5.37	5.37
32	4.25	6.75
33	2.50	7.87
34	6.75	1.87
35	6.00	8.12
36	4.25	3.00

Appendix A (*continued*)

Q-set item number	Ego-undercontrol	Ego-resiliency
37	5.87	4.25
38	5.50	4.00
39	7.37	5.75
40	3.87	2.25
41	2.50	3.37
42	2.00	2.87
43	8.00	6.25
44	4.00	6.87
45	4.75	1.00
46	6.25	5.37
47	3.25	3.87
48	2.75	3.50
49	4.25	3.87
50	8.12	3.87
51	4.25	6.37
52	6.37	6.75
53	9.00	3.12
54	6.62	5.37
55	5.12	1.62
56	7.37	7.62
57	6.62	7.25
58	7.75	6.87
59	4.25	4.37
60	4.12	8.37
61	4.37	3.62
62	8.12	4.62
63	2.75	4.12
64	6.00	7.75
65	8.50	4.62
66	6.87	6.87
67	7.75	4.25
68	4.50	2.12
69	5.37	4.25
70	2.75	7.25
71	4.37	6.75
72	4.50	4.62
73	7.12	4.62
74	4.87	6.25
75	4.12	6.25
76	5.62	3.62
77	6.25	6.87

Appendix A (*continued*)

Q-set item number	Ego-undercontrol	Ego-resiliency
78	4.37	2.50
79	2.62	2.50
80	6.37	5.87
81	4.87	5.12
82	7.50	4.25
83	4.50	7.75
84	5.75	7.12
85	6.50	4.87
86	3.25	2.00
87	3.75	2.75
88	6.12	6.12
89	4.75	4.75
90	3.87	6.00
91	5.12	4.87
92	5.50	8.12
93	4.62	5.12
94	8.00	4.87
95	5.12	5.00
96	6.37	7.62
97	1.25	2.25
98	5.37	6.50
99	7.00	3.62
100	3.00	2.12

Appendix B. Items of the ego-undercontrol scale

1. I tend to buy things on impulse.
2. I become impatient when I have to wait for something.
3. I often say and do things on the spur of the moment, without stopping to think.
4. I can remember "playing sick" to get out of something.
5. I have often had to take orders from someone who did not know as much as I did.
6. When I get bored, I like to stir up some excitement.
7. Some of my family have quick tempers.
8. People consider me a spontaneous, devil-may-care person.
9. I often get involved in things I later wish I could get out of.
10. I have been known to do unusual things on a dare.
11. I have sometimes stayed away from another person because I thought I might do or say something that I might regret afterwards.
12. I do not always tell the truth.
13. My way of doing things can be misunderstood or bother others.
14. Sometimes I rather enjoy going against the rules and doing things I am not supposed to.
15. At times, I am tempted to do or say something that others would think inappropriate.

16. At times I have very much wanted to leave home.
17. I would like to be a journalist.
18. I like to flirt.
19. Some of my family have habits that bother and annoy me very much.
20. At times I have worn myself out by undertaking too much.
21. In a group of people I would not be embarrassed to be called on to start a discussion or give an opinion about something I know well.
22. I would like to wear expensive clothes.
23. I am against giving money to beggars (reverse scored).
24. It is unusual for me to express strong approval or disapproval of the actions of others (reverse scored).
25. I like to stop and think things over before I do them (reverse scored).
26. I don't like to start a project until I know exactly how to proceed (reverse scored).
27. I finish one activity or project before starting another (reverse scored).
28. I am steady and planful rather than unpredictable and impulsive (reverse scored).
29. On the whole, I am a cautious person (reverse scored).
30. I do not let too many things get in the way of my work (reverse scored).
31. I keep out of trouble at all costs (reverse scored).
32. I consider a matter from every viewpoint before I make a decision (reverse scored).
33. I am easily downed in an argument (reverse scored).
34. I have never done anything dangerous for the fun of it (reverse scored).
35. My conduct is largely controlled by the customs of those about me (reverse scored).
36. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of thing (reverse scored).
37. I find it hard to make small talk when I meet new people (reverse scored).

Appendix C. Items of the ego-resiliency scale

1. I am generous with my friends.
2. I quickly get over and recover from being startled.
3. I enjoy dealing with new and unusual situations.
4. I usually succeed in making a favorable impression on people.
5. I enjoy trying new foods I have never tasted before.
6. I am regarded as a very energetic person.
7. I like to take different paths to familiar places.
8. I am more curious than most people.
9. Most of the people I meet are likeable.
10. I usually think carefully about something before acting.
11. I like to do new and different things.
12. My daily life is full of things that keep me interested.
13. I would be willing to describe myself as a pretty "strong" personality.
14. I get over my anger at someone reasonably quickly.

Note. From "IQ and Ego-Resiliency: Conceptual and Empirical Connections and Separateness," by J. Block and A. M. Kremen, 1996, *Journal of Personality and Social Psychology, 70*, p.352. Copyright 1996 by the American Psychological Association, Inc." Reprinted with permission.

Appendix D. Correlations with the Big Five personality traits and measures of well-being

	UC		ER	
	Female	Male	Female	Male
BFI (self-report)				
Extraversion	.19	.48	.57	.45
Agreeableness	−.21	−.36	.39	.18
Conscientiousness	−.25	−.28	.43	.16
Neuroticism	.26	.28	−.37	.04
Openness to Exp.	.24	.39	.70	.46
BFI (report from acquaintances)				
Extraversion	.21	.45	.35	.32
Agreeableness	−.09	−.31	.04	.08
Conscientiousness	−.24	−.08	.06	.10
Neuroticism	.06	.08	.00	−.04
Openness to Exp.	.22	.14	.21	.29
PWB	−.12	−.00	.53	.21
BDI	.24	.20	−.31	−.04
Subjective happiness	−.15	−.02	.38	.18
SSI total score	.27	.36	.63	.39
MMPI scales				
Hypochondriasis	.36	.17	−.10	.09
Depression	.02	−.06	−.37	.01
Hysteria	.31	.21	−.06	−.07
Psychopathic deviate	.36	.30	−.22	−.05
Paranoia	.17	.27	−.13	.24
Psychasthenia	.23	.26	−.35	.25
Schizophrenia	.33	.21	−.25	.19
Hypomania	.40	.29	.20	.21
Social introversion	−.13	−.13	−.57	−.07
College maladjustment	.24	.23	−.33	.15

Note. BFI, Big Five Inventory (John et al., 1991). PWB, Psychological Well-Being (Ryff, 1989), a composite score was computed and used in subsequent analyses. BDI, Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Subjective Happiness (Adapted) (Lyubomirsky & Lepper, 1999), the first two items of this 4-item scale were used to measure subjective happiness. SSI, Social Skills Inventory (Riggio, 1986). MMPI-2, Minnesota Multiphasic Personality Inventory-2 (Hathaway & Mc-Kinley, 1989). N for females: 93 for BFI and PWB; 92 for Subjective Happiness and SSI; 91 for BDI; 90 for MMPI-2. N for males: 95 for BFI, PWB, BDI, and SSI; 94 for Subjective Happiness; 92 for MMPI-2. All correlations greater than .20 are significant at $p < .05$.

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