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Does a "Triple Package" of traits predict success?

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ABSTRACT

What individual factors predict success? We tested Chua and Rubenfeld's (2014) widely publicized "Triple Package" hypothesis that a tendency toward impulse control, personal insecurity, and a belief in the superiority of one's cultural or ethnic group combine to increase the odds that individuals will attain exceptional achievement. Consistent with previous research, we found in two sizable samples (combined N = 1258) that parents' level of education and individuals' own cognitive ability robustly predicted a composite measure of success that included income, education, and awards. Other factors such as impulse control and emotional stability also appeared to be salutary. But despite measuring personal insecurity in four different ways and measuring success in three different ways, we did not find support for any plausible version of Chua and Rubenfeld's proposed synergistic trinity of success-engendering personality traits.

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Why do some people achieve more success in life than others? Social scientists have studied this question for decades, finding that among social factors, educational attainment most consistently predicts success (e.g., Hauser, Sheridan, & Warren, 1999; Von Stumm, Macintyre, Batty, Clark, & Deary, 2010). Among individual differences, general intelligence (*g*) and the Big-Five trait of conscientiousness consistently predict job performance and education (Schmidt & Hunter, 1998); g is also associated with income, wealth accumulation, and status attainment (e.g., von Stumm et al., 2010; Wai, 2013). But what about other factors?

Some research suggests that emotional insecurities and vulnerabilities facilitate artistic creativity (e.g., Akinola & Mendes, 2008) or cognitive performance (e.g., Proulx & Heine, 2009). Other research points to the opposite conclusion, that psychological resources reflecting emotional stability and regulation, such as high self-esteem and impulse control, augur better life outcomes (e.g., Baumeister, Campbell, Krueger, & Vohs, 2003; Judge, Higgins, Thoresen, & Barrick, 1999; Shoda, Mischel, & Peake, 1990). A similarly mixed picture can be extracted from work relating the positively tinged Big Five dimensions of openness, agreeableness, and extraversion to different dimensions of individual and organizational work performance (e.g., Neal, Yeo, Koy, & Xiao, 2012).

In a much-discussed book, Chua and Rubenfeld (2014) attempted to explain why certain minority groups in the United States, such as Jews, Mormons, and Asian-Americans, seem associated with extraordinary success (i.e., higher socioeconomic status) relative to other groups. They proposed that a "Triple Package" (TP) of factors is the recipe for success. By positing that insecurity combined with impulse control is the psychological formula for high achievement, Chua and Rubenfeld's thesis blends the commonsense view that psychological strength enables success with the counterintuitive notion that insecurities can do so as well. Specifically, they propose that, armed with the tendency to control impulses, individuals who simultaneously possess a sense of group superiority (i.e., ethnocentrism or intergroup bias, thought to reflect defensive insecurity; e.g., Agroskin, Klackl, Lechinger, McGregor, & Jonas, 2014) and personal insecurity (e.g., low self-esteem) will in turn develop the grit and determination (Duckworth & Gross, 2014) necessary to become highly educated and to acquire wealth and status. Hence, cultural and ethnic groups that inculcate these traits through socialization give their children a competitive advantage.

It is important to emphasize that, although Chua and Rubenfeld's (2014) theory is in part a retrospective explanation for the relatively high success ostensibly enjoyed by certain minority groups in the U.S., it is fundamentally a universal theory. Indeed, the authors assert that "…the Triple package is accessible to anyone. It's a set of values and beliefs, habits and practices, that individuals from any background can make a part of their lives or their children's lives…" (p. 3). Hence, the TP theory is one about individual differences that generate success for individuals or groups of individuals who possess the specific blend of traits identified by the theory.

Chua and Rubenfeld are legal scholars who have not conducted research in psychology, sociology, demography, or economics, and their theory was published in a bestselling general-audience book rather than a monograph or journal article. One might argue that these facts make their theory undeserving of attention in psychological science. We believe, on the contrary, that the wide dissemination and public discussion of Chua and Rubenfeld's theory are affirmative reasons for

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investigating it, and that psychological scientists should see it as their responsibility to evaluate popular theories and ideas regardless of their provenance. Indeed, the more widely a theory is believed, the more influence it is likely to have, and therefore the more important it is that it be critically examined within the relevant academic disciplines.[1]

In that light, what does behavioral science suggest about the plausibility of the TP model? First, impulse control and related constructs do predict positive outcomes (e.g., Mischel, 2014); but research does not show a negative association between self-esteem and success (Baumeister et al., 2003), and self-esteem and impulsivity are negatively related in the population (Watson, Suls, & Haig, 2002). Another form of personal insecurity, neuroticism, is consistently associated with *less* success (e.g., Judge et al., 1999; Roberts, Jackson, Duckworth, & Von Culin, 2011). We know of no empirical studies associating ethnocentrism and success, nor any that address the specific blend of characteristics posited by Chua and Rubenfeld's theory, whether the traits' effects are regarded as interactive (e.g., synergistic), additive, or both.

On the basis of this research, one might conclude that the TP theory should be rejected out of hand. However, to our knowledge, no research addresses the specific *blend* of characteristics posited by this theory. Chua and Rubenfeld (2014) assert that group superiority combined with insecurity leads to "drive," which is ineffectual without "grit," or the determination to persevere in the face of obstacles; grit is purportedly derived from a combination of superiority and impulse control. In turn, the combination of drive and grit create success. That formula alone seems simple enough, but other aspects of the TP thesis are not so easily translated into an empirical model. Chua and Rubenfeld go on to postulate that:

> "A superiority complex built up around impulse control can be very potent. A person with such a complex eagerly demonstrates and exercises his self-control to achieve some difficult goal; the more sacrifice or hardship he can endure, the more superior he feels and the better able to accomplish still more demanding acts of self-restraint in the future, making him feel even more superior" (p. 16).

Observing such a complex, recursive dynamic in a sufficiently large sample of individuals to draw generalizable inferences would require an ambitious long-term longitudinal study, and we are unaware of any existing representative panel datasets that include measures of all the relevant constructs. More problematically, Chua and Rubenfeld have a tendency toward imprecise definition of constructs, as demonstrated in the quote above. Although they defined superiority at first as pertaining to feelings about one's group, here Chua and Rubenfeld seem to cast superiority in more personal terms, making it hard to reconcile with the personal insecurity that constitutes the remaining element of the TP. It is also not always clear whether the TP hypothesis predicts that success will only be associated with the presence of all three elements, combined, within a single person (i.e., a three-way statistical interaction), or whether the elements could be additive, with the presence of all three simply giving the greatest probability of success. We decided to examine both possible versions of the hypothesis in our analyses.

To support their argument, Chua and Rubenfeld adduce evidence that consists mostly of anecdotes (for example, lists of famous Mormons or stories about Jewish parenting) or simple descriptive statistics, such as income levels in different groups. However, their theory is a psychological one, concerning individual differences and personality processes that lead to social success, so it calls for an empirical psychological test at the individual level of analysis. The present research was thus designed to evaluate the TP theory in cross-sectional samples of U.S. adults.

Given the TP theory's promise of universal generalizability (i.e., it is not just a theory about successful minority groups), one critical test of the theory is to examine it in a population that does not exclusively consist of the circumscribed minority group members discussed by the authors. Hence, we chose to obtain a sample of U.S. adults that was as representative as possible, rather than trying to sample from the particular ethnic groups that Chua and Rubenfeld discuss. In Study 1 we included several measures of each TP construct; in Study 2 we attempted to replicate the findings of Study 1 using the most promising subset of measures, but with a larger sample of participants.

1. Study 1

1.1. Participants

Participants were 430 adults located in the United States (283 women, 147 men; ages 18–82 [$M = 37.84$; $SD = 13.83$]) recruited via Amazon Mechanical Turk (MTURK) and paid $0.75. Participants identified primarily as White/Caucasian (83%), Black/African-American (7%), Hispanic/Latino (6%), Asian-American (4%), or another ethnicity (< 1%). MTURK participant demographics are surprisingly diverse and fairly representative of the U.S. population (Ross, Irani, Silberman, Zaldivar, & Tomlinson, 2010; Simons & Chabris, 2012).

1.2. Materials and procedure

Participants completed surveys of personality traits first, cognitive ability variables second, "success" variables third, and demographic variables last. Below, we describe the measures used for each of the main study variables. Table 1 displays the correlation matrix and alpha reliability coefficients for the most important measures.

1.2.1. Group superiority

Chua and Rubenfeld (2014) define the first element of their Triple Package as "… a deeply internalized belief in your group's specialness, exceptionality, or superiority" (p. 9). We measured this using the 22-item Revised Ethnocentrism Scale (Neuliep & McCroskey, 1997), which includes such items as, "Most other cultures are backward compared to my culture" (1 = *strongly disagree*; 5 = *strongly agree*).

1.2.2. Insecurity

The most direct operationalization of insecurity, as Chua and Rubenfeld define it ("… an anxious uncertainty about [one's] worth or place in society … [or that] what you've done or what you have is in some fundamental way not good enough," p. 9), seems to be the inverse of self-esteem, which we measured using the Rosenberg Self-Esteem scale (RSE; Rosenberg, 1965).

However, Chua and Rubenfeld also write that "insecurity can take many different forms: a sense of being looked down on; a perception of peril; feelings of inadequacy; a fear of losing what one has" (p. 9), so to be fair to their theory we also considered the possibility that insecurity may be manifested in various—possibly indirect—ways, as reflected by other commonly used personality trait measures. Therefore, in addition to self-esteem, we also measured stability of self (Rosenberg, 1965), hypersensitive narcissism (Hendin & Cheek, 1997), neuroticism (along with the other Big Five personality traits, using the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991), contingencies of self-worth (CSW; Crocker, Luhtanen, Cooper, & Bouvrette, 2003), the quality of relationship to parents (the "parent" subscale of the revised Inventory of Parent and Peer Attachment [IPPA]; Gullone & Robinson, 2005), a perceived comparison of self and others (the Self-Attributes Questionnaire; Pelham & Swann, 1989), and a measure tapping individuals' perceptions of being the

[1] Although *The Triple Package* was not published by an academic press, it was widely discussed upon its publication in 2014, and it was reviewed by scholars and public intellectuals, both negatively and positively (e.g., Deresiewicz, 2014; Murray, 2014; Roithmayr, 2014; Woodard, 2014). The book also sold well, spending four consecutive weeks on the hardcover bestseller list of *The New York Times* from 23 February through 16 March 2014.

Table 1
Correlation matrix for both studies' main variables.

	Age	Sex	Parents' education	Cognitive ability	Impulse control	Ethno-centrism	Personal insecurity	Contingent self-worth	Family insecurity	Perceived discrimination	Success
Age	(–)	−.02	−.22***	.20***	.22***	−.02	−.23***	−.21***	−.01	.17**	.06
Sex	−.04	(–)	.03	.08	−.10*	.23***	−.11*	−.12*	−.11*	−.11*	−.06
Parents' edu.	−.23***	.01	(.67; .72)	.18***	−.05	−.09	.02	.06	.06	.02	.18***
Cog. ability	.09*	.09*	.12**	(.49; .42)	.07	−.25***	−.10*	.01	−.05	.07	.28***
Impulse control	.18***	−.02	.02	.05	(.75; .79)	−.14**	−.62***	−.20***	.18***	.22***	.13**
Ethnocentrism	.07	.22***	−.05	−.16***	−.05	(.93; .93)	.08	.01	−.08	−.14**	−.09
Pers. insecurity	−.22***	−.08*	.06	.07*	−.57***	−.04	(.81; .80)	.34***	−.10*	−.26***	−.16**
CSW	−.15***	−.17***	.09**	.07	−.02	−.03	.25***	(.73; .63)	.32***	.02	.18***
Family insec.	.05	−.10**	−.04	−.07*	.13***	−.01	−.10**	.43***	(.52; .81)	.31***	.09
Perceived discr.	.17***	−.02	−.01	.01	.25***	.03	−.25***	−.06	.11**	(.73; .71)	.08
Success	.06	.03	.19***	.17***	.09*	−.06	−.11**	.10**	.04	−.03	(.35; .39)

Note. Study 1's correlation coefficients are above the diagonal; Study 2's correlation coefficients are below the diagonal. Coefficient alphas are reported in parentheses along the diagonal (Study 1; Study2).
* $p < .05$.
** $p < .01$.
*** $p < .001$.

target of discrimination (the Everyday Discrimination Scale; Williams, Yu, Jackson, & Anderson, 1997).

Together, these measures seemed to encompass the three main types of insecurity Chua and Rubenfeld highlight: "scorn" (i.e., perceived discrimination), "fear" (e.g., neuroticism), and "family" (e.g., CSW family subscale; the IPPA), in addition to other possible variants (e.g., hypersensitive narcissism, self-concept instability). To discern any common factors underlying these measures, and to create more reliable composite measures and simplify the subsequent analyses, we conducted exploratory factor analyses on all these measures (at the subscale level) using principal axis extraction and promax rotation. We used a scree test to determine the number of factors to rotate (e.g., Costello & Osborne, 2005). This analysis suggested three factors (all loadings >.40). Factor 1, which we will call *personal insecurity*, comprised self-esteem (negatively loaded), neuroticism, self-other comparison (negatively loaded), (in)stability of self, and hypersensitive narcissism. Scores on this factor were computed by averaging the standardized scores for each measure, after reverse coding the scores where appropriate. This factor seems to reflect a similar core construct to the one identified by Judge, Erez, Bono, and Thoresen (2002), who concluded that the omnibus factor was more reliable and valid than any of its constituent measures (i.e., self-esteem, neuroticism, locus of control, and self-efficacy), which demonstrated poor discriminant validity. Factor 2, *contingent self-worth*, comprised CSW subscales for competition, school, appearance, and others. Factor 3, *family insecurity*, comprised the CSW family subscale and the IPPA parent subscale. This factor also included the CSW virtue and discrimination subscales, but because those scales did not seem to fit thematically with the factor, we decided to remove them; we evaluated *perceived discrimination* as a fourth potential insecurity variable, and because we had no hypotheses for the virtue subscale, we excluded it from all analyses. (exploratory regression analyses using virtue as an insecurity variable showed that it did not predict success in either study; $\beta s < |.03|$; $ps > .45$.)

1.2.3. Impulse control

We measured impulse control, defined by Chua and Rubenfeld as "… the ability to resist temptation, especially the temptation to give up in the face of hardship or quit instead of persevering at a difficult task" (p. 10), using the Barratt Impulsiveness Scale (BIS-11, reverse-scored; Patton, Stanford, & Barratt, 1995), the conscientiousness measure from the BFI, and the 8-item Grit scale (Duckworth & Quinn, 2009). Given that previous research suggests high correlations between grit and conscientiousness scores (Duckworth, Peterson, Matthews, & Kelly, 2007), and that such correlations were also obtained in the present study (BFI conscientiousness, grit, and impulsivity all correlated $r > |.53|$), we combined standardized scores from each of the three measures into a composite index of impulse control.[2]

1.2.4. Cognitive ability

Chua and Rubenfeld do not discuss this extensively in their argument, but one of the best predictors of achievement and success across domains is general cognitive ability (e.g., Ceci & Williams, 1997; Herrnstein & Murray, 1994; Ree & Earles, 1992). We constructed a brief measure of this construct by averaging two equally weighted components: (1) the ten-item "Wordsum" vocabulary test from the General Social Survey (Malhotra, Krosnick, & Haertel, 2007), and (2) a five-item version of the Cognitive Reflection Test, consisting of the three mathematical reasoning items published by Frederick (2005) and two additional similar items supplied by Frederick (personal communication). The first additional item was: "A cube made of white plastic is spray painted black and cut into 27 identical sized cubes. How many have exactly two black sides?" The answer is 12. The second item was: "If John can drink one barrel of water in 6 days, and Mary can drink one barrel of water in 12 days, how long would it take them to drink one barrel of water together?" The answer is 4 days. Both of these scales are commonly used, in isolation, as brief measures of cognitive ability.

1.2.5. Success

Chua and Rubenfeld (2014) explicitly define success as the earning of income, status, and prestige, and limit their discussion of the triple package's value to its ability to confer this type of success. To be sure, these are not the only ways of defining or understanding "success," but they are the ones addressed by the TP theory, and they have been studied often by investigators across the social sciences (e.g., Herrnstein & Murray, 1994). Therefore we asked participants to report their annual income (in increments of $20,000, up to $80,000, and then in increments of $40,000 to "greater than $200,000"), and their highest level of education (7 options, from "Grade school or less" to "Graduate/professional degree"). As a robustness check, we repeated all the main analyses in both studies after first excluding participants who reported voluntarily not earning a full-time income (e.g., by listing "homemaker" or "student" or "mother" as their occupation, as well as those

[2] Chua and Rubenfeld's emphasis on perseverance in the face of obstacles in defining impulse control is probably most directly captured by the "grit" scale. However, we conducted all of our main analyses for Study 1 replacing our impulse control composite variable with grit scores only, and it did not change the significance or nonsignificance of any of the results. This bolsters our position that grit, conscientiousness, and (low) impulsivity represent a common factor blending impulse control and conscientiousness, which is similar to Tellegen's (1985) *constraint*.

who reported being disabled; this did not change the results patterns, although in a few cases it caused significant results to become nonsignificant).

We also asked about awards received by asking participants to indicate areas in which they had earned "an honor or award," from a list adapted from the Common Application (www.commonapp.org) used for U.S. college admissions. The list includes a variety of general categories including academic, artistic, athletic, career, and community service domains. Each award category checked counted as 1 award, up to a possible 26. We also asked a question about net worth, but we did not analyze it because participants are very unlikely to know their net worth without being asked detailed questions about individual components of wealth, e.g. mortgages, home values, mutual fund balances, etc. Indeed, over 25% of participants across both studies either did not indicate their net worth or simply entered "0."

To correct for skewness, we log-transformed each of the three outcome measures. We then standardized the transformed scores and averaged them into a composite "success" variable, for several reasons: (1) A composite measure should be more reliable than its separate components; (2) Chua and Rubenfeld's theory does not make clearly distinct predictions about the TP's influences on separate aspects of success; (3) considering three separate outcome measures multiply our statistical tests, leading to greater likelihood of false positive findings; (4) different individuals might apply themselves to succeed in different domains—some people may try to earn a lot of money; others might try to accumulate academic degrees; still others might hone skills related to music, art, athletics, chess, and so on, that might be reflected in awards and other acknowledgments. (Nonetheless, we did perform analyses on the disaggregated variables, which produced similar, but less stable results than the main analyses reported below—see Supplemental Materials for details.)

1.2.6. Demographics

In addition to age, sex, and ethnicity, we asked participants about their mother's and father's level of educational attainment. This allowed us to control, roughly, for the participants' socioeconomic status (SES) in childhood and adolescence (although parental educational attainment may be influenced as well by genetic factors that also influence the participants' own success). We also asked participants to list their occupation and hours worked per week, and to indicate their ethnicity, religious affiliation, and the ancestry group with which they most identified.

2. Results

To test the TP hypothesis, we conducted a series of regression analyses predicting success from a combination of demographic, cognitive ability, and personality factors. In the first step of each regression, we entered scores for participants' age, sex, parental education (averaged across mother and father), and cognitive ability, along with standardized scores for ethnocentrism, the impulse-control composite, and one of the four measures of personal insecurity (i.e., we interchanged the different potential measures of insecurity in sets of regression analyses for each outcome variable). In the second step of each regression, we entered two-way interaction terms between the TP variables (ethnocentrism, impulse control, and insecurity), followed by a three-way interaction term in the third step. Table 2 displays the results.

In every analysis, success was predicted significantly by both parental education and participant cognitive ability. In three analyses, impulse control was an additional positive predictor of success; however, this effect was eliminated when we included the negative effect of personal insecurity, suggesting that the effect of impulse control is due to the fact that individuals' higher in impulse control also tend to be more emotionally stable (i.e., less insecure). Hence, personal insecurity predicted *less* success—opposite from the TP hypothesis. However, in alternate analyses, contingent self-worth predicted more success, qualified by an interaction with ethnocentrism, such that the salutary effect of contingent self-worth depended on relatively high ethnocentrism.

Table 2
Regression results for Study 1.

	B	SE	β	p
Success 1				
Age	.00	.00	.00	.96
Sex	−.13	.07	−.09	.06
Parents' education	.06	.02	.14	.00
Cognitive ability	.08	.02	.25	.00
Impulse control	.03	.05	.04	.52
Ethnocentrism	.01	.03	.02	.70
Personal insecurity	−.08	.04	−.12	.04
Success 2				
Age	.00	.00	.06	.26
Sex	−.06	.07	−.04	.40
Parents' education	.06	.02	.15	.00
Cognitive ability	.07	.02	.24	.00
Impulse control	.12	.04	.15	.00
Ethnocentrism	.01	.03	.01	.86
Contingent self-worth	.14	.03	.21	.00
CSW × ethnocentrism	.12	.05	.13	.01
CSW × impulse control	−.07	.04	−.09	.06
Success 3				
Age	.00	.00	.02	.74
Sex	−.09	.07	−.07	.18
Parents' education	.06	.02	.14	.00
Cognitive ability	.08	.02	.26	.00
Impulse control	.08	.04	.10	.03
Ethnocentrism	.01	.03	.02	.71
Family insecurity	.05	.03	.07	.13
Success 4				
Age	.00	.00	.01	.80
Sex	−.10	.07	−.07	.15
Parents' education	.06	.02	.15	.00
Cognitive ability	.08	.02	.25	.00
Impulse control	.09	.04	.11	.02
Ethnocentrism	.01	.03	.02	.73
Perceived discrimination	.01	.03	.02	.66

Note. For brevity, only interactions with p-values <.10 are displayed.

(There was also a marginally significant interaction between family insecurity and impulse control, such that higher impulse control predicted more success, but only at lower levels of family insecurity—also in contrast to the TP hypothesis.) There were no other main effects or interactions. Interestingly, though, analyses on the disaggregated success variables revealed opposing effects of ethnocentrism, which positively predicted income but negatively predicted awards, and had no significant effect on educational attainment (see Supplemental Materials).

3. Discussion

Study 1 showed that success was largely predicted by participants' cognitive ability and the educational attainment of their parents—factors long known to be important. Whereas, consistent with prior research (e.g., Mischel, 2014), impulse control predicted success, here the effect of impulse control was completely attributable to emotional stability. In this regard, the TP hypothesis fares poorly, as the most obvious operationalization of "personal insecurity"—an amalgam of neuroticism, (lower) self-esteem, and related variables—*negatively* predicted success, regardless of individuals' impulse control or ethnocentrism. This was true even when potential synergistic interactions with other TP traits were considered.

Thus, the TP hypothesis about personal insecurity should be rejected. However, if one interprets insecurity as contingent self-worth, or self-esteem that is predicated on external sources, and hence presumably more fragile (Park & Crocker, 2005), the TP hypothesis fares somewhat better: participants whose self-esteem depended on their appearance, others' opinions, and on doing well in competitive contexts scored higher on the composite success measure, albeit only if they were also relatively high in ethnocentrism. Secondly, in disaggregated analyses (see Supplemental Materials), ethnocentrism positively predicted income (consistent with the TP hypothesis), although it

negatively predicted awards (inconsistent with the TP hypothesis) and was not associated with education.

4. Study 2

4.1. Participants

In Study 2, we replicated Study 1 with a sample approximately twice as large as the original (Tversky & Kahneman, 1971). Participants were 828 adults located in the United States (534 women, 294 men; ages 19–73 [$M = 35.55$; $SD = 11.49$]), who were paid $0.75. Participants identified primarily as White/Caucasian (78%), Black/African-American (13%), Asian-American (6%), Hispanic/Latino (4%), or another ethnicity (2%; percentages sum to more than 100% due to rounding).

4.2. Materials and procedure

Study 2 followed the same procedure as Study 1, but with some measures omitted to minimize the demands on participants while still conceptually replicating Study 1. Specifically, we removed stability of self, hypersensitive narcissism, and the self-attributes questionnaire, because in Study 1 these measures did not load as highly on the personal insecurity factor as self-esteem and neuroticism (which we retained in Study 2, again to form a composite of personal insecurity). We also removed the IPPA, because it was the longest questionnaire, so family insecurity was measured using only the CSW parents subscale. Finally, due to a programming error, data from the 8-item grit scale could not be used; hence, in Study 2, impulse control was a composite of conscientiousness and (low) impulsivity. As grit correlated $r = .59$ with conscientiousness in Study 1, consistent with other published findings (e.g., Duckworth et al., 2007), we do not think this inadvertent change affected the results of Study 2.

5. Results

We followed the same analytic steps as in Study 1, except where noted below. Table 3 displays the regression results.

Replicating Study 1's results, in all analyses parental education and participant cognitive ability positively predicted the composite measure of success. Age emerged as an additional predictor of success. Also similar to Study 1, impulse control predicted more success, but this was only significant in one of four analyses; as in Study 1, controlling for personal insecurity, which again negatively predicted success, eliminated the effect of impulse control.

Also replicating Study 1, contingent self-worth predicted success. However, this time, the main effect was qualified by a different interaction than in Study 1; ironically, the effect of contingent self-worth depended on relatively low impulse control. (Looked at another way, this interaction makes more sense: impulse control has a salutary effect, but only among individuals lower in contingent self-worth.)

A new finding in Study 2 was a two-way interaction between impulse control and ethnocentrism, such that lower ethnocentrism combined with higher impulse control predicted greater success than any other combination. Also new was an interaction between personal insecurity and impulse control, such that the deleterious effect of personal insecurity on success only occurred for individuals who were also lower on impulse control.

Finally, analyses on the disaggregated success variables, despite yielding less consistency across studies than analyses on the aggregated variable, replicated Study 1 in finding ethnocentrism to be a negative predictor of awards but a positive predictor of income (see Supplemental Materials).

Table 3
Regression results for Study 2.

	B	SE	β	p
Success 1				
Age	.00	.00	.07	.05
Sex	.02	.05	.01	.74
Parents' education	.07	.01	.20	.00
Cognitive ability	.05	.01	.14	.00
Impulse control	−.01	.03	−.02	.72
Ethnocentrism	−.02	.02-	.04	.30
Personal insecurity	−.09	.03	−.13	.00
Insecurity × impulse control	.08	.02	.15	.00
Impulse control × ethnocentrism	−.05	.03	−.08	.07
Success 2				
Age	.01	.00	.10	.00
Sex	.06	.05	.04	.22
Parents' education	.07	.01	.19	.00
Cognitive ability	.04	.01	.12	.00
Impulse control	.04	.03	.06	.10
Ethnocentrism	−.03	.02	−.04	.28
Contingent self-worth	.07	.02	.10	.00
Impulse control × ethnocentrism	−.06	.02	−.08	.01
Success 3				
Age	.01	.00	.09	.02
Sex	.04	.05	.03	.41
Parents' education	.07	.01	.19	.00
Cognitive ability	.04	.01	.13	.00
Impulse control	.04	.03	.05	.16
Ethnocentrism	−.02	.02	−.04	.33
Family insecurity	.04	.02	.05	.12
Impulse control × ethnocentrism	−.05	.02	−.08	.02
Success 4				
Age	.01	.00	.10	.01
Sex	.03	.05	.02	.51
Parents' education	.07	.01	.19	.00
Cognitive ability	.04	.01	.13	.00
Impulse control	.05	.03	.07	.05
Ethnocentrism	−.02	.02	−.03	.36
Perceived discrimination	−.04	.02	−.06	.07
Impulse control × ethnocentrism	−.05	.02	−.07	.04

Note. For brevity, only interactions with p-values <.10 are displayed.

6. Discussion

Study 2 replicated the main results of Study 1. As has often been found, success was predicted by cognitive ability and parents' education (SES), validating the quality of our samples and our research design. But there was again only slim support for the TP hypothesis. Personal insecurity negatively predicted success, even accounting (perhaps surprisingly) for the salutary effects of impulse control, the TP component with the strongest theoretical and empirical basis.

If one allows that contingent self-worth reflects a type of insecurity, then that element of the TP hypothesis ostensibly receives some support in the present studies. However, the effect of contingent self-worth in both studies depended on other variables, but not the same ones or in the same way, suggesting that these interactions were spurious and unlikely to replicate.

Indeed, most damaging to the TP hypothesis was the absence of synergy among the predictors. Although we found a number of interactions (mostly when analyzing disaggregated success measures), they either did not replicate across studies (suggesting they were unreliable) or did not directly match the TP hypothesis (e.g., insecurity was harmful when combined with low impulse control).

The one consistent finding that might support some version of the TP hypothesis was that ethnocentrism predicted income (although it also negatively predicted awards and had no association with education). This novel effect was visible in the small but significant simple correlations between ethnocentrism and income (.14 and .15 in Studies 1 and 2) and in analyses controlling for other known predictors of success. This finding, while falling short of affirming the TP theory, warrants further study.

7. General discussion

Across two studies with sizable samples of U.S. adults (N = 1,258), we found that achievement of awards, education, and income was predicted by the educational attainment of individuals' parents (a proxy for socioeconomic status) and individuals' own cognitive ability as estimated by brief verbal and math tests. However, we found scant support for a "Triple Package" hypothesis that a group superiority complex (i.e., ethnocentrism), personal insecurity (operationalized in four different ways), and impulse control interact to predict exceptional achievement. Even a modest version of the TP hypothesis, according to which ethnocentrism, impulse control, and personal insecurity exert independent effects, received little support. Impulse control was related to an omnibus measure of success, but that relationship was explained by *low* personal insecurity—in other words, insecurity predicted less success, contradicting the TP hypothesis, and this negative effect mediated the effect of impulse control.

Both studies found that contingent self-worth predicted success. Chua and Rubenfeld (2014) did not define insecurity as contingent self-worth, but basing one's self-worth on external sources probably reflects a type of insecurity (e.g., Lemay & Clark, 2008; Park & Crocker, 2005), and seems compatible with the TP view that success is motivated by external expectations, so perhaps here Chua and Rubenfeld were onto something. In Study 1, the effect of contingent self-worth was qualified with an interaction that resonated with the TP view of individuals striving to live up to the perceived high standards of their ethnic group: contingent self-worth predicted success only among individuals relatively high in ethnocentrism. However, that interaction did not replicate in Study 2; instead, contingent self-worth predicted success only among individuals relatively low in impulse control, as though for them, contingent self-worth functions as extra motivation. (Note also that contingent self-worth with respect to individuals' families did not predict success in our studies, limiting the effect further.) Either way, the findings for contingent self-worth deserve additional exploration, in particular to discern whether it motivates people to become more successful, or whether people who have achieved more success develop contingent self-worth from receiving more positive feedback.

As for ethnocentrism, it bore no relation to our omnibus success measure; ancillary analyses revealed that ethnocentrism positively predicted income across both studies (but negatively predicted awards). Of course, the question of causation remains—it is possible that instead of ethnocentrism increasing income, people who are wealthier tend to think more highly of their social and cultural groups when those groups are wealthier, because people are motivated to believe that positive outcomes are intrinsically deserved (e.g., just world theory, Lerner, 1980; system justification theory; Jost, Kay, & Thorisdottir, 2009). Alternatively, higher-earning individuals who are part of higher-earning groups might reasonably infer that their groups are special.

Overall, the present studies could be interpreted as supporting a highly constrained and modified version of Chua and Rubenfeld's theory, although they seem to have mischaracterized some of the relevant personality variables (what they call personal security may be contingent self-esteem—measures of the two constructs were correlated in both studies), and misconstrued how these traits relate to outcomes (the process is not synergistic). Consistent with previous research (Ceci & Williams, 1997; Judge et al., 1999; Ree & Earles, 1992), our studies suggest that success is best explained by environmental and ability factors including socioeconomic status and cognitive ability, along with personality traits reflecting something akin to psychological security or emotional stability (i.e., lower neuroticism and higher self-esteem).

If the TP theory does not explain extraordinary success enjoyed by certain cultural minority groups in the U.S., then what does? First, it is important to note that Chua and Rubenfeld selected their "cultural groups" post-hoc, based on (allegedly) already-overachieved success. It is easy to pick out successes (or failures) from a larger set and then discern or imagine characteristics shared by those cases that plausibly differentiate them. But this is the first step in forming a hypothesis, not the last step in testing it. The hypothesized process must operate through the psychology of individual group members, and must be testable at that level. We attempted to test it, and the hypothesis mostly failed. Second, it seems plausible that different groups are successful for different reasons. Some groups may have benefitted from members who had more cognitive ability and impulse control being more likely to immigrate to the United States. In short, before too much effort is directed at explaining the success of certain immigrant groups, we must verify (1) that they really do enjoy unexpected levels of success, and (2) that this cannot be explained by other well-established predictors of success, which might be amplified in people who accept the challenges attendant with moving to a new country. The totality of the evidence suggests that the mostly likely elements of a triple package would be intelligence, conscientiousness, and economic advantage: the same factors that would benefit anyone, regardless of ethnicity.

The present research is limited in some ways, including the use of a self-report cross-sectional design and an online sample that is diverse, but not perfectly representative of the population. Our interest was not to generate ironclad support for the TP theory, but to see whether we could generate basic correlational support for it. Since we could not, it seems unlikely that the theory has merit, although it is possible that an investigation including more sensitive or objective measures could turn up evidence that our exploration missed.

It is appealing to think that a simple set of success-engendering traits can be inculcated in anyone and that parents need only to create a belief that their family comes from a special stock and to be strict with their children to endow them with grit and a sense that their efforts are never quite good enough. Perhaps there is a formula of learnable personality traits that increases individuals' chances of succeeding in Western culture above and beyond what is contributed by native ability and the advantages of socioeconomic status. If so, the formula remains undiscovered—and we have found no evidence that the one proposed by Chua and Rubenfeld is it.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.paid.2015.12.041.

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