

## Personality and Social Psychology

# An application of belief-importance theory with reference to trait emotional intelligence, mood, and somatic complaints

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This article describes the basic principles of belief-importance (belimp) theory and tests them in two empirical studies. Belimp theory hypothesizes that personality traits confer a propensity to perceive convergences and divergences between our belief that we can attain goals and the importance that we place on these goals. Belief and importance are conceptualized as two coordinates, together defining the belimp plane. Four distinct quadrants can be identified within the belimp plane (Hubris, Motivation, Depression and Apathy), broadly corresponding to the personality dimensions of trait emotional intelligence, conscientiousness, neuroticism and introversion. Study 1 ( $N = 365$ ) defines the four quadrants in relation to goals about financial security and shows that they score differently on trait emotional intelligence, mood and somatic complaints. Study 2 ( $N = 230$ ) defines the quadrants in relation to goals about appearance and, separately, in relation to goals about popularity, and replicates the findings of the first study. Strategies and requirements for testing belimp theory are presented, as are a number of theoretical and practical advantages that it can potentially offer.

*Key words:* Belimp theory, trait emotional self-efficacy, expectancy-value models, TEIQue.

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### INTRODUCTION

Belief-importance (belimp) theory posits that personality traits confer on the individual a propensity to perceive convergences and divergences between their *belief* that they can attain goals and the *importance* that they place on these goals. Belief and importance are conceptualized as two coordinates, together defining the *belimp plane* (see Fig. 1 and the section “Explanation of the belimp plane” below). Although they are depicted as orthogonal, in practice, the two coordinates will often be correlated because people tend to invest in goals that they value more.

It is postulated that personality traits determine an individual’s position on the belimp plane. Aspects of, mainly, conscientiousness and introversion confer a tendency to move *towards* the *belimp axis of symmetry* (see Fig. 1). That is to say, conscientious individuals (particularly those high on the drive aspect of this dimension) will be both more confident that they can achieve success in major life domains (e.g., financial security) and more likely to value those domains compared to individuals with low conscientiousness scores. Hence, the former are expected to be found high on the axis of symmetry (high belief – high importance), while the latter are expected to be found low on the axis (low belief – low importance).

Similarly, aspects of, mainly, trait EI and neuroticism confer a tendency to move *away* from the axis of symmetry. Divergence from the axis creates residuals that can be either *positive* (belief > importance) or *negative* (belief < importance). That is to say, high trait EI individuals will tend to overestimate their ability to achieve success in major life domains relative to the importance they attach to them, while neurotic individuals will tend to underestimate it.

The two belimp coordinates are individually as well as jointly exposed to the effects of personality traits. Despite pronounced

differences in value hierarchies, we believe that certain traits (e.g., aspects of conscientiousness) predispose people towards taking life more seriously and, thus, placing relatively high importance on multiple life domains (attractiveness, family, security, work, etc.; see Cummins, 1996; Petrides, 2010a). Contrary to the view that confidence is essentially task-dependent (Bandura, 1997), we, in fact, believe that certain personality traits (e.g., aspects of trait EI) predispose people towards being generally confident.

### *Explanation of the belimp plane*

Four quadrants are conceptualized within the belimp plane and, for heuristic purposes, labeled in terms of affect and motivation (see Fig. 1). Clockwise from top left, we have the quadrants of Hubris (excessive pride or presumption), Motivation, Depression and Apathy, loosely corresponding to the personality dimensions of trait emotional intelligence, conscientiousness, neuroticism and introversion. The Hubris quadrant also suggests unconventionality (because it is unusual to be uninterested in major life domains, even when you believe you can excel in them), the Motivation quadrant suggests conventionality (because we are socialized to achieve in major life domains), the Depression quadrant suggests humility (because it requires modesty to admit low confidence in life domains that you accept as important), and the Apathy quadrant suggests detachment (because it requires a degree of withdrawal to have low confidence and be indifferent to major life domains). The labels are heuristic and intend to highlight connections between belimp processes and established dimensions of personality. These connections relate to specific facets of the dimensions, and not necessarily to their global scores, which often represent an amalgamation of rather disparate constructs.

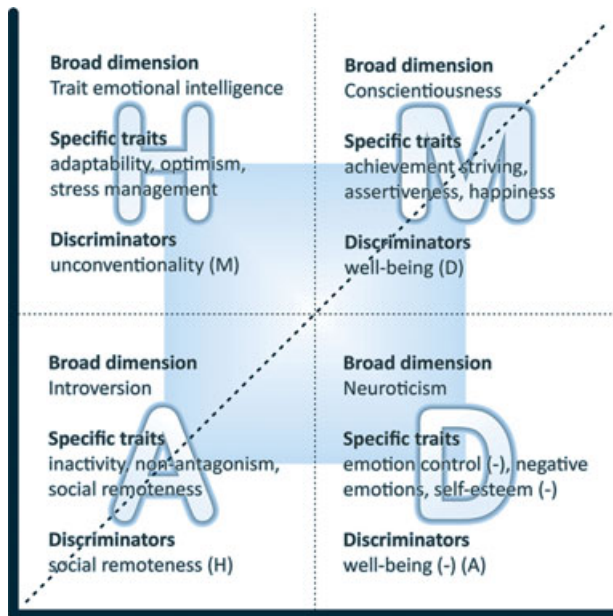


Fig. 1. The figure presents the four belimp quadrants (*Hubris*, *Motivation*, *Depression*, and *Apathy*), along with the personality dimensions and specific traits that may underpin them. Because dimensions and traits will often cut across quadrants, we present, for each quadrant, a discriminating trait that helps distinguish it from adjacent quadrants. Discriminating traits are different from the key traits underlying each quadrant and their function is to distinguish a quadrant from the adjacent quadrant specified in the parentheses. For example, well-being should specifically discriminate between the Motivation and Depression quadrants, but it should not be thought of as a key underlying characteristic of the former quadrant because other quadrants (in this case, *Hubris*) may be even more closely associated with well-being than it is. Also depicted are the axis of symmetry, which divides the figure into two parts, such that when one part is folded over along the axis it coincides with the other part (see diagonal line), as well as the inner and outer belimp plane regions (shaded and unshaded, respectively).

A belimp quadrant assumes focal status when it becomes the most theoretically relevant in a particular analysis. When the criterion concerns self-confidence (e.g., estimating one's IQ score) the focal quadrant is *Hubris*, when it concerns achievement (e.g., job performance) the focal quadrant is *Motivation*, when it concerns indifference (e.g., lack of interest in a laboratory task), the focal quadrant is *Apathy*, and when it concerns negative affect (e.g., somatic complaints), the focal quadrant is *Depression*.

Two different types of belimp plane can be identified: the *conditional* belimp plane, of which there are many, and the *master* belimp plane, of which there is only one. The former are planes specified in relation to a particular life domain and therefore conditional upon it. The latter is a hypothetical plane arising from averaging conditional planes over multiple life domains. An individual's position in the master belimp plane represents their *typical* belimp position.

Conditional belimp planes can be either *concordant* or *discordant* in relation to the master belimp plane and, more implicatively, in relation to a criterion. The degree of concordance between a conditional plane and the master plane is an empirical question (largely depending on the individual's value hierarchy), whereas the degree of concordance between a conditional plane and a particular criterion can be estimated conceptually.

#### Mapping personality dimensions onto belimp quadrants

Belimp quadrants cannot be mapped injectively onto broad-band-width personality dimensions because the latter often lack the necessary psychological coherence. In the quest for comprehensiveness, personality dimensions have been expanded voraciously to incorporate heterogeneous concepts (e.g., sociability, activity and impulsivity within *Extraversion*; depression, hostility and self-consciousness within *Neuroticism*). What is more, their strictly empirical construction (Block, 1995) probably rules out the discovery of explicit processes underpinning the entire spectra of these dimensions.

Since the mapping between belimp quadrants and personality dimensions is non-injective, no single dimension can be conceived of as the preserve of any one quadrant. This is important to remember, especially when taking the ANOVA approach to testing the theory (see the section "Strategies for testing belimp theory" below). We must avoid hypothesizing that scores on, say, conscientiousness-related variables will be significantly higher in the *Motivation* quadrant than in the other three quadrants, since aspects of conscientiousness may well be implicated in all four quadrants. Nevertheless, we would expect that, over a number of randomly drawn life domains, pooled scores in the *Motivation* quadrant will be at least numerically higher than in the other quadrants.

#### Dominant personality traits

Central in belimp theory is the hypothesis that a person's position in a conditional plane will be a function of their personality, the life domain under consideration, and other, undetermined, factors of probably minor influence. Averaging over multiple conditional planes will cause all effects to cancel out, except those of the dominant personality traits that are expected to act as determinants of the individual's typical position in the master plane (from which positions in conditional planes will deviate to various extents).

Due to the hypothesized role of personality traits in determining conditional plane positions, we predict that the classification of individuals into belimp quadrants, particularly their *outer regions* (see Fig. 1), will show statistically significant evidence of stability. The fact that both personality and life domains will affect positions in conditional planes means that the theory is able to allow for a simultaneous consideration of traits and contexts. A corollary of this advantage is *quadrant migration*, whereby someone is classified away from their typical quadrant as a part function of the life domain, with the effects of personality acting as stabilizers across classifications. For example, a person's typical position may be in the *Motivation* quadrant, where we would expect to find him in most conditional belimp planes. However, for a particular conditional plane (defined, for example, in relation to the life domain of family) that individual may be classified in the *Depression* quadrant. It is highly unlikely for someone to always be classified in the same quadrant irrespective of the underlying life domain defining the conditional plane. Belimp theory posits that the individual's typical position on the master belimp plane can be derived by averaging over a number of conditional planes (life domains).

In belimp theory, life domains must be relatively broad. Such stability as belimp classifications may exhibit will be the result of cross-contextual consistency in the effects of personality traits. Consequently, it is necessary that life domains be sufficiently general to allow mental aggregation over multiple narrow facets, each of which will be far less susceptible to the influence of personality than the domain as a whole.

#### *Strategies for testing belimp theory*

Three complementary statistical procedures can be used to test belimp theory. The first entails one-way ANOVAs, followed by post-hoc tests. This approach has advantages, including simplicity and comparatively lower sample size requirements. Four groups can be derived from a  $2 \times 2$  table combining high and low scores on the two coordinates of belief and importance. For an analysis of the whole belimp plane, the classification can be done based on mean or median splits (median values will often be higher due to likely negative skewness). For an analysis of the outer regions, a type of partile- or SD-based classification is possible. In practice, the process will vary across studies as a function of the distributions of the belimp coordinates (with complications potentially arising from leptokurtosis). Splits based on theoretical means should be avoided because they could be severely misaligned in relation to the empirical means. In due course, it may be desirable to develop standardized belimp instruments to aid the classification process.

The second procedure for testing belimp theory is moderated multiple regression (MMR) with belief, importance, and their multiplicative interaction as the regressors. This complements the ANOVA approach by shedding more light on how belimp positions relate to the dependent variables. It is not recommended as the sole testing approach due to its heavier demands on sample size.

The third approach to testing belimp theory is via latent variable modeling (LVM). This takes into account measurement error in the variables, although it requires still larger sample sizes than MMR. It cannot be handled by conventional LV models due to the non-linearity of the interaction terms and requires instead the use of numerical integration methods (Klein & Moosbrugger, 2000; Muthén & Asparouhov, 2003).

All three data analytic procedures can be applied to both whole plane and outer region data. Clearer results are expected in the latter case because outer regions ought to be less affected by quadrant migration. The three approaches vary in their focus and should be thought of as complementary (the main contrast being between the group differences approach of the ANOVA and the interaction approach of MMR and LVM). The order of the four groups in the ANOVA and the sign of the interaction terms in the other two approaches are of interest, irrespective of their statistical significance. The expectation is that the focal quadrant will emerge with the highest (or lowest) score and that the sign of the interaction will be in the hypothesized direction. Thus, the order of the group means in the ANOVA and the signs of the interaction terms in the MMR and LVM approaches carry empirical weight and can be interpreted over and above any statistically significant results.

#### STUDY 1

Having sketched out the basics of belimp theory in a necessarily succinct exposition, Study 1 proceeded to test them with reference to trait emotional intelligence (trait EI or trait emotional self-efficacy), positive and negative affect, and somatic complaints. Trait EI is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides, Pita & Kokkinaki, 2007). Positive affect (PA) concerns the subjective experience of pleasant mood states, while negative affect concerns the subjective experience of unpleasant mood states (Watson, 2000). Somatic complaints refer to the frequency of experiencing a range of common bodily symptoms (e.g., stomach ache; Jellesma, Rieffe & Meerum Terwogt, 2007).

Primarily due to sample size and space considerations, the ANOVA approach was chosen to analyze the present dataset. In line with belimp theory and, in particular, with the implications stemming from the master belimp plane (see Fig. 1) we advanced a total of seven specific hypotheses. With respect to the Hubris quadrant, we hypothesized that it will have the highest score on global trait EI (H1a) as well as on positive affect (H1b). With respect to the Motivation quadrant, we hypothesized that it will have the highest score on trait EI self-control (H2a). With respect to the Depression quadrant, we hypothesized that it will have the lowest score on global trait EI (H3a) and on negative affect (H3b), and will also experience the highest frequency of somatic complaints (H3c). Last, with respect to the Apathy quadrant, we hypothesized that it will have the lowest score on trait EI sociability (H4).

#### *Method*

*Participants.* A total of 365 individuals (142 females) with a mean age of 34.71 ( $SD = 11.96$ ) took part in the study. About 47% of them were single, 44% married or cohabiting, and 7% divorced or widowed (2% "other"). The sample was well educated with about 20% to high-school level, 63% to degree level, and 5.5% to postgraduate level (10% "other").

*Measures.* The following measures were used:

- (1) *Belimp instrument.* We assessed a single life domain only. There were five questions concerning the belief that certain financial goals can be attained ("I really believe I can be financially independent") and five matching questions concerning the importance placed on those goals ("It is important to me to be financially independent"). The alphas for the two scales were 0.82 and 0.87.
- (2) *Positive and Negative Affect Schedule (PANAS).* The 20-item PANAS (Watson, Clark & Tellegen, 1989) was used to measure individual differences in positive and negative affect. Participants were asked to indicate, on a five-point Likert scale, how they feel "right now". On this sample, the internal consistencies for positive and negative affect were 0.90 and 0.82, respectively.
- (3) *Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF).* The 30-item TEIQue-SF (Petrides, 2009; Petrides & Furnham, 2006) was used to measure trait EI. Although this form was designed to yield a global score only, it is possible to derive relatively reliable scores on the four trait EI factors based on the scoring key of the full form. On this sample, the alpha for the global score was 0.86.
- (4) *Somatic complaint list (SCL).* The 11-item SCL (Jellesma *et al.*, 2007) was used to record somatic complaints. It asks participants to rate on a three-point scale (1 = never, 2 = sometimes, 3 = often) the frequency

with which they experience certain bodily symptoms. The internal consistency on this sample was 0.79.

**Procedure.** Postgraduate students in psychology were asked to collect data from 4–6 people from widely different backgrounds as part of a course in psychometrics. Participants were informed that all questionnaires were to be completed anonymously and that they could withdraw at any time without giving a reason.

### Results

The four groups in Fig. 1 were derived by combining high and low scores on belief and importance using mean splits. Thus, 104 participants were classified into the Hubris quadrant, 54 into the Motivation quadrant, 64 into the Depression quadrant, and 143 into the Apathy quadrant.

In order to test the study hypotheses, seven one-way ANOVAs were performed, all of which reached statistical significance (see Table 1 for details). The Motivation quadrant had the highest score on global trait EI, which was not in line with H1a. Nevertheless, the Hubris quadrant still scored significantly higher than both the Apathy and the Depression quadrants. It also had the highest score on positive affect (significantly higher than both Apathy and Depression), which supports H1b.

The Motivation quadrant had the highest score on trait EI self-control (significantly higher than both Apathy and Depression), thus supporting H2. The Depression quadrant had the lowest score on global trait EI (significantly lower than both Hubris and Motivation), thus supporting H3a. It also had the highest score on negative affect (significantly higher than Motivation), thus supporting H3b as well as the highest frequency of somatic complaints (significantly higher than Hubris), thus supporting H3c. The final hypothesis (H4) was also confirmed, as the Apathy quadrant had the lowest score on trait EI sociability (significantly lower than Hubris).

### Discussion

The results were remarkably clear, with six out of seven hypotheses receiving full support and one receiving partial support. While it could be easily dismissed as an anomalous finding, it is actually informative to examine why the Motivation quadrant scored slightly higher on global trait EI than Hubris. This result underlines the difficulty of mapping injectively personality dimensions onto belimp quadrants, caused by the diverse nature of these dimensions. In the case of trait EI, the construct cuts across

Hubris and Motivation, with some facets (e.g., optimism and stress management) more closely associated with the former and other facets (e.g., achievement striving and assertiveness) more closely associated with the latter quadrant. A further complication arises from the fact that the Hubris quadrant may exaggerate its adaptation levels (hence its label). We predict that differentiation between these two quadrants will be maximized in measures of unconventionality and in performance-based criteria examined with reference to congruent life domains.

One limitation in the research design of Study 1 is that it comprised only a single belimp classification involving the life domain of financial security. The second study addresses this limitation by including classifications based on two different life domains.

### STUDY 2

Study 2 offers an independent test of belimp theory with reference to trait EI, this time using two different life domains (attractiveness and popularity). Not only will this allow us to re-test several of the hypotheses in Study 1 with different conditional planes, it will also give us the opportunity to test whether there is a statistically significant relationship between the two conditional planes, as predicted by belimp theory (see the section “Dominant personality traits” above). The first four experimental hypotheses in this study were tested twice (i.e., separately with the appearance and popularity planes). These were that the Hubris quadrant will have the highest score on global trait EI (H1), the Motivation quadrant will have the highest score on trait EI self-control (H2), the Depression quadrant will have the lowest score on global trait EI (H3), and the Apathy quadrant will have the lowest score on trait EI sociability (H4). In addition, we also hypothesized that there will be a statistically significant association between the classifications derived from the two conditional belimp planes (H5).

### Method

**Participants.** A total of 230 pupils (123 girls) from a secondary school in Cyprus participated in the study. The average age was 14.79 ( $SD = 0.99$ ). Pupils were from different cultural backgrounds, but all were generally fluent in Greek.

**Measures.** The following measures were used.

- (1) *Belimp instruments.* Two life domains were assessed. The first instrument comprised five questions concerning the belief that certain appearance-related goals can be attained (“I really believe I can be

Table 1. Descriptive statistics and one-way ANOVA results for Study 1

Variable	Hubris (h)		Motivation (m)		Depression (d)		Apathy (a)		F	df	Tukey post-hoc tests
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Global trait EI	5.24	0.64	5.28	0.54	4.78	0.71	4.86	0.59	14.28	3, 360	h> a, d; m> a, d
Trait EI Self-control	4.85	1.00	4.86	0.85	4.43	1.03	4.50	0.82	4.92	3, 360	h> a, d; m> d*
Trait EI Sociability	5.06	0.85	5.05	0.72	4.74	0.88	4.57	0.81	7.86	3, 360	h> a, d*
Positive affect	31.15	8.85	29.24	6.99	27.13	9.18	27.85	7.08	4.99	3, 360	h> a, d
Negative affect	13.95	4.92	12.35	3.08	14.93	4.95	14.50	5.43	3.23	3, 360	a, d> m
Somatic complaints	16.52	3.39	17.49	4.01	18.33	3.36	17.39	3.59	4.10	3, 359	d> h

Note: All statistical tests were significant at either  $p < 0.05$  or  $p < 0.01$ , except where marked with asterisks indicating significance at  $p < 0.05$ , one-tailed.

attractive”) and five matching questions concerning the importance placed on those goals (“It is important to me to be attractive”). The alphas for the two scales were, respectively, .85 and .87. The second instrument comprised five questions concerning the belief that certain popularity-related goals can be attained (“I really believe I can be popular”) and five matching questions concerning the importance placed on those goals (“It is important to me to be popular”). Both scales had a low alpha of .64.

(2) *Trait Emotional Intelligence Questionnaire-Adolescent Short Form* (TEIQue-ASF; Petrides, Sangareau, Furnham & Frederickson, 2006). We used the Greek adaptation of the TEIQue-ASF, which is a simplified version, in terms of wording and syntactic complexity, of the adult short form of the TEIQue. The ASF consists of 30 short statements designed to measure global trait EI in children aged 12–17 years, although it is possible to derive relatively reliable scores on the four trait EI factors based on the scoring key of the full form. Its completion time is about 10 minutes. On this sample, the internal consistency of the scale was 0.77.

*Procedure.* Questionnaires were administered by teachers in the classroom and the process took approximately 40 minutes. In those cases where pupils encountered unknown words, teachers provided appropriate oral explanations. Pupils were informed that they could withdraw at any time without giving a reason.

## Results

*Appearance plane.* The four groups in Fig. 1 were derived by combining high and low scores on belief and importance using mean splits. Thus, 24 pupils were classified into the Hubris quadrant, 108 into the Motivation quadrant, 22 into the Depression quadrant, and 76 into the Apathy quadrant.

In order to test the study hypotheses, four one-way ANOVAs were performed, all of which reached statistical significance (see Table 2a for details). The Hubris quadrant scored highest on global trait EI (significantly higher than all other groups), thus supporting H1. However, it also scored significantly higher than all other quadrants on trait EI self-control, which was not in line with H2. The Apathy quadrant had the lowest score on global trait EI, which was not in line with hypothesis H3. It also had the lowest score on trait EI sociability (significantly lower than the Hubris quadrant), thus supporting H4.

*Popularity plane.* The four groups in Fig. 1 were derived by combining high and low scores on belief and importance using mean

splits. Thus, 27 pupils were classified into the Hubris quadrant, 96 into the Motivation quadrant, 28 into the Depression quadrant, and 79 into the Apathy quadrant.

In order to re-test the study hypotheses with the popularity plane, another set of four one-way ANOVAs were performed, three of which reached statistical significance (see Table 2b for details). The Hubris quadrant scored highest on global trait EI and trait EI self-control (in both cases significantly higher than Apathy and Depression). This provided support for H1, but not H2. Nevertheless, the Motivation quadrant had the second highest score on trait EI self-control (significantly higher than Depression), which was in line with H2. The Depression quadrant scored lowest on global trait EI (significantly lower than both Hubris and Motivation), thus supporting H3. The Apathy quadrant scored lowest on trait EI sociability, thus supporting H4.

In order to test H5, namely, that there will be a statistically significant association between the classifications derived from the two conditional belimp planes, we conducted a chi-squared test. A strong and highly statistically significant association was found  $\chi^2_{(9)} = 113.74, p < 0.01$ , with the observed count exceeding the expected (under the null hypothesis) count along the diagonal in all four quadrants. Carmer's V was a high 0.406,  $p < 0.01$ . These results were fully in line with H5.

## Discussion

There were five hypotheses in this study, of which the first four could be tested twice: first with the appearance plane and second with the popularity plane. From a total of nine hypotheses, then, six were fully borne out by the data and three partially. In those cases where hypotheses were not confirmed, the focal quadrant was always second (instead of first) in the hypothesized order.

With respect to the stability of the classifications, the findings were in full agreement with the hypothesis, showing strong convergence between the two belimp plane classifications. From the perspective of belimp theory, this is an important finding that must, nevertheless, be replicated with different planes. An important limitation of this study concerned the low internal consistencies of the two popularity coordinates. A larger sample, with more participants classified in the Hubris and Depression quadrants would have also been helpful.

Table 2. Descriptive statistics and one-way ANOVA results for Study 2

Variable	Hubris (h)		Motivation (m)		Depression (d)		Apathy (a)		F	df	Tukey post-hoc tests
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
<b>a. Appearance plane</b>											
Global trait EI	5.29	0.71	4.93	0.65	4.65	0.70	4.63	0.69	7.15	3, 226	h> a, d, m*; m> a
Trait EI Self-control	5.15	0.89	4.45	0.86	4.29	0.93	4.13	1.06	7.46	3, 226	h> a, d, m
Trait EI Sociability	5.32	1.20	5.04	0.86	4.88	0.78	4.78	0.89	2.66	3, 226	h> a
<b>b. Popularity plane</b>											
Global trait EI	5.23	0.72	4.99	0.66	4.60	0.67	4.61	0.66	8.94	3, 226	h> a, d; m> a, d
Trait EI Self-control	4.76	1.18	4.56	0.93	4.02	0.79	4.22	0.96	4.51	3, 226	h> a*, d; m> d*
Trait EI Sociability	5.28	0.99	5.01	0.90	4.89	0.81	4.83	0.92	1.75ns	3, 226	–

Note: All statistical tests were significant at either  $p < 0.05$  or  $p < 0.01$ , except where marked with asterisks indicating significance at  $p < 0.05$ , one-tailed, or if otherwise indicated.

## GENERAL DISCUSSION

This paper introduced the basic principles of belief-importance theory, many of which it also tested empirically in two studies. Three different conditional belimp planes were used (financial security, appearance, and popularity) yielding consistent results and supporting the clear majority of hypotheses. While most hypotheses were corroborated, it is worth noting that there were virtually no significant differences between Hubris and Motivation or between Apathy and Depression. This is mainly due to the choice of criteria that were not specifically selected to elicit such differences. Other criteria or life domains will be better discriminators of these quadrants (see Petrides, 2010b). Nevertheless, these belimp quadrants will likely be the hardest to differentiate because, overall, self-belief is a particularly strong determinant of behavior (e.g., Bandura, 1997; Marsh, 1990). Consequently, groups with similar scores on the belief coordinate (Hubris and Motivation – Apathy and Depression) will be more difficult to distinguish than groups with similar scores on the importance coordinate (Hubris and Apathy – Motivation and Depression).

Belimp theory makes it possible to complement synonym-driven descriptions of the effects of personality traits on behavior with process-focused explanations. Via the hypothesis that they confer a propensity to perceive convergences or divergences between what people believe they can attain and what they value as important, belimp theory grants a functional role to personality traits. More generally, it offers the promise of at least some common ground between personality theories that focus on traits and those that focus on processes.

Although this issue was not specifically examined in this paper, belimp theory should yield significant efficiencies and perhaps also improvements in our ability to predict action (behavior) over existing personality inventories. We expect this, first, because the belimp mechanism is a more proximal determinant of behavior than personality and, second, because position on a concordant belimp plane will reflect both one's personality traits as well as their attitudes towards a context (life domain), thus carrying more information than either personality or context alone.

The predictive power of belimp theory in relation to a particular criterion will be progressively enhanced as life domains become more concordant, and maximized when the life domain matches the criterion (e.g., work as the life domain with job performance as the criterion). Personality is a distal determinant of behavior and the mechanisms through which it affects it are largely unknown. If such mechanisms were to be successfully isolated, they should prove significant mediators (Baron & Kenny, 1986) of personality traits. In fact, because concordant belimp planes are hypothesized as more proximal and partially contextualized determinants of behavior, there may be cases where they emerge as full mediators and perhaps even as incremental predictors.

Another advantage of belimp theory concerns the possibility of using it as a guide to developing behavior modification programs. Some view personality traits as deterministic due to their high temporal stabilities, particularly after 30 (Terraciano, McCrae & Costa, 2006), and the underwhelming efficacy of interventions designed to change them (Costa & McCrae, 1986). Interventions targeting the belimp mechanism could moderate the effects of personality traits without necessarily trying to change one's standing

on the traits themselves. Our incomplete understanding of the determinants of personality beyond general quantitative facts about gene-environment influences currently renders the second option elusive.

*Limitations and future research*

While the two studies in this paper provide considerable support for multiple aspects of belimp theory, it is important to highlight certain limitations in them, in addition to those mentioned in their respective discussion sections. In particular, more data are required on the stability of belimp classifications under different life domains, on the degree of quadrant differentiation under self-report and behavioral criteria, and also on the ability of the belimp coordinates to predict actual behavior. Additional variables, especially age, should also be systematically examined. Notwithstanding the internally consistent results of this article, whose two samples had very significant age differences (35 versus 15 years) the strength of the links between the belimp variables and the underlying personality dimensions may well be moderated by age. Overall, more work is required to refine and, probably, amend aspects of belimp theory, but it is important that this work be firmly rooted in empirical research. Should belimp theory, or a version thereof, survive rigorous empirical testing, we will have at our disposal a general mechanism for linking personality traits to affect, motivation and action.

This paper is dedicated to the memory of Raymond B. Cattell.

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