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A Broader Conceptualization: The Vanity Construct Re-examined

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Abstract

A new vanity scale was developed and psychometrically validated using a total of 339 participants. Three studies were carried out using undergraduate students and family and friends. Validation procedures included assessing the convergent and discriminant validity of our scale using the Balanced Inventory of Desirable Responding (BIDR) and the International Personality Item Pool (IPIP). Internal reliability and factor analytic procedures were also performed on the scale data. Cumulative results of the three studies support the psychometric properties of the new scale. The final 22-item version of the scale showed high internal reliability and excellent factor structure. It is concluded that the scale may potentially be used for general purpose research to identify vain individuals.

A Broader Conceptualization: The Vanity Construct Re-examined

Vanity has remained over the years a relatively unexplored psychological construct. Although many philosophers and poets have long documented acts and experiences of vanity, during the past seven decades social scientists have sporadically explored the phenomenon.

There have been various conceptualizations and definitions of vanity, and surely debate about this topic will persist. This study examines vanity in a new light and offers a new scale, which more broadly captures vanity. This paper will briefly review the extant literature related to vanity and will consider a new conceptualization of the construct. The new construct definition and associated domains will be discussed and rationalized. Then, three purification studies, which assess the reliability and validity of the original scale and its revisions, are described. The implications of the results are then discussed.

Theoretical and Empirical Precedents

Vanity has been studied from various perspectives over the years. For example, vanity has been conceptualized on one extreme as originating in the sexual struggle (Battistelli, 1929) or more mundanely as the inclination for self-expression originating from the desire to increase one's sense of importance (Grau, 1928). Consequently, I will briefly review the vanity construct from the psychoanalytic perspective, the more conventional excessive pride perspective, and finally the consumer behavior perspective.

As early as 1929, scholars have attempted to explore the concept of vanity within a psychoanalytic framework. Battistelli (1929) suggested that vanity originated in the sexual struggle and presents itself in different forms among normal persons, mental patients, and criminals. Sztulman (1976) discussed how vanity might be a manifestation of unconscious symbolic expressions due to the Oedipal situation. More recently, Bernstein (1998) proposed that females carry a considerable amount of desexualized, homosexual libido, which is stored for

mothering. This energy may be channeled into vanity if not utilized for the purpose of mothering (Bernstein, 1998).

The second framework from which vanity has been studied is more heterogeneous. It encompasses the more conventional conceptualizations of vanity. The most broad definition of vanity would probably be in terms of excessive pride for oneself (Webster, 2001). Webster (2001) also proposed that vain individuals may often incur important personal costs due to their excessive concern for their public self-image. Much earlier, Grau (1928) proposed that a vain person constantly uses external means to increase his sense of superiority. Modesty is also distinguished as the inhibition of self-expression due to the fear of decreasing one's self-confidence. Later, Keller (1938) stated that vanity differs from pride in its need for recognition and differs from ambition in its illusory satisfactions. Similarly, Pascal (1950) defined vanity as "the desire to live an imaginary life in the minds of others" (pp. 36).

More recently, Bilsbury, Roach, and Bilsbury (2001) commented on the fact that vanity has not been linked to social anxiety, although the two constructs are very much related. Beck, Emery, and Greenburg (1985) conceptualized social anxiety as the fear of thinking that another may hold a negative impression of oneself. Thus, if vanity is conceptualized as an excessive concern for the impression of oneself, it may be that social anxiety is a term obscuring the psychological construct of vanity.

Vanity has also been studied alongside the psychological construct of narcissism. Also having psychoanalytic roots, a narcissistic personality is characterized by a grandiose sense of self-importance, fantasies of unlimited success, exhibitionism, inability to tolerate criticism, expectation of unreciprocal favors, exploitativeness, and lack of empathy (DSM-III; American Psychiatric Association, 1980). Consequently, vanity has been reliably extracted as a component

from the narcissistic construct, using the Narcissistic Personality Inventory (NPI), using only three items (Raskin & Terry, 1988). Finally, a Character Assessment Scale (CAS) includes vanity as one of its eight character weakness scales (Murphy, Impara, & Plake, 1999).

The third and most recent framework from which vanity has been studied is consumer behavior research. This line of research seeks to explore the various factors that affect how individuals purchase and consume products. The logic behind studying vanity from this perspective is that many products and services facilitate needs of the vain individual (Netemeyer, Burton, & Lichtenstein, 1995). Vanity as Netemeyer, Burton, and Lichtenstein (1995) conceptualized it is defined as an excessive concern or view of one's own physical appearance and personal achievements. They constructed a 21-item scale that measures the four distinct trait components of vanity: (1) physical concern, (2) inflated positive physical view, (3) achievement concern, and (4) inflated positive achievement view. This scale has been shown to be psychometrically sound and has also been shown to be valid in China, India, and New Zealand (see Durvasula, Lysonski, & Watson, 2001).

Another application of vanity has been in investigating overspending amongst young individuals without credit histories. Using Worst, Duckworth, and McDaniel's (1991) 98-item measure of vanity-motivated overspending, Morris, McDaniel, Worst, and Timm (1995) found that individuals motivated by vanity were more likely to show poor spending and saving habits six months later. Thus, it seems that vanity may be especially useful for understanding the nature of human consumption behaviors.

Finally, vanity has also been studied in an industrial organizational setting. Mohn (1986) found that manager's overemphasis on personal success undermined the achievement of broader corporate goals.

It is important to accurately measure vanity because of associated negative behaviors that vain individuals may exhibit. Many negative physical and mental consequences (e.g., anorexia and social anxiety, respectively) may arise due to one's vanity-motivated behaviors. In order to possibly help individuals at risk for these maladaptive behaviors, one must be able to reliably and accurately measure the construct.

The Present Research

Vanity has been measured in the past from some of the perspectives described above. Several limitations make these previous scales undesirable for general use. For example, Murphy, Impara, and Plake's (1999) CAS is founded on biblical principles and may not be applicable to many individuals. Worst, Duckworth, and McDaniel's (1991) vanity-motivated overspending measure taps specifically into overspending behaviors. Finally, Netemeyer, Burton, and Lichtenstein's (1995) scale, which may be regarded as probably the best current vanity scale, taps only into specific physical and achievement-based behaviors from a consumer behavior perspective. Thus, we propose a vanity scale that taps into more general vanity-related behaviors and is not specific to consumer behavior.

In this paper, vanity is more broadly defined as over-emphasizing one's positive self-perceptions and under-emphasizing one's negative self-perceptions. These self-perceptions can be based on social comparisons made with others or pure "gut" feelings about one's competencies. Thus, an individual can be vain not only of physical and achievement-based dimensions, but can be vain of any skills or abilities encountered in various situations (e.g., athleticism, cleverness, conversationalist, etc.).

We propose five vanity domains because broader behaviors were incorporated, as compared to Netemeyer, Burton, and Lichtenstein (1995). Hence, the following dimensions are:

(1) excessive physical view, (2) overestimation of intelligence, (3) excuses for perceived failures, (4) overestimation of efficacy, and (5) overestimation of skills and abilities. The physical domain represents probably the most prevalent and least disputable aspect of vanity. Intelligence represents a prerequisite to many achievement-related behaviors. Vain individuals may also readily make excuses for any failures they experience. Efficacy refers to an overestimation of the effect an individual has on others. Finally, skills and abilities encompass many other vanity-related behaviors not included by the other domains.

The rationale for recognizing these five domains lies in the logic that vanity-motivated behaviors can occur in all facets of everyday life. These components are not meant to be an exhaustive list of all vanity-related behaviors. The specified domains were intended to be distinct but include an adequate representation of the theoretically infinite vanity-related behaviors.

The Balanced Inventory of Desirable Responding (BIDR) and the International Personality Item Pool (IPIP) were used to assess the construct validity of the newly developed scale. The BIDR was composed of two subscales, *self-deceptive positivity*, which measures the tendency to give honest but positively biased self-reports, and *impression management*, which measures deliberate self-presentation (Paulhus, 1991). High scores on these two subscales gauge socially desirable responding. Due to the nature of the self-deceptive positivity subscale and our working definition of vanity, it is predicted that our scale will converge with the subscale. On the other hand, we do not expect our scale to correlate with the impression management subscale, as any useful scale should not correlate highly with this construct.

The IPIP is a measure of the Big Five Model of Personality, which includes subscales of Extraversion, Openness to Experience, Neuroticism, Agreeableness, and Conscientiousness (Goldberg, 1999). Because Extraversion is characterized by many gratifying relationship with

others, extraverted individuals may also be vain because both individuals show a concern for others. Thus, it was predicted that our vanity scale would correlate with the Extraversion subscale. Additionally, our scale was also predicted to correlate with Openness to Experience, as individuals with positively biased self-perceptions of themselves tend to be talented in my activities. In turn, talented individuals tend to be more open to various experiences. Finally, our scale was expected to diverge from the Neuroticism, Agreeableness, and Conscientiousness constructs.

The three studies involved assessing the reliability and validity of the newly developed vanity scale. In Study 1, we validated the vanity scale by completing internal reliability analyses, principal components analyses, and convergent and divergent validity analyses from the responses of 114 undergraduate students. In Study 2, we modified and further analyzed the scale using the online responses of 112 friends and family. In Study 3, we further purified the scale using data from 113 friends and family.

Study 1

Scale Construction

An initial pool of 32 Likert-type statements were generated based on our working definition of vanity and its five associated domains. The items were kept concise and easy to understand. Half of the items were then negatively worded. A 5-point Likert-type scale was chosen because it allowed for enough fineness for participants to discriminate between the five possible answer points. The endpoints were from one (“Strongly disagree”) to five (“Strongly agree”) with three as the middle point (“Neutral”). These endpoints were chosen mainly due to convention. See Appendix A for the complete scale.

Procedure

The 30-item measure was administered to 112 undergraduate students from an advanced statistics class from the University of Waterloo. The scale was included in a questionnaire containing other scales. The questionnaire was completed in a two-hour class, but participants who did not finish were allowed to bring it home to complete. Approximately five minutes were taken to complete our scale. The questionnaire was completed as part of class credit.

Participants

The participants had a mean age of 22.8, with a standard deviation of 3.2. Seventy-six percent of the participants were female ($N = 85$) whereas 24% were male ($N = 27$). A total of 114 individuals completed the scale, but because of incomplete or inaccurate data, some cases were excluded for certain analyses.

Results

The 30-item scale had a mean of 96.6 (from a possible range of 30 to 150), where high scores were associated with greater vanity. The scale had a standard deviation (SD) of 10.3 and a range of 54.

Item Analysis

Individual items, in general, exhibited reasonably good SDs. Except for item 13 which had an SD of .63, all items had SDs greater than .83, which is reasonable for a 5-point scale. Thus, it was expected that most items had enough variance to correlate with other items. Frequencies are directly related to item variance and will be discussed here. The responses for most of the items approximated a normal distribution. However, there were some problematic items where participants did not use the full range of the scale. For example, 75% of the

participants selected 4 for item 13 and 82% of the participants selected 3 or 4 for item 29 and 30. Thus, these items had a restricted range and so in turn had low variance.

The item correlation table showed mediocre results. Correlations ranged from $-.30$ to $.47$, with a mean inter-item correlation of $.10$. Many items did not correlate well with each other, especially items from different domains. For example, item 10 (“I’m always pleased with what I see in the mirror”) and item 22 (“I’m rarely challenged mentally”) had a correlation of $.02$. Although these items are expected not to correlate with each other, many other items that were from the same domain did not correlate well. And so these low correlations most likely affected the overall alpha.

Many corrected item-total correlations were problematic. Specifically, 11 items had corrected item-total correlations of less than $.20$ (see Table 1). These items, for some reason did not correlate well with total scale scores. Thus, participants that scored high on item 22, for example, did not necessarily score high on the test as a whole, which means that the item may have been potentially tapping into something other than vanity.

Internal Reliability Analysis

The sample for Study 1 consisted of 114 students, but because of missing data, only 107 cases were included for internal consistency. The overall scale had an internal consistency of $.77$ (Cronbach’s alpha). Reliability analyses were performed independently on each of the domains. The excessive physical view domain had an internal consistency of $.69$, overestimation of intelligence $.31$, failure to acknowledge failures $.19$, overestimation of importance $.50$, and finally overestimation of skills and abilities had a Cronbach’s alpha of $.57$.

Principal Components Analysis

The 30 vanity items were subjected to principal components analysis using VARIMAX rotation. Number of components to be extracted was limited to five. The five components extracted accounted for 44% of the variance, whereas factor 1 accounted for 12% of the variance. However, the domain items did not load well on their respective factors. Table 2 presents the items and their respective factor loadings. For the first factor, at least one item from each domain (except domain 3) loaded well on factor 1, which is problematic. Three items came from domain 2 and three other items came from domain 5 and so it is impossible to conclude which domain the first factor captures. The same problem occurred for all other factors. Thus, in general, our items did not map well onto their respective domains.

Convergent and Discriminant Validity Analysis

Due to incomplete or incorrect identification, only 106 cases were included for construct validity analysis. Our data supported the predictions for both the BIDR and the IPIP. Overall, our scale did not significantly correlate with the overall BIDR construct ($r = .08, p > .05$). Our scale significantly correlated with the self-deceptive positivity subscale ($r = .25, p < .01$) and did not correlate with the impression management subscale ($r = -.08, p > .05$). For the IPIP, our scale significantly correlated with the Extraversion subscale ($r = .44, p < .001$), significantly correlated with the Openness to Experience subscale ($r = .43, p < .001$), and did not correlate with the Neuroticism, Agreeableness, and Conscientiousness subscales ($r = .10, p > .05$; $r = .00, p > .05$; $r = .18, p > .05$).

Correlations between the five domains were calculated to assess the distinctness of the dimensions. Although six of the ten correlations were significant ($p < .05$), all correlations were less than .43 except two. Factor 2 and factor 5 had a correlation of .52 and factor 4 and factor 5

had a correlation of .47. These moderate correlations forewarn us that perhaps these different domains (i.e., intelligence, efficacy, and skills/abilities) encompass the same behaviors.

Discussion

A new vanity scale was developed and administered to undergraduate students. In general, the scale showed good psychometric properties. However, many improvements are needed, especially in the dimensionality of the scale. Additionally, many items did not correlate with the total scores of the scale. The second study focuses on these problems in an attempt to improve the psychometric properties of the scale.

First Purification: Study 2

The aim of this study was to modify the original 30-item scale as to improve it with special emphasis on its dimensionality. The factor analysis revealed that our items did *not* map onto their appropriate dimensions. It was decided that the domains were therefore not appropriate and should be revised.

Domain Modifications

The domains were revamped and in the end three domains remained including: (1) excessive physical view, (2) excessive abilities view, and (3) deficient view of weaknesses. The rationale for these modified domains was that intelligence, efficacy and abilities are very closely related (given the moderately high inter-domain correlations) and so clumping them together seemed more logical. Finally, based on the working definition, it was deemed still appropriate to attempt to tap into attitudes and behaviors that demonstrate an underestimation of flaws.

Item Modifications

Some items were therefore deleted and new items were generated for the revised scale. In total, 13 items were deleted, 12 items were modified slightly, and so 13 new items were created.

Eight of the items deleted had corrected item-total correlations less than .20. The other five items were deemed unrelated to our working definition (e.g., item 3, “I give the best advice”, and item 18, “If I was in charge, things would be better”). Of the items that were modified, usually qualifiers were changed (e.g., “always” changed to “frequently”) or the item was re-worded for clarity. Seven of the new items attempted to tap into the third dimension of deficient view of weaknesses (e.g., item 23, “I can’t easily shrug off mistakes I make” and item 28, “I go out of my way to avoid being wrong”). Additionally, two physical vanity-related items were adopted from Netemeyer, Burton, and Lichtenstein’s (1995) vanity scale. See Appendix B for the complete revised scale.

Procedure

The revised scale was converted into a web-based form which was subsequently completed by 112 individuals, mostly friends and family.¹ The participants were contacted via e-mail and informed that the study was informally conducted for a class project and in no way affiliated with University of Waterloo research. The potential participants were also informed that confidentiality and unanimity would be guaranteed (as the e-mails I received only included the item answers, gender, and age). It was also explained that it should take no longer than four minutes to complete.

Participants

The participants had a mean age of 24.5, with a minimum of 17, a maximum of 55, and with a standard deviation of 7.0. Fifty-five percent of the participants were male ($N = 62$) whereas 45% were female ($N = 50$). A total of 112 individuals completed the scale with no missing information.²

Results

The 30-item scale had a mean of 90.7 (from a possible range of 30 to 150), a standard deviation (SD) of 9.0, and a range of 45.

Item Analysis

Once again, individual items exhibited reasonably good SDs. Except for item 26, which had an SD of .68, all items had SDs greater than .75. The responses for most of the items approximated a normal distribution, however, there were some problematic items. For example, 87% of the participants selected 1 or 2 for item 6 and 80% of the participants selected 3 or 4 for item 2. Thus, these items had a restricted range and so in turn had low variance.

The item correlation table was similar to that of Study 1. Correlations ranged from -.27 to .61, with a mean inter-item correlation of .07. Many items did not correlate well with each other, especially items from different domains. Most of the low correlations were due to items from the deficient view of weaknesses domain.

Many corrected item-total correlations were problematic. Specifically, 13 items had corrected item-total correlations of less than .20. For example, item 8 (“My impatience rarely affects other people”) had a corrected item-total correlation of -.19. This item and others for some reason did not correlate well with total scale scores and so may have been tapping into something other than vanity.

Internal Reliability Analysis

The sample for Study 2 consisted of 112 individuals from the general population. The overall scale had an internal consistency of .68 (Cronbach’s alpha). Reliability analyses were performed independently on each of our domains. The excessive physical view domain had an

internal consistency of .74, the excessive abilities view .69, and the deficient view of weaknesses had a Cronbach's alpha of .17.

Principal Components Analysis

The revised vanity scale items were subjected to principal components analysis using a VARIMAX rotation. A restriction of three was placed on the number of components to be extracted. The first three components accounted for 32% of the variance, whereas factor 1 accounted for 13% of the variance. The domain items loaded very well on their respective factors compared to study 1, but some items were still problematic (see Table 3). As can be seen in Table 3, nine of the 11 items that loaded well on factor 1 were from the excessive abilities view domain. Eight of the nine items that loaded well on factor 2 were from the excessive physical view domain, and seven of the 10 items that loaded well on factor 3 were from the deficient view of weaknesses domain. Thus, it is clear that factor 1 represents the excessive abilities view domain, factor 2 represents the excessive physical view domain, and factor 3 represents the deficient view of weaknesses domain.

Correlations between the three domains were calculated to assess the distinctness of the dimensions. Although factor 1 and factor 2 were significantly correlated ($r = .23, p < .05$), the correlation remains low and does not compromise the distinctness of our domains. The other two correlations (factor 1 vs. factor 3 and factor 2 vs. factor 3) were very low ($rs < .10$) and so overall our domains were distinct.

Discussion

The original vanity scale was revised and administered to friends and family. In general, the scale showed significant psychometric improvements in comparison to the original scale. Most notably, the dimensionality of the revised scale was much improved and showed

impressive factor structure. However, many items nonetheless showed poor item-total correlations. Furthermore, for practical concerns the IPIP or BIDR items for convergent and discriminant validity analyses were not included. The final study attempts to rectify some of these remaining issues.

Last Purification: Study 3

The aim of this study was to further modify the revised 30-item scale as to improve it, with special emphasis on the items that did not correlate with the scale total scores. Upon closer examination, it was noticed that the items composing the deficient view of weaknesses domain were responsible for most of the low item-total correlations, which probably decreased the overall reliability coefficient.

Domain Modifications

Eight of the 13 items that had item-total correlations less than .19 were from the deficient view of weaknesses domain. Due to the additional fact that these items did not even correlate well with each other (Cronbach's alpha of .17), it was concluded that these items were most likely capturing something *other* than vanity. It may be that vanity does not encompass a deficient need to admit one's flaws; one may simply think they are the best at almost everything. Thus, the domain and its associated items were deleted and as a result two domains remained: (1) excessive physical view and (2) excessive abilities view.

Item Modifications

All nine items from the deficient view of weaknesses were therefore deleted. Another eight items that had corrected item-total correlations less than .24 were also deleted. In total, 17 items were deleted, three items were modified slightly, and nine new items were created, resulting in a 22-item revised scale. Five new items were added to the physical view domain,

which in total contained 10 items. Four new items were added to the excessive abilities view domain, including “I impress myself with ideas that I have”. See Appendix C for the complete revised scale.

Procedure

The revised scale was re-administered using the same procedure as in Study 2. A total of 113 family and friends completed the online scale.

Participants

The participants had a mean age of 29.0, with a minimum of 18, a maximum of 67, and with a standard deviation of 12.2. Fifty-eight percent of the participants were male ($N = 65$) whereas 42% were female ($N = 48$).

Results

The 22-item scale had a mean of 74.1 (from a possible range of 22 to 110), a standard deviation (SD) of 9.8, and a range of 51.

Item Analysis

Once again, individual items showed reasonably good SDs. Except for item 11 which had an SD of .61, all items had SDs greater than .73. All item frequencies approximated a normal distribution except item 11 (“I enjoy looking good”). For this item, no one selected 1 or 2 and so approximately 90% of the participants selected 4 or 5. This restriction in range explains why the item had low variance.

The item correlation table showed considerable improvement from Study 2. Correlations ranged from $-.17$ to $.71$, with a mean inter-item correlation of $.23$. Some physical items did not correlate with abilities items, but this was expected. For example, item 11 (“I enjoy looking good”) had a correlation of $.05$ with item 15 (“I’m less interesting than most people”). Thus,

although these low correlations seem reasonable due to the inherent distinctness in domains, they nonetheless affected the overall alpha.

The corrected item-total correlations were considerably improved from the revised 30-item scale. No items had an item-total correlation less than .24 (compared to 13 items having correlations less than .19). Only items 17 (“I consistently do well academically”) and 11 (“I enjoy looking good”) had correlations less than .30. It would seem that item 17 may not be tapping into vanity and item 11’s low restricted range may account for its low item-total correlation.

Internal Reliability Analysis

The sample for Study 3 consisted of 113 individuals from a more heterogeneous population. The overall 22-item scale had considerably higher internal consistency of .87. Reliability analyses were performed independently on each of the domains. The excessive physical view domain had an internal consistency of .87 and the excessive abilities view had an alpha of .81.

Principal Components Analysis

The revised vanity scale items were subjected to principal components analysis using a VARIMAX rotation. A restriction of two was placed on the number of components to be extracted. The first two components accounted for 41% of the variance, whereas factor 1 accounted for 23% of the variance. The domain items loaded significantly better on their respective factors as compared to Study 2 (see Table 4) as *all* items loaded well on their respective factors. Item 1 was the only potentially problematic item, which loaded approximately equally well on both factors. But it is clear that factor 1 represents the excessive physical view domain and that factor 2 represents the excessive abilities view domain.

The correlation between the two domains was low, although it reached significance levels ($r = .39, p < .05$). Thus, the two dimensions are not overly associated and so remain distinct.

General Discussion

The revised vanity scale was improved and re-administered to friends and family. In general, the scale showed further psychometric improvements in comparison to both the revised and original 30-item scale. Most notably, the dimensionality of the 22-item scale was drastically improved and showed remarkable factor structure. Additionally the overall reliability of the scale improved to a .87 level. However, some improvement is still needed for some of the items. For example, item 11 (“I enjoy looking good”) should be modified as to increase its variance and item 17 (“I consistently do well academically”) should probably be deleted since it does not seem to be tapping into vanity.

In general, the revised 22-item vanity scale exhibits very respectable psychometric properties. The scale has sufficient variance, has high internal consistency, and exhibits a convincing factor structure. Additionally, the revised vanity scale’s psychometric properties remained meaningful among a more heterogeneous general population, which provides cumulative evidence for the soundness of the scale.

However, the revised 22-item scale should be validated in the future by contrasting it to the IPIP and BIDR. It is predicted that the same relationships seen with the original 30-item scale and the IPIP and BIDR would hold with the revised 22-item scale. Convergent validity could also have been assessed by administering a portion of the NPI to our participants. The scale would be expected to correlate with this broader construct, as vanity is subsumed by the Narcissistic construct.

A known-group validity study was planned to further validate the revised scale, but due to ethical and practical concerns, the study was not completed. It was predicted that individuals that attend fitness and esthetic centers would exhibit significantly higher vanity than individuals from the general population (e.g., individuals from Study 3). Future studies should look into confirming these predictions with actual participant data.

The original goal of this paper of broadening Netemeyer, Burton, and Lichtenstein's (1995) vanity scale was accomplished. The two domains developed in the current vanity scale encompass a wider scope of vanity-related behaviors, especially the excessive abilities view domain. Whereas Netemeyer, Burton, and Lichtenstein's (1995) second domain only encompassed professional career achievements, the new scale's second domain includes more general ability-related behaviors.

A new vanity scale was developed and validated in three independent studies using undergraduate students and a general population. A broader conceptualization was achieved and empirical results supported the reliability and validity of the scale. In light of these results, it follows that the scale may potentially be used for general-purpose research to identify vain individuals. One can only wonder whether individuals in general will become more vain as our society becomes more individualistic.

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Appendix A: Original 30-item Vanity Scale

1. *I'm rarely the best-looking person in any room.
2. I always do well academically.
3. I give the best advice.
4. *When something goes wrong, it's always my fault.
5. *I often need instructions from others.
6. People are jealous of the skills I have.
7. I always reach goals that I set for myself.
8. *My actions do not have an impact on a lot of people.
9. *I'm rarely bored when others talk to me.
10. I'm always pleased with what I see in the mirror.
11. I turn heads when I walk down the street.
12. *I find it difficult to manipulate people.
13. *What I say rarely helps others.
14. Other people's criticisms are not important me.
15. *I am good at very few things.
16. I can succeed at whatever I want.
17. *Failures are a reflection of me.
18. If I was in charge, things would be better.
19. *My ideas are rarely better than others' ideas.
20. I look at my reflection whenever I get the chance.
21. *I try to hide my looks.
22. I'm rarely challenged mentally.
23. *When people have a need, they would be better going somewhere else for help.
24. *I feel bad when people tell me I'm wrong.
25. If I would try new things I would be good at them.
26. *My looks are not worth noticing.
27. *People don't need my help to achieve things.
28. I'm more interesting than most people.
29. I'm much smarter than average.
30. *I never find the most clever solution in a group.

Note. * Indicates reverse-scored item.

Appendix B: Revised 30-item Vanity Scale

1. I usually reach challenging goals that I set for myself.
2. My looks are worth noticing.
3. *I frequently need instructions from others.
4. People are jealous of my skills.
5. It is important to me that my friends and family know only my strengths.
6. *I'm frequently interested in what others tell me.
7. I impress myself in front of the mirror.
8. My impatience rarely affects other people.
9. *I am not skilled at many activities.
10. I can succeed at a task faster than most.
11. When I screw up, it's usually because of someone else.
12. *My ideas are usually not as good as others'.
13. I look at my reflection whenever I get the chance.
14. I easily find excuses when I can't finish projects on time.
15. I can understand what someone is telling me before they finish speaking.
16. *I can easily accept when I'm in the wrong.
17. If I would try new activities I would be good at them.
18. I'm frequently the best-looking person in a room.
19. It bothers me when someone tells me I could have been more.
20. *I don't have to glance in the mirror before I head out into the public.
21. I'm more interesting than many people.
22. Looking my best is worth the effort.
23. *I can't easily shrug off mistakes I make.
24. My looks are very appealing to others.
25. I consistently do well academically.
26. *I try to hide my looks.
27. My farts don't stink.
28. I go out of my way to avoid being wrong.
29. *I don't turn heads when I walk down the street.
30. I'm more creative than many people.

Note. * Indicates reverse-scored item.

Appendix C: Revised 22-item Vanity Scale

1. If I would try new things I would be good at them.
2. *I'm rarely the best-looking person in any room.
3. I'm more creative than most people.
4. My looks are worth noticing.
5. *I don't impress myself in front of the mirror.
6. I'm more knowledgeable than most.
7. *I don't consider myself an attractive individual.
8. I can succeed at a task faster than most.
9. I'm always pleased with what I see in the mirror.
10. *My ideas are usually not as good as others'.
11. I enjoy looking good.
12. *I'm not talented at many things.
13. I impress myself with ideas that I have.
14. My looks are very appealing to others.
15. *I'm less interesting than most people.
16. People notice me when I enter a room.
17. I consistently do well academically (if not in school, think in the past).
18. *I don't enjoy looking at myself.
19. I can succeed at whatever I want.
20. Others wish they could be as skilled as me.
21. *I don't turn heads when I walk down the street.
22. People are jealous of the skills I have.

Note. * Indicates reverse-scored item.

Footnotes

¹ I constructed the HTML file from scratch and used CGI scripts from www.free-cgi.com to send the data from the web form to my e-mail address. I then wrote a Visual Basic script that converted the e-mails into a comma-delimited file which SPSS could import. This saved me from doing data entry and saved me a lot of time.

² I added JavaScript validation code to ensure that all items and participant information were complete.

Table 1

Corrected Item-Total Correlations

Items	Item-Total Correlations
*24. I feel bad when people tell me I'm wrong.	-.05
*17. Failures are a reflection of me.	.07
22. I'm rarely challenged mentally.	.08
*4. When something goes wrong, it's always my fault.	.10
*8. My actions do not have an impact on a lot of people.	.13
14. Other people's criticisms are not important me.	.13
*9. I'm rarely bored when others talk to me.	.14
*30. I never find the most clever solution in a group.	.17
*13. What I say rarely helps others.	.18
20. I look at my reflection whenever I get the chance.	.19
*23. When people have a need, they would be better going somewhere else for help.	.19

Note. * Indicates reverse-scored item.

Table 2

Item Factor Loadings for the Five Factors of Study 1

Items (associated domain)	Factor				
	1	2	3	4	5
29. I'm much smarter than average. (2)	.66	.10	.00	.28	.01
6. People are jealous of the skills I have. (5)	.63	-.01	.04	.15	.01
11. I turn heads when I walk down the street. (1)	.62	.22	-.05	-.11	.21
28. I'm more interesting than most people. (5)	.61	.10	.17	.05	-.01
25. If I would try new things I would be good at them. (5)	.53	.07	.20	.31	-.24
18. If I was in charge, things would be better. (4)	.51	-.19	-.07	.29	.05
12. *I find it difficult to manipulate people. (2)	.48	-.02	-.10	-.19	.24
22. I'm rarely challenged mentally. (2)	.48	-.11	-.28	-.13	-.11
3. I give the best advice. (4)	.45	.23	.19	.37	.09
10. I'm always pleased with what I see in the mirror. (1)	.20	.62	.18	.09	.18
21. *I try to hide my looks. (1)	.15	.62	.15	.04	.23
4. *When something goes wrong, it's always my fault. (4)	-.24	.58	.26	.02	-.14
17. *Failures are a reflection of me. (3)	-.16	.46	-.15	.02	-.05
1. *I'm rarely the best-looking person in any room. (1)	.28	.46	-.19	.06	.39
9. *I'm rarely bored when others talk to me. (2)	.19	.30	-.15	.00	-.07
13. *What I say rarely helps others. (4)	.07	-.04	.68	.07	-.01
23. *When people have a need, they'd be better going somewhere else for help. (4)	-.11	.27	.64	.11	.02
30. *I never find the most clever solution in a group. (5)	.18	-.18	.51	-.09	.29
14. Other people's criticisms are not important me. (3)	.13	.13	-.49	.17	.05
27. *People don't need my help to achieve things. (4)	.06	.08	.49	.19	-.09
19. *My ideas are rarely better than others' ideas. (4)	.45	.26	.45	-.05	.30
7. I always reach goals that I set for myself. (3)	.00	.05	-.08	.68	.12
2. I always do well academically. (2)	.13	-.07	.21	.64	.03
16. I can succeed at whatever I want. (5)	.21	.28	.05	.52	.38
5. *I often need instructions from others. (5)	.27	.32	-.22	.52	-.15
24. * I feel bad when people tell me I'm wrong. (3)	.14	.39	-.26	-.48	-.30
20. I look at my reflection whenever I get the chance. (1)	.24	-.20	.15	-.12	.62
8. *My actions do not have an impact on a lot of people. (4)	-.19	.02	.01	.17	.59
26. *My looks are not worth noticing. (1)	.04	.45	.38	.07	.53
15. *I am good at very few things. (5)	.05	.13	-.14	.17	.53

Note. * Indicates reverse-scored item.

Table 3

Item Factor Loadings for the Three Factors of Study 2

Items (associated domain)	Factor 1	Factor 2	Factor 3
10. I can succeed at a task faster than most. (2)	.73	-.23	-.01
30. I'm more creative than many people. (2)	.63	.05	.08
9. *I am not skilled at many activities. (2)	.59	.03	-.27
21. I'm more interesting than many people. (2)	.57	.17	.32
18. I'm frequently the best-looking person in a room. (1)	.57	.46	.18
17. If I would try new activities I would be good at them. (2)	.56	.22	.15
4. People are jealous of my skills. (2)	.53	.14	-.05
12. *My ideas are usually not as good as others'. (2)	.44	.06	-.02
25. I consistently do well academically. (2)	.37	-.09	-.10
11. When I screw up, it's usually because of someone else. (3)	.35	.00	.10
1. I usually reach challenging goals that I set for myself. (2)	.30	-.23	-.23
24. My looks are very appealing to others. (1)	.38	.69	-.12
7. I impress myself in front of the mirror. (1)	.27	.69	-.09
2. My looks are worth noticing. (1)	.38	.66	-.15
22. Looking my best is worth the effort. (1)	-.08	.49	-.08
29. *I don't turn heads when I walk down the street. (1)	.34	.48	-.17
3. *I frequently need instructions from others. (2)	.33	-.46	-.35
13. I look at my reflection whenever I get the chance. (1)	-.01	.41	.01
20. *I don't have to glance in the mirror before I head out into the public. (1)	-.21	.38	.05
27. My farts don't stink. (3)	.03	.23	.09
16. *I can easily accept when I'm in the wrong. (3)	-.01	.06	.58
14. I easily find excuses when I can't finish projects on time. (3)	-.12	.27	.57
28. I go out of my way to avoid being wrong. (3)	.07	.03	.55
5. It is important to me that my friends and family know only my strengths. (3)	.13	-.12	.48
26. *I try to hide my looks. (1)	.26	.30	-.39
19. It bothers me when someone tells me I could have been more. (3)	-.10	-.18	.38
23. *I can't easily shrug off mistakes I make. (3)	.16	.19	-.34
6. *I'm frequently interested in what others tell me. (2)	.16	-.24	.29
15. I can understand what someone is telling me before they finish speaking. (2)	.26	.13	.27
8. My impatience rarely affects other people. (3)	-.16	-.11	-.27

Note. * Indicates reverse-scored item.

Table 4

Item Factor Loadings for the Two Factors of Study 3

Items (associated domain)	Factor 1	Factor 2
7. *I don't consider myself an attractive individual. (1)	.79	.13
14. My looks are very appealing to others. (1)	.78	.12
18. *I don't enjoy looking at myself. (1)	.78	.09
5. *I don't impress myself in front of the mirror. (1)	.76	.07
2. *I'm rarely the best-looking person in any room. (1)	.72	.10
21. *I don't turn heads when I walk down the street. (1)	.68	.15
4. My looks are worth noticing. (1)	.64	.15
16. People notice me when I enter a room. (1)	.63	.29
9. I'm always pleased with what I see in the mirror. (1)	.47	.09
11. I enjoy looking good. (1)	.42	.01
20. Others wish they could be as skilled as me. (2)	.08	.71
6. I'm more knowledgeable than most. (2)	-.03	.65
12. *I'm not talented at many things. (2)	.14	.64
10. *My ideas are usually not as good as others'. (2)	.19	.63
22. People are jealous of the skills I have. (2)	.00	.63
15. *I'm less interesting than most people. (2)	.30	.60
8. I can succeed at a task faster than most. (2)	.17	.55
13. I impress myself with ideas that I have. (2)	.17	.53
19. I can succeed at whatever I want. (2)	.06	.47
17. I consistently do well academically (if not in school, think in the past). (2)	-.02	.45
3. I'm more creative than most people. (2)	.16	.41
1. If I would try new things I would be good at them. (2)	.35	.38

Note. * Indicates reverse-scored item.