

For this discipline-based literature review, you will research peer-reviewed articles that were published within the last 10 years in the Ashford University Library on the following major perspectives of personality.

- Psychodynamic
- Behavioral
- Trait
- Learning/Social
- Humanistic

You will utilize your researched article to create your literature review. The review should be formatted with the headings and content designated below.

Introduction

Assess the types of personality measurements and research designs used in the peer-reviewed articles you researched. Briefly describe the main theoretical models represented within each of the perspectives of personality and explain the commonalities found across all five.

Discussion

Examine the major theoretical approaches, research methods, and assessment instruments used in the five perspectives of personality. Evaluate and describe the current research in these perspectives using a minimum of one peer-reviewed article for each of the five required perspectives. Present a detailed critique of each of the perspectives by evaluating the standardization, reliability and validity, and cultural considerations present in the most common personality assessments used within each. Support your opinions about each model by substantiating them with scholarly research. Be sure to include the following:

- The theoretical framework(s) for the selected models
- The major contributors to those fields
- The methods of inquiry and assessment usually associated with those models
- An overview of the characteristics, strengths, and weaknesses of the models

Conclusion

Provide a summary of your evaluation addressing the current use and relevance of these perspectives in explaining personality citing research as appropriate.

Writing the Discipline Based Literature Review

The paper:

- Must be seven to ten double-spaced pages in length and formatted according to APA style as outlined in the Ashford Writing Center.
- Must include a title page with the following:
 - Title of paper
 - Your name

- Course name and number
- Your instructor's name
- Date submitted
- Must begin with an introduction that describes and the main theoretical models represented within each of the perspectives of personality.
- Must address the topics of the paper with critical thought.
- Must end with a conclusion that summarizes your evaluation addressing the current use and relevance of these perspectives in explaining personality.
- Must use at least five peer-reviewed sources from the Ashford University Library.
- Must document all sources in APA style as outlined in the Ashford Writing Center.
- Must include a separate reference page that is formatted according to APA style as outlined in the Ashford Writing Center.

THE ROLE OF SELF-ACCEPTANCE IN AUTHORITARIAN PERSONALITY FORMATION

Reintroducing a Psychodynamic Perspective Into Authoritarianism Research

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The paper reintroduces psychodynamic considerations into the study of authoritarianism. It proposes that the experience of authoritarian socialization fosters a lack of self-acceptance, which is hypothesized to be a strong predictor of authoritarianism above and beyond the socialization experience itself. Four similarly sized subsamples of young adults with Turkish and Russian migration backgrounds, Western expatriates, and native Germans living in Germany, $N = 1318$ overall, were studied. Participants were asked to report the degree of authoritarianism experienced in their formative years in their family and their culture of upbringing as well as the degree of negativity of their life position as conceptualized in Transactional Analysis (TA), plus their current degree of authoritarianism. A structural equation model using a measure of low self- and other-acceptance as an additional predictor of authoritarianism is shown to explain more variance in authoritarianism than mere socialization circumstances in the Turkish and the ex-Soviet subsamples but—contrary to expectation—not in the Western samples.

Keywords: authoritarian personality, authoritarian parenting, authoritarian cultural background, negative existential position, Transactional Analysis

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Research under the title “Authoritarian Socialization Experience and Acculturation Dysfunction among Young Immigrants to Western Europe: The Role of a Negative Existential Position” was conducted by Lena Kornyeveva at Jacobs University Bremen, Germany, from 2006 to 2009 as her PhD project under the supervision of Klaus Boehnke. It was supported by the Open Society Institute and the Deutscher Akademischer Austauschdienst.

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Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) and other psychologists from their team were most influential in developing the Authoritarian Personality concept (Suedfeld, 2006). Interest in authoritarian personality features and their origins emerged, however, already before and during World War II, when millions of Germans were involved in atrocities committed by the fascists under Hitler's leadership. How could this happen?

According to Adorno et al.'s theory, the Authoritarian Personality is to be seen as a comprehensive set of individual characteristics: authoritarian submission, authoritarian aggression, conventionalism, antiintraception, superstition and stereotypy, preoccupation with power and toughness, destructiveness and cynicism, projectivity, and exaggerated concerns over sexuality. In brief, the authoritarian is predisposed to follow a strong leader, hold conventional values, and is prone to be prejudiced against essentially any outgroup, as long as that group does not lend itself to a leadership projection.

Prior to Adorno's research group, several other scientists contributed to the authoritarian personality theory. Fromm (1941) conceptualized the phenomenon of the Authoritarian Personality about a decade before the Adorno group. He offered a sociopsychological analysis and explanation for the societal trend to "escape from freedom," as it developed in Germany after World War I in light of the then economic crisis. Together with various colleagues from the Frankfurt School (Wiggershaus, 1995), Fromm conducted a study among industrial blue- and white-collar workers in Berlin, in search of empirical evidence for his ideas. Based on his findings, Fromm described "people with [a] conservative-authoritarian character" (p. 37), and noted "they had a strong emotional drive to submit to strong leaders whom they admired as symbols of power and toughness and had a strong urge to identify with these authorities in order to derive personal security and strength" (Baars & Scheepers, 1993, p. 345).

Adorno et al. and Fromm based their views of the authoritarian personality largely on Freud's psychoanalytic theory, which emphasizes early childhood experience as the basis of all personality development. In a Freudian psychoanalytic perspective, the authoritarian personality develops when aggressive-compulsive needs of children are suppressed excessively by obedience demands of the parents and "break out" by being projected onto other people, weaker groups, and minorities. The proverbial punitive, cold father figure as the decisive socialization agent is at the core of this reasoning (Hopf, 1993). Such a father figure is not only domineering over the child but—at least implicitly, often explicitly—signals unworthiness to the child, as any warmth is missing from the relationship. In his own self-evaluation the cold father is at the same time seeing himself as unworthy for leadership (authoritarian submission), as there always will be someone above him in the hierarchy to look up to. In this sense authoritarian fathers/parents serve as models of individuals who neither accept "the other" (their child) nor themselves as genuinely worthy.

The adherence to psychodynamic theorizing has typically been left aside in more recent work on authoritarianism. Altemeyer (1981) decidedly rejected the idea and linked his theorizing on right-wing authoritarianism (RWA) to Bandura's (1977) Social Learning Theory. Altemeyer proposed that authoritarian dispositions as a concept can be reduced to a three-component set of attitudes: authoritarian submission, authoritarian aggression, and conventionalism.

While Adorno et al.'s work has been of utmost fruitfulness in several domains of psychology, most prominently political psychology (Suedfeld, 2006), its psychodynamic roots have regularly been underemphasized if not ignored. Authoritarianism in our view degenerated to an attitude syndrome acquired through social learning; psychodynamic

features of familial and societal upbringing vanished from conceptual reasoning. The current paper proposes a reintegration of the psychodynamic roots into contemporary empirical research on the development of authoritarianism. It does so by drawing on suggestions made by Transactional Analysis (TA) theory (Berne, 1961, 1964). The TA advocates a fourfold schema of life positions or Existential Positions that can be characterized as a parsimonious psychodynamic theory of self-acceptance. The concept assumes that a Positive Existential Position (PEP) is developed when a child experiences a family climate of mutual acceptance of children and parents, allowing the child positive acceptance of both the self and 'the other,' a feeling of an equal importance, worthiness, and unconditional "goodness." PEP is contrasted by three types of a Negative Existential Position. The first is a position where the child is unable to accept him or herself, but accepts the other, typically his or her parents and implicitly experiences inferiority and/or powerlessness. In TA theory, this life position is said to be the most frequent one, because a child will initially always experience itself as weak (a thought also found in the writings of the German sociologist-philosopher Gehlen, 1988).

The second type of a Negative Existential Position is one where the child has come to accept him or herself, but has lost faith in the other, usually represented by his or her parents. Such an attitude is conceptually close to the Adlerian idea of compensation, because it has its origins in a subjectively perceived inferiority and an intention to overcome it, to become a "top dog" instead of a "bottom dog". The most problematic Negative Existential Position is one where a child is growing up in a socialization context that neither allows self-acceptance nor is the child endowed with trustworthy parents, so that not only the self but also the other is seen as rather unworthy, unimportant, or powerless. We subsequently focus on this most problematic life position, sometimes labeled NEP3. We suggest that of all three types of a negative existential position NEP3 best reflects the dialectics of authoritarian aggression and authoritarian submission in Adorno et al.'s original theorizing.

We propose that knowing about a person's life position will facilitate a better understanding of his or her degree of authoritarianism. Trivial models of authoritarian socialization assume a direct connection between (perceived) authoritarian parenting and the degree of authoritarianism among adults (Boehnke & Hadjar, 2004). Dwairy and Achoui (2010) add that perceived authoritarianism in the culture of upbringing also plays a decisive role in determining the degree of authoritarianism held by an individual. We, however, propose that the formation of authoritarianism among young adults is best understood when going beyond assuming an impact of perceived parental authoritarianism and experience with authoritarianism in one's culture of upbringing on individual authoritarianism. We assume that a Negative Existential Position of the kind that is accepting neither of the self nor of others serves as a potent additional predictor of adult authoritarianism. We expect it to even (partially) mediate the influence of perceived authoritarianism in the family and the culture of upbringing on the one side and degree of authoritarianism on the other side. We endeavor to test the supposition that socialization experiences determine a person's life position and that the degree of negativity of one's life position—the sense of low self-acceptance in combination with low other-acceptance—then becomes the best predictor of authoritarianism. This main hypothesis of our research is visualized in Figure 1.

Following Dwairy and Achoui's (2010) argument that the relationship between the degree of adult authoritarianism and perceived authoritarianism in parenting and in the culture of upbringing might vary between people who were brought up in an authoritarian culture as opposed to a nonauthoritarian culture, we set out to test our hypothesis in four

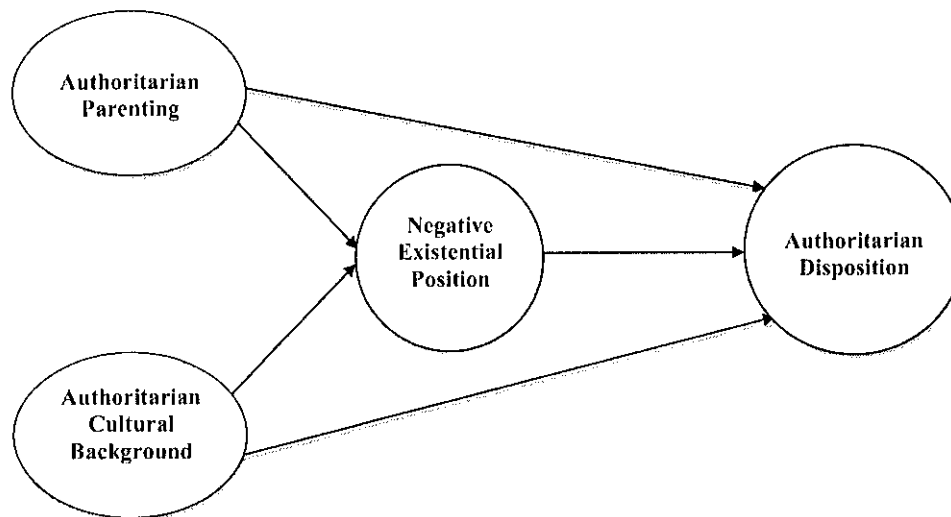


Figure 1. Roots of the authoritarian personality.

samples of young adults from cultural backgrounds that differ with regard to the prevailing level of authoritarianism.

Methods

Sample

For all four groups of residents of Germany included in the study, snowball sampling was the primary sampling strategy. The term “snowball sampling” refers to the fact that participants who had been solicited for voluntary participation in the study were requested to also forward information on the study to other members of their group, thereby allowing the snowball sample size to gain momentum. Two groups were studied, for whom an authoritarian socialization background can plausibly be assumed as being prevalent in the culture (Seipel, Rippl, & Lederer, 1995), namely (A) migrants from the former Soviet Union (93%) and the “real socialist bloc” (7%; $N = 239$) and (B) first-generation (73%) and second-generation (27%) Turkish immigrants ($N = 281$) to Germany. Furthermore, two groups for whom an authoritarian socialization background cannot plausibly be assumed as being prevalent in the culture were studied, namely (C) a group of migrants or sojourners from Western countries ($N = 304$), and (D) a group of native Germans ($N = 494$). The split between these two cultural backgrounds (Russia, Turkey vs. Germany, “the West”) is supported by empirical evidence from the World Values Survey, where Russia and Turkey are among the countries where authoritarian values like “One must always love and respect one’s parents regardless of their behavior” are cherished above average, and in Germany and other Western countries adherence to such values is below average (Inglehart & Welzel, 2005, p. 63).

Study participants born in East Germany were included in the native German sample, not the sample of the Soviet bloc. The reasoning for this is that almost 90% of the East Germans in the study have at most lived in German Democratic Republic up to the end of their preschool years. In the above cited value study, East Germany’s population is

shown to cherish values much more similar to those of West Germany than to those of Russia. The same finding also emerged from work undertaken with the Schwartz Value Survey (Schwartz, 2008, Figure 3), where Denmark and Austria emerged as East Germany's closest neighbors in overall value preferences, with all other formerly real socialist countries emerging in a distinctly different quadrant of the world map of value preferences. Further details on the composition of the sample are documented in Table 1.

The design of our research allows disentangling authoritarian parenting and an authoritarian socialization experience in the broader cultural context not only through self-report measures, but also by virtue of the cross-culturally comparative approach we take. Standardized questionnaires were used in all subsamples. Turkish, Russian, English, and German versions of the questionnaire were provided. The appropriateness of all language versions was checked by using the translation-backtranslation method (Brislin, 1970). Data were collected via online surveying as well as in face-to-face contacts. Non-German participants (except for the German Turks included in Subsample B) were socialized in their home countries and came to Germany not younger than at 15 years of age.

Instruments

Authoritarian Parenting

In order to enable an assessment of the degree of (perceived) authoritarian parenting, participants had to fill in a five-item instrument adapted from work by Stone, Lederer, and Christie (1993). The items read, "My parents believe that a child should have strict discipline in order to develop a fine strong character," "I was brought up under strict discipline," "My family believes that a teenager should be allowed to decide most things for him or herself" (reversed), "It usually helps the child in later years if it is forced to conform to its parents' ideas," and "A child should have strict discipline in order to develop a fine strong character." The items had to be answered on a five-point Likert scale ranging from 1 = *totally disagree* to 5 = *totally agree*. The consistency of the scale was $\alpha = .72$. Item scores were added to obtain scale scores.

Authoritarian Cultural Background

The prevalence of an authoritarian cultural background was measured by means of items on subjectively perceived "authoritarianism" of the wider cultural context of socialization. In essence this measure can be seen as an operationalization of perceptions of the social character prevailing in a society, as laid out in theories of Fromm (1942). There were four items in total, reading "In my home country's culture it is customary to think 'to be afraid of someone means to respect him,'" "In teacher-student conflicts parents always sided with the teachers, when I was young," "In my teenage years it was important to be 'tough' among me and my peers," and "In my school time teachers were never contradicted and criticized." The items were developed and pretested by the authors. Items had the same Likert-type response format as the items on authoritarian parenting. The consistency of the scale was $\alpha = .44$, and thereby rather low, though still satisfactory for very short scales (Nunnally & Bernstein, 1994). Item scores were also added to obtain scale scores.

Authoritarian Disposition

An authoritarian disposition was measured by a bipolar eight-item Authoritarian Personality scale. This subscale is based on Lederer's (1982) New General Authoritarianism

Table I
Sample Characteristics

Variable	Grand sample	Subsample A: Ex-Soviet and Soviet Bloc countries	Subsample B: Turkey	Subsample C: Western countries	Subsample D: Germany
N	1,318	239	281	304	494
Percent female	52.3	67.7	41.3	55.9	48.8
Mean age	25.10	25.6	25.6	25.8	24.1
Major Ethnic/Citizenship Subgroups in the Respective Sample	Germans (37.5%) Turks (20.7%) US—Americans (12.5%) Russians (9.2%)	Russians (54.3%) Ukrainians (19.3%) Kazakhs (11.2%) Byelorussians (4.9%)	Turks (70.5%) German Turks (26.7%) Turkish Kurds (2.8%)	US—Americans (54.3%) British (12.2%) Canadians (8.6%) French (6.6%)	West Germans (69.2%) East Germans (30.8%)

Scale, and Altemeyer's (2002) dogmatism measure. The items read "Disobedience to the authorities is sometimes justified" (-)¹, "Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else" (-), "Our society needs free thinkers who have the courage to defy traditional ways, even if this upsets many people" (-), "We should be grateful for leaders who tell us exactly what to do and how to do it," "The 'old-fashioned ways' and the 'old-fashioned values' still show the best way to live," "Among the most important qualities that a person can have is disciplined obedience and respect for superiors," "Flexibility is a real virtue in thinking, since you may well be wrong" (-), and "It is the duty of a citizen to criticize or censure his or her government whenever he or she considers it to be wrong" (-). The items also had to be answered on a five-point Likert scale ranging from 1 = *totally disagree* to 5 = *totally agree*. The consistency of the scale was $\alpha = .71$. Once again, item scores were added to obtain scale scores.

Self-Acceptance

The Negative Existential Position (NEP3) of neither accepting the self nor the other was assessed through two items each from Kälín's multidimensional questionnaire of individuality "*Das Egogramm*" (originally in Kälín & Müri, 2000). The two items assessing the lack of self-acceptance read, "It seems like I pity myself more than others do," and "I am not very self-confident." The two items measuring the lack of other-acceptance read, "If I am giving somebody an inch, he or she will usually take a yard," and "I think most people see themselves in too positive a light." It is important to note that in NEP3 assessment we did not work with classically constructed scales by averaging or summing item scores. Here we worked with a latent measurement model in which two correlated items of self-acceptance and two correlated items of other-acceptance form one latent construct. This is important, because only through this way of modeling the Negative Existential Position can we capture a unique feature of the construct, namely that it encompasses an aspect of the self-concept, namely self-acceptance, and—inevitably intertwined with it—a perception of the other. The selection only of items that measure NEP3 (and not all NEPs) is based on the conceptual consideration that that negative existential position best reflects the dialectics of submission and aggression encompassed in the authoritarianism concept. The selection of the specific items included in our analyses is rooted in extensive pretesting prior to the commencement of the main study reported here.

Results

In the results section we will first offer descriptive data for all instruments used in the present study. Using structural equation modeling for grand sample data, we will then test the model depicted in Figure 1 and will contrast it with a model that omits the psychodynamic component of a Negative Existential Position (as is common in contemporary authoritarianism research). Through this we aspire to show that additional variance can be explained by introducing a psychodynamic component into the prediction of adult authoritarianism. Third, we will test our prediction model in a multisample comparison across the four studied groups and will highlight group differences.

¹ Items marked (-) were reversed for scale score calculation.

Mean scores on the variables of the research model as well as standard deviations are documented in Table 2.

Table 2 shows that for all variables under scrutiny participants with an Ex-Soviet and most prominently those with a Turkish migration background exhibited higher scores than participants from Western countries or from Germany. Oneway analyses of variance show that group differences are significant at $p < .001$ in all instances.

In a second step we tested the prediction model as portrayed in Figure 1 and contrasted it with a model that only includes the two socialization variables but not NEP3 as predictors of an authoritarian disposition. The hypothesized model (Figure 2a) had a good fit according to commonly accepted thresholds (Byrne, 2010). We only report Bentler's (1990) comparative fit index (CFI) which is at .977, and the root mean square error of approximation, RMSEA, which is at .050. The simpler model presented in Figure 2b is, of course, a saturated model, that is, a model that assumes all possible interrelations of variables to indeed exist. For such models the presentation of goodness of fit indices is obsolete, because fit is per definition "perfect." The contrast of Figure 2a and 2b show that NEP3 is a strong predictor of an authoritarian disposition ($\beta = .26$) alongside authoritarian parenting ($\beta = .28$) and an authoritarian cultural background ($\beta = .11$). NEP3 itself has both authoritarian parenting ($\beta = .31$) and authoritarian cultural background ($\beta = .47$) as significant predictors. Beta coefficients reported are standardized regression coefficients that can take values between -1 and $+1$. NEP3 increases the amount of variance explained in the authoritarian disposition by three percent (26% vs. 29%), and most importantly it partially mediates the effect of authoritarian parenting and of the authoritarian cultural background. The drop in direct impact of authoritarian parenting on the authoritarian disposition—from $\beta = .36$ to $\beta = .28$ —is marginally significant at $p < .10$, the drop in the direct impact of the authoritarian cultural background on authoritarian disposition—from $\beta = .23$ to $\beta = .11$ —is significant at $p < .01$. Splitting the sample into men and women and performing separate analyses for them yields essentially the same results; only item loadings for the item LSA2 and its intercorrelation with the item LSA1 differed between men and women, not the substantive relationships.

In order to test the cross-cultural validity of the hypothesized model, we finally performed a multigroup test of the model for the four groups of study participants. Fit coefficients for the multigroup test once again suggest a very good fit (CFI = .977, RMSEA = .017). Results pertaining to the interrelations of the variables under scrutiny

Table 2
Means and Standard Deviations

Variable	Grand sample	Subsample A: Ex-Soviet countries	Subsample B: Turkey	Subsample C: Western countries	Subsample D: Germany
Perceived Authoritarian Parenting	12.46 (3.83)	13.38 (3.90)	13.78 (3.77)	12.94 (3.79)	10.97 (3.35)
Authoritarian Cultural Background	10.54 (2.80)	11.82 (2.81)	13.32 (3.02)	9.47 (2.56)	9.58 (1.93)
Low Self-Acceptance 1	2.28 (1.06)	2.44 (.97)	2.52 (1.25)	2.29 (1.02)	2.07 (.97)
Low Self-Acceptance 2	2.24 (1.12)	2.55 (1.17)	2.33 (1.34)	2.19 (1.00)	2.07 (.98)
Low Other-Acceptance 1	2.88 (1.02)	3.28 (1.15)	3.29 (1.13)	2.72 (.85)	2.54 (.82)
Low Other-Acceptance 2	3.15 (1.05)	3.36 (.97)	3.69 (1.16)	2.72 (.99)	3.01 (.90)
Authoritarian Disposition	17.21 (4.62)	18.90 (4.37)	19.65 (5.17)	15.36 (3.90)	16.13 (3.90)

Note. Coefficients in parentheses are standard deviations.

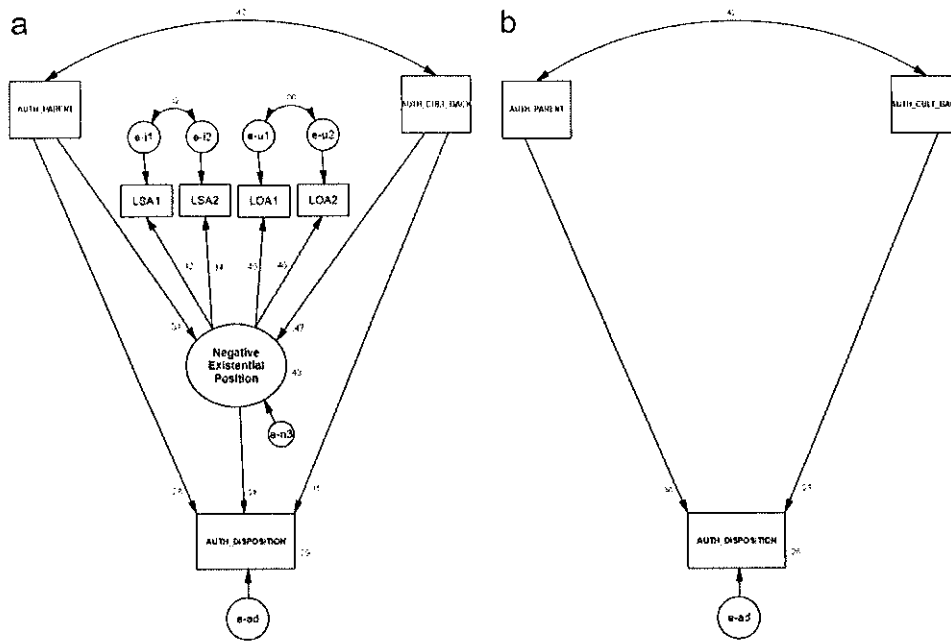


Figure 2. (a) Test of hypothesized model. (b) Test of model without NEP.

in the simple model and the hypothesized model across the four groups are documented in Table 3.

The information documented in Table 3 makes clear that the fact that our hypothesized model can be corroborated in the grand sample is owed almost exclusively to the two groups of participants who have migrated to Germany from an authoritarian culture, most pronouncedly to Turkish migrants. Although a Negative Existential Position is predicted to a substantial degree by authoritarian socialization experiences in all four groups, it only impacts the authoritarian disposition significantly among the two groups of migrants from authoritarian cultures. The predictive power of authoritarian parenting and an authoritarian cultural background on the authoritarian disposition consistently drops when NEP3 is included in the model, but reduction effects are minute for Westerners and Germans. There is a noticeable increase in variance explained in authoritarian disposition when NEP3 is included in the model (21% vs. 26% for the Ex-Soviets, 24% vs. 29% for the Turks) only for participants with an “authoritarian migration background.” Our hypothesis of a negative existential position being a mediator in the socialization of authoritarianism is confirmed only in the subsamples from authoritarian cultural backgrounds.

Discussion

The present research was designed to offer empirical evidence for the supposition that a psychodynamic prediction logic should no longer be ignored by contemporary studies on the development of authoritarianism.

The godfathers of authoritarianism research, among them Theodor W. Adorno and Erich Fromm, relied heavily on Freudian psychoanalytic reasoning when it came to explaining the disastrous consequences of authoritarianism in the first half of the 20th

Table 3
Prediction of an Authoritarian Disposition in Four Cultural Groups

Sample	Model	Authoritarian parenting → NEP		Authoritarian cultural background → NEP		Authoritarian parenting → Authoritarian disposition		Authoritarian cultural background → Authoritarian disposition		NEP → Authoritarian disposition	Explained variance in authoritarian disposition
		Authoritarian parenting → NEP	Authoritarian cultural background → NEP	Authoritarian cultural background → NEP	Authoritarian parenting → Authoritarian disposition	Authoritarian cultural background → Authoritarian disposition	Authoritarian parenting → Authoritarian disposition				
Ex-Soviets	Simple					.38***	.13***				21%
	Hypothesized	.28*	.44***		.34***		.08*		.18*		26%
Turks	Simple					.43***	.12***				24%
	Hypothesized	.55***	.25***		.28***		.08*		.26***		29%
Westerners	Simple					.40***	.13***				20%
	Hypothesized	.19*	.28***		.37***		.08*		.07 ^{n.s.}		18%
Germans	Simple					.37***	.10***				17%
	Hypothesized	.33***	.25***		.34***		.07*		.07 ^{n.s.}		16%

* $p \leq .10$. ** $p \leq .05$. *** $p \leq .001$. ^{n.s.} $p \geq .10$.

century. Psychodynamic elements have, however, largely been purged from recent theories of authoritarianism. Although an influential recent volume on authoritarianism bears the title, *The Authoritarian Dynamic* (Stenner, 2005), the author refrains from extensively discussing psychodynamic reasoning when explaining the formation of authoritarianism. The same can be said about important earlier work by Feldman and Stenner (1997) and Feldman (2003) who focus on perceived threat and conformity pressure as important predictors of authoritarianism. Perceived threat and a tendency to see external pressures as threatening are seen in the here referenced Transactional Analysis as a consequence of a negative existential position. NEP—and most strongly NEP3, which encompasses low self- and low other-acceptance—is a deeply engrained personality feature, developed during the preverbal stage of individual development. Someone who has instead been engrained with PEP, a positive existential position of high self- and -other acceptance, is more likely prone to feel able to cope with threats, be they real or symbolic.

One has to go back several decades to come across work in mainstream psychology that offers explicit links to a psychodynamic perspective on explaining the formation of an authoritarian personality: Marcia (1967) relates authoritarianism to “ego identity status,” and shows that individuals who are in an ego identity status that he labels *foreclosure* have above-average scores in authoritarianism.² Individuals in the foreclosure ego identity status have not experienced developmental crises during adolescence but have usually succumbed to demands of parents in their development to adulthood.

Authoritarianism has, of course, been a topic discussed among psychoanalysts and other psychodynamically oriented psychologists and social scientists (English, 1996; Jacobs, 1996; Lavine, Lodge, & Freitas, 2005; Rothman, 1984; Waelder, 1951; Wilke, 1977). Their work, however, is mostly conceptual and if it offers empirical data it often—though with exceptions (Farris, 1960)—relies on case studies if not anecdotic evidence. The “marriage” of psychodynamic reasoning with mainstream methodology is extremely rare; it is an approach we advocate.

The core psychodynamic assumption of the present study originates from Transactional Analysis, which distinguishes four life positions or Existential Positions. TA assumes that children, who have neither developed self-acceptance nor acceptance of the other, based on having lived in an autocratic, possibly abusive family environment have acquired a certain Negative Existential Position (NEP3) that forces them on a trajectory of aggression and violence. We referred to this thought, when assuming that holding a Negative Existential Position would predict authoritarianism above and beyond the repressive socialization context itself.

It should be noted that NEP3 must be seen as a psychodynamic concept in its own right. The relationship of self-acceptance and authoritarianism has been studied early on by Zuckerman and Oltean (1959). Items like the ones used here to measure low self-acceptance are regularly found in studies relating self-esteem and authoritarianism. Porter (2008) as well as Mirels and Dean (2006) have studied the relationship between cynicism and authoritarianism. The items we used to measure low acceptance of “the other” would fit well into cynicism scales and are indeed found in an almost identical wording in the social axioms scales by Leung and Bond (2004), who see cynicism as a negative attitude toward others and a general distrust of the integrity or professed motives of people. NEP3, however, is modeled here as a latent construct encompassing *both* low self-acceptance and

² Here “mainstream psychology” is operationally defined as psychological research published in journals listed in the PsychARTICLES collection.

cynical low acceptance of others. Only the combination of the two is hypothesized to promote authoritarianism in its own right, reflecting the dialectics of aggression and submission entailed in the authoritarianism concept. What, however, are our findings? We first should underscore that our data offer highly plausible evidence on the socialization of authoritarianism: Perceived authoritarian parenting, reporting an authoritarian cultural background of upbringing, a Negative Existential Position, and an authoritarian disposition are much stronger among young adults with a Turkish or Russian migration background than among Westerners and native Germans.

The hypothesis that a Negative Existential Position can serve as a predictor of the Authoritarian Personality was confirmed in general terms for the grand sample, but in the four subsamples the same finding only emerged clearly in the subsamples of young adults with a Turkish or a Russian migration background. NEP3 predicted an authoritarian disposition to almost the same extent as did perceived authoritarian parenting and it mediated the impact of an upbringing in an authoritarian cultural context in the grand sample of young adult residents of Germany. NEP3, though, served as a powerful predictor of authoritarianism only among young adults brought up in an authoritarian culture, not those who grew up in a nonauthoritarian culture.

From a psychodynamic perspective we interpret this as supporting a threshold model: Across diverse cultures perceived parental and perceived cultural autocracy does “breed” a Negative Existential Position, but only in high-authoritarianism cultures does such a life position, a syndrome of low self- and other-acceptance, also lead to individual authoritarianism. This may be seen as evidence for the interpretation that a Negative Existential Position only impacts individuals from cultures where an authoritarian social character in the sense of Fromm (1942) prevails.

The current study on authoritarianism presumably was the first study using TA reasoning in developing the models to be tested. Thus, limitations are inevitable.

A first, prominent criticism can be brought forward against the instruments used in the present study. All measures lacked reliability to some degree, though probably not face validity. Future research is in dire need to use psychometrically more sound measures of all authoritarianism variables (parenting, cultural background, disposition), but most urgently so of NEP3. We must also point to the fact that our measure of an authoritarian disposition did not encompass items assessing ethnocentrism, although in the original work by Adorno et al. (1950) ethnocentrism figured as a prominent ingredient of the authoritarian personality. An inclusion of such items might have lead to different results with regard to the predictability of authoritarianism on the grounds of NEP3 in the four different cultural contexts.

Also, one should note that all data are correlational and stem from a one-shot study, although one with an ethnically and culturally diverse sample. What is needed is a study that has a longitudinal design, at least one that has a prospective component: Does childhood experience—measured in childhood—lead to personality features as assessed in adulthood? Whether that is indeed the case is a difficult question to study. Recent research does, however, show that it can be done. A study has been conducted in which the researchers attempted to estimate using structural equation models whether English children who had been separated from their families during World War II, children like the ones Anna Freud worked with (Freud & Burlingham, 1943a, 1943b), were more authoritarian than children who had not been separated from their families. The answer is that *grosso modo* girls are, whereas boys are not (Rusby, 2010). Also that study has shortcomings, because only the fact whether children were separated from their parents or not was assessed over 50 years ago, but all other information was obtained retrospectively.

To a certain degree it can, however, serve as a paradigmatic research endeavor in that it incorporates a process into its research design, something that could not be done here.

Before we come to a final statement about the thrust of our study, we should certainly acknowledge that psychoanalytic thinking does not form a monolithic epistemological and/or conceptual bloc. When we advocate the reinclusion of psychodynamic thinking into authoritarianism research, we do so only by presenting evidence that one psychoanalytic concept, namely that of a negative existential position, is worthy to be included. Our plea should not be misunderstood as ruling out the inclusion of other psychodynamic concepts. Our empirical finding is, in our eyes, serving as an example, not as proof for the sole or ultimate validity of a particular psychodynamic approach. The role that self-deception (see, e.g., Paulhus, 2007; Triandis, 2009) can play in predicting (low) self-reported authoritarianism was left out of this paper and would need prominent future attention in psychodynamically inspired authoritarianism research.

All in all, we believe that our study was able to offer evidence that excluding psychodynamic reasoning from authoritarianism research no longer “pays”. We also believe that our study showed that authoritarianism in authoritarian cultures—though not in nonauthoritarian cultures—“refeeds” authoritarianism through fostering a Negative Existential Position (in TA terminology) by instilling a worldview of little self-acceptance and high cynicism in individuals who grow up under such circumstances.

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Behavioral Perspectives on Personality and Self

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Abstract In many accounts of personality, the positions of behavioral writers are rarely presented in depth and it assumed that behavioral writers have neglected the topic of personality. In reality, since the very beginnings of behaviorism, behavioral theorists have devoted considerable attention to the topic of personality, and a term Skinner equated with personality, the self. This paper summarizes some of the major assumptions of traditional personality theory and theory of self, and then summarizes the positions of various behavioral theorists such as John Watson, B. F. Skinner, Arthur Staats, and others on personality and self. Behavioral theorists have not neglected these topics, and behavioral accounts of these topics present a more parsimonious view. Personality and the self are behavior in need of explanation, in contrast to the belief that personality and the self function to explain as well as cause behavior.

Keywords Personality theory · Traits · Self · Behaviorism · B. F. Skinner

What is Personality or the Self in Behavioral Terms?

In much of contemporary psychology, a great deal of attention is paid to the study of personality, with a great many “theories of personality” (McCrae and Costa 1996). In contrast, fewer behavioral writers have developed theories specifically on this topic since this subject is not granted status as being separate and distinct from behavior in general (Watson 1919; Skinner 1953, 1974). Nevertheless, behavioral writers have addressed personality and other typically non-behavioral terms from a

behavioral perspective, for instance, see Watson (1919), Skinner (1945, 1953), and Hayes (1984). This paper will attempt to compare and contrast traditional positions on personality and a related term, self, with behavioral perspectives on these concepts. The question of why these topics are important to contemporary behavior analysts is a legitimate one. Why should behavior analysts know about personality and self? Watson thought personality was worthy of an entire chapter on the theme of personality and disturbances thereof (Watson 1919); Skinner did not give the term personality as much direct attention, although one chapter in *Science and Human Behavior* analyzes the topic of traits. Skinner repeatedly addressed the concept of self (Skinner 1953, 1974), which he equated with personality. Skinner authored chapters on the subject of self in *Science and Human Behavior* (Skinner 1953), *About Behaviorism* (Skinner 1974), and in one of his last works *Recent Issues in the Analysis of Behavior* (Skinner 1989). Skinner attempted to address arguments that behavior analysis has neglected the study the topic of self: “It is often said that a science of behavior studies the human organism but neglects the person or self” (Skinner 1974, p. 184), and that introduction led to Skinner elucidating one of his discussions of the self. While it is true that the term personality is rarely used in the majority of contemporary behavior analytic literature (Vyse 2004), there are detailed discussions of these topics in the writings of Watson, Skinner, and other relevant theorists.

Traditional Views of Personality

In 1937, Gordon Allport catalogued some 50 definitions of personality (Allport 1937); despite the earlier work by other writers cited by Allport, the popular concept of personality as commonly described is the result of Allport, who has been termed the “inventor” of the concept of personality as

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popularly described in terms of traits (Nicholson 2003). Little has changed since Allport's initial writings except there are now more definitions and theories of personality; McCrae and Costa (1996) lamented that researchers had generated "dozens of mini-theories" (p. 53) and that questions regarding the number of basic dimensions of personality were still disputed and debated. Personality theories are grouped into either the nomothetic or the idiographic approach. The former represents an attempt to identify general characteristics or laws seen in individuals in general but on which individuals vary in quantifiable ways (Allport 1937). The idiographic approach attempts to identify or describe those aspects that make a person unique, and idiographic methodology is more likely to be qualitative than quantitative (Allport 1937). Regardless of the general approach, most such theories refer to internal or intrapsychic variables that in vaguely defined ways cause a person's behavior, but do not refer to personality as being behavior (Mischel 1968; Hayes et al. 1995; Pronko 1988). While one writer concluded that personality is a term "so resistant to definition and so broad in usage that no coherent simple statement about it can be made" (Reiber 1985, p. 533), other writers have attempted to define personality. Some typical definitions are "that which permits a prediction of what a person will do in a given situation" (Cattell 1950, p. 2) or "the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought" (Allport 1961, p. 28). Mischel (1968), who presented a behavioral view of personality, said that personality "is an abstraction or hypothetical construction from or about behavior, whereas behavior consists of observable events. Statements that deal with personality describe the inferred, hypothesized, mediating, internal states, structure, and organization of individuals" (p. 4). Pervin (1975) defined personality as "...those structural and dynamic properties of an individual or individuals as they reflect themselves in characteristic responses to situations" (p. 2).

Traits and States

Personality theories of the traditional view represent structural accounts of behavior (Sturmeijer et al. 2007), with the structures of personality being a collection of "traits" and/or "states." Personality traits have been defined in a number of ways, and different theorists equivocate on their causal status; one definition is "a collection of reactions or responses bound by some kind of unity which permits the responses to be gathered under one term" (Cattell 1946, p. 61) or as a "neuropsychic structure" (Allport 1961, p. 347). Allport (1966) also offered that "A trait has more than nominal existence...and is dynamic, or at least determinative, in behavior" (p. 1). McCrae and Costa (1996, 2003) defined traits in a number of ways. McCrae and Costa (1996) stated that "Sophisticated

personality theorists have never claimed that traits determine behavior independent of situational context, but they do claim a prominent role for forces within a person as part of the explanation of behavior" (p. 58). McCrae and Costa (2003) asserted that "We can define traits as dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings and actions" (p. 25). These writers then elaborated to add, "...traits often lead people to develop entirely new behaviors" (p. 28). McCrae and Costa (2003) offered another definition of traits with "Traits are endogenous basic tendencies that give rise to consistent patterns of thoughts, feelings, and actions" (p. 204-205). Revelle (2007) defined a trait as the average measures or the rate of change of a person's affect, behaviors, cognitions, and/or desires. Another definition of a trait would be as differences between individuals in terms of inclinations, styles, or tendencies to perform different modes or manners of behavior (Hamaker et al. 2007). Currently, the most widely cited view of trait theory is the "five-factor model," the FFM, with personality being adequately described with five traits: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (McCrae and Costa (1996, 2003). These authors have argued that the FFM has ended the competition between rival trait theories (McCrae and Costa 2003), and furthermore, these five traits show considerable stability over time. In a 1982 paper, these researchers asserted that the personality of an individual at age 30 years is strong predictor of the individual's personality at age 80 years (McCrae and Costa 1982). McCrae and Costa (2003) concluded that research was arriving at a consensus of predominant stability in these traits throughout adulthood.

Behavioral theorists do not infer internal structures in an attempt to account for behavior, but look instead to the past or present environment to explain behavior (Skinner 1953, 1974). Skinner (1953) devoted a chapter to an analysis of traits; to Skinner, not surprisingly, traits are not causes of behavior. Traits are a means by which aspects of an individual's behavioral repertoire can be categorized, if done correctly. Skinner concluded that traits which could be traced to behavioral inventories, to the relative strengths of different response classes in the repertoire, and to the rapidity with which behavioral processes occurred constituted acceptable scientific analyses (Skinner 1953). A functional analysis of how many ways we could expect an individual to differ from others or from himself from one time to another would give behavioral equivalents of traits, but, Skinner argued, most of the researchers in traits at his time of writing quantified their data in much different ways. The tendency to describe individuals as having relative excesses or deficits in terms of trait adjectives did not advance any science of behavior and did not lead to anything, but descriptions and classifications. The prevailing tendency of listing descriptive adjectives for this or that individual never pointed to any variables for changing the

behavior being described. “We do not change behavior by manipulating a trait” (Skinner 1953, p. 203). Mischel (1968) saw traits as hypothetical constructs; traits were described as “...categories of the observer who perceives and describes behavior and not necessarily properties of the observed behavior itself” (p. 68). A recent behavior analytic definition of a trait was as a preexisting or predisposing individual difference with relative degrees of stability, such as sex, intellectual strengths or deficits, or psychiatric conditions, that can also affect behavior (Odum and Baumann 2010).

Another way of examining traits was proposed by Vyse (2004), with his arguments that the traditional view of this subject and behavioral views might have some commonalities. Consider that McCrae and Costa (2003) defined traits as “...dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions” (p. 25) and “The consistent patterns that indicate traits must be seen over time as well as across situations” (p. 28). Behavioral theorists would likely re-define McCrae and Costa’s terms as being response classes and repertoires displaying behavioral momentum (Nevin 1992); that is to say, under the right circumstances, behavior will show stability over time and context (Vyse 2004). Molar behavior theory as proposed by Baum (2002, 2005) and Rachlin’s teleological behavioral theory (Rachlin 1992, 1994, 2007) propose that units of behavior are not discrete responses but instead are activities that are extended over time (Baum 2002, 2005) and these activities can only be seen as being meaningful over extended timeframes (Rachlin 1994). These views of behavior as being a prolonged activity are relevant to this discussion of traits. Molar behaviorism and teleological behaviorism’s view of extended patterns of behavior show a considerable degree of generalization with how theorists like McCrae and Costa (2003) discuss the consistent patterns of thoughts, feelings, and actions indicative of traits. Where traditional and behavioral theorists would disagree is upon the locus of the stabilizing variables. Behavioral theorists would point to the behavioral stability and consistency as being due to multiple sources of environmental control, all contributing to the stable behavior, whereas personality theories would infer that the sources of the stability are essential characteristics of the person themselves (Vyse 2004).

Lastly, the component of personality referred to as a state is given considerably less attention and is not a cause of behavior. Cattell (1957) is typically credited as drawing a distinction between states and traits. States are recurrent, transient measures; Cattell (1957) defined a state as “a level in a pattern of reactive characteristics (the latter not being present in the given form and level all the time) which reappears from time to time” (p. 633). Hamaker et al. (2007) discussed states as being instances of intraindividual variability; to these researchers, states are relatively rapid and reversible changes in personality measures. States may be correlated with the exogenous

environment, such as the social and physical situation, or the internal environment, such as physiological, emotional, and cognitive processes taking place within the individual (Hamaker et al. 2007). Revelle (2007) defined a state as the transient measures of variables such as affect, desires, and cognitions at any given time. Lastly, from a behavior analytic perspective, a state is not a structural component of a personality but instead as an environmental manipulation or operation that can affect behavior over a short time horizon (Odum and Baumann 2010).

Much of psychology argues that personality and its components are an independent variable, a literal cause of behavior (Cattell 1950; Staats 1993a, b). Cattell’s definition of personality points to this concept being a predictor of behavior; prediction points to correlation, which may or may not be an instance of causation. Other definitions of personality indicate a stronger argument for personality causing behavior (Allport 1961; McCrae and Costa 1995). Behavior, in contrast, is studied only for what it reveals about non-observable, inferred constructs, said to be inside the person (Skinner 1953). The presence of any such non-observable structures is only inferred from behavior, never observed independent of behavior (Baum 2005), yet these structures are then used to explain the same behavior (Skinner 1974). If behavior changes, structural accounts conjecture that the underlying structures or variables were changed and the changes in the inferred structure explain the observed behavior change (Skinner 1974; Sturmeijer et al. 2007).

To conclude that a hypothetical construct (such as personality) exists independent of behavior as well as arguing that the construct is a cause of behavior is an instance of committing the fallacy of reification (Mill 1843/1874). That is to say, traditional personality theorists have turned personality into a thing, a noun. Scientific theory attempts to establish correlations between words, concepts, and empirical observations. In cases where reification is occurring, the relation between the concept and the empirical observation is assumed to exist (Blackburn 1994). Besides being a likely reification, personality seems to be viewed and emphasized disproportionately by many theorists. The weight given to biological factors relative to environmental variables have waxed and waned over the decades of studying human behavior (Eibl-Eibesfeldt 1989; Kuo 1967; Moore 2002, 2009a, b; Pinker 2002; Watson 1919; Wilson and Herrnstein 1985). Personality, on the other hand, has been emphasized as a cause of behavior to the point that theorists proposed a field of personology, a systematic, comprehensive, idiographic approach to the study of the individual, separate and distinct from psychology (Holt 1962; Murray 1938). Why is there such an emphasis on personality? In 1953, Skinner pointed out the common tendency for theorists to look for inner causes of behavior such as personality. If one observes another individual with the tendency to be obsessed or preoccupied with observing themselves in

the mirror, an adjective is assigned to such behavior, “narcissistic”; the adjective then becomes a noun, “narcissism.” The noun is reified into an entity or a thing, a personality or a trait that is argued to be the cause of the initial behavior in question (Skinner 1953). Many psychologists, at a loss to identify an antecedent event to correlate with a person’s behavior, turn the search to the person’s interior, and if that search is not productive, they invent one and name it something like “will power” or “extraversion” (Rachlin 2007).

Based on the assumed inner causation, with personality as a cause of behavior, any therapeutic interventions must be directed at the personality or other structure as cause (Sturney et al. 2007), not directed at behavior as effect. One reasonable conclusion is that since the plethora of theories of personality draw inferences as to the cause of behavior, any therapies need to be customized to fit the inferred structures. Such theories are the basis for many of the classic psychotherapies such as the psychoanalytic, psychodynamic, object relations, and humanistic therapies. Personality theory is not a mere academic or theoretical interest, personality theories are the basis for clinical training programs with orientations other than that of the cognitive behavioral or behavioral paradigm. The different versions of personality theory and the resultant psychotherapies provide justification for each other (Alexander 1948; Rogers 1959; Mahler 1976).

Psychology and the Self

Since they are not a common basis for psychotherapies, psychological theories of the self are less prominent, yet they too refer to differing versions and numbers of reified entities. The self has been defined as “a social and cognitive construction” (Harter 2007, p. 506). Theory about the self can be traced to William James (1890, 1892) with his distinction between the I-self which was an actor-agent, a subject, a knower, and the Me-Self, as an object, something that was known. Contemporary theorists argue that each of these types of self is argued to consist of still other components; the I-Self was composed of “self-awareness,” and “self-agency,” amongst others, and the Me-Self consisted of a “material me,” a “social me,” and a “spiritual me” (Harter 2007). Harter goes on to say, “The distinction between the I-Self and the Me-Self has proved amazingly viable and is a recurrent theme in many theoretical treatments of the self” (Harter 2007, p. 508). Other theorists have added still more elaborations to the self, with the concepts of an “individual self,” a “relational self,” as well as a “collective self” (Sedikides and Brewer 2001). Theories of self as these are also structural accounts of behavior as indicated by the statement such as, “We assume that these three self-representations coexist within the same individual” (Sedikides and Brewer 2001, p. 2). Accounts of the self such as these bear resemblance to the terminology

devoted to “dissociative identity disorder” that are inferred from the behaviors of individuals who are assigned this diagnostic label (APA 1994, 2000, 2013). For instance, James argued that the multiplicity of selves may not speak with the same voice and that there could be harmonious relations between the selves or discordance and schisms (James 1890). A century later, Sedikides and Brewer (2001) stated, “There is considerably less agreement, however, about the nature of the interrelations among the three self-representations. Are the individual, the relational, and the collective self, close partners, bitter opponents or indifferent acquaintances?” (p. 2).

Behavioral Perspectives on Personality

As long as some psychologists have argued for the stance known as behaviorism, behaviorists have had starkly different views in comparison to traditional theories on how to characterize personality. In contrast to traditional psychology’s theories of personality, fewer behavioral theorists have written extensively about the behaviors of personality (Mischel 1968; Phelps 2000; Skinner 1953, 1974, Staats 1993a, b, 1996, 2003; Vyse 2004). Nevertheless, detailed behavioral discussions of the topic exist. Watson and Skinner both devoted chapters and analyses in major works to the topic of personality or self, as did other writers (Skinner 1953, 1974, 1989; Watson 1919). From a behavioral perspective, because personality is behavior, other writings are pertinent without specifically addressing personality or granting privileged status to personality. If one accepts that, from a behavioral perspective, personality is behavior, behavioral theory subsumes personality theory. Thus, personality is not a neglected topic in behavioral writings; it is a dependent variable, behavior to be explained itself rather than seen as a cause of behavior (Skinner 1974). For instance, Watson (1919) stated the following:

we use the term personality or character as a convenient way of expressing the fact that we are looking at the individual not from the standpoint of how well or how poorly any particular emotion, instinct or group of habits may function, but from that of how the organism as a whole works or may work under changed conditions. (p. 392).

Watson followed this definition with an extensive discussion of what he termed a “behavioristic and commonsense conception of personality” (Watson 1919, p. 396) and how the sampling of various behaviors (activity levels, as well as social, manual, laryngeal, and visceral habits and response tendencies) could be conducted. Watson described the study of personality as being akin to an ethogram, i.e., a behavioral inventory of the learned/acquired and species-typical

behaviors of a human (Immelmann and Beer 1989) with individual differences in acquired behaviors, and not surprisingly, concluded that the study of personality belongs in the laboratory.

In a behavior analytic account, Skinner (1953) made the point that personality and/or the self is said to be responsible for features of behavior and seen this way, had to be addressed as an explanatory fiction. Instead of a cause of behavior, personality was behavior (Skinner 1953); personalities represent “topographical subdivisions of behavior”, and a personality was “tied to a particular type of occasion—when a system of responses is organized around a given discriminative stimulus” (p. 285). Skinner proposed that the behaviors we call personality would be different as a function of deprivation of food or after satiation. During emotional behaviors, the behavior of personality will be seen to be different, and an individual’s personality repertoire will be different under the influence of drugs. Some 20 years later, Skinner (1974) echoed his prior position: “a self or personality is at best a repertoire of behavior imparted by an organized set of contingencies” (p. 149). In another instance, Skinner argued that “Complex contingencies of reinforcement create complex repertoires, and, as we have seen, different contingencies create different persons within the same skin, of which so called multiple personalities are only an extreme manifestation” (Skinner 1974, p. 185).

Other Behavioral Views on Personality

Behavioral theorists from other perspectives also see personality as behavior. Interbehavioral theorists have defined personality, as Kantor (1924) wrote, “we cannot consider personality to be anything more than the individual’s particular series of reaction systems to specific stimuli” (p. 75). In comparable terms, Pronko (1980) defined personality as “the total series of a given individual’s interactions with the relevant stimulus objects” (p. 201). In addition, the paradigmatic or psychological behaviorism of Arthur Staats has given the topic of personality extensive attention. Staats (1993a, b) discussed personality as “The individual’s original learning experiences, up to the present life situation, are considered to produce his or her personality...personality is composed of specifiable, learned behaviors” (p. 10). Staats critiqued traditional personality theory as being “mixed-up” by including Skinner’s analysis of behavior. Staats further asserted that Skinner rejected and never addressed the concept of personality and that radical behaviorists tend to ignore personality by following Skinner (Staats 2003).

Staats has attempted to dismiss Skinner’s relevance on a number of occasions (1993a, b, 1996, 2003) and argued for the superiority of his position: a personality is composed of three basic behavioral repertoires (BBRs), which are an

emotional-motivational repertoire, a language-cognitive repertoire, and a sensorimotor repertoire, with each representing an extensive class of learned behaviors (Staats 2003). Staats’ emotional-motivational repertoire can be characterized as a response class composed of both unconditioned and conditioned behaviors; Staats elaborated on these as being specific yet transient emotional responses that are a function of the appearance or removal of a stimulus. In addition, various affect-eliciting events can elicit a series of interrelated emotional responses that persist over time or what he termed an “emotional state.” Lastly, an individual can acquire emotional responses to classes of stimuli that are functionally related as in a person who experiences positively or negatively valenced emotional responses to religious, political, or nationalistic images or words. This latter response class characterized an emotional-motivational trait (Staats 2003). Staats makes the argument that any human will acquire an exceedingly intricate emotional-motivational repertoire that is a significant component of personality.

Staats’ concept of a language-cognitive repertoire can be summarized as the individual’s learned behaviors to use words to label verbally events and behaviors, to use words and rules to respond to and be controlled by events, and by which the individual could control oneself. Staats makes the point that one’s “self-concept” is composed of words learned to label the individual’s own functional stimuli arising from an individual’s own behaviors. Staats (2003) concluded that “the self-concept, (composed of learned words) is an important aspect of personality because the individual reasons, plans and decides depending on those words...” (p. 148).

Lastly, Staats’ discussed the concept of the sensorimotor repertoire as an aspect of personality. Staats argues that sensorimotor repertoires function as acquired personality traits, either in part or completely. To be a physically aggressive person necessitates having sensorimotor behaviors composing such behaving. Being described as a “dependent person” likely indicates some behavioral deficits in terms in terms of repertoires such as physical assertiveness, resource procurement, or responding to tasks with significant complexity or response effort. An individual who has acquired sensorimotor abilities and skills revered in a given group is likely to be described as being confident or possibly arrogant. Such an individual would have resultant differences in their emotional-motivational and language-cognitive repertoires due to this social recognition, illustrating that the different repertoires interact with each other (Staats 2003). Staats concludes that personality is behavior, and it is not a cause of other behavior. One’s personality is a product of experience and learning, if one accepts his concept of basic behavioral repertoires as being analogous to response classes. This, however, is not the only way to characterize Staats’ position. For one contrarian view, Plaud (1995) critiqued the psychological behaviorism of Staats. Plaud concluded that Staats had mischaracterized the

empirical data supporting the efficacy of behavior analysis and had caricatured its breadth and depth, and that the concepts of BBRs were unnecessary, intervening variables. In a number of his writings, Staats (1993a, b, 2003) asserted that the behavior of an individual, his or her personality, was a function of various organismic and situational variables with the BBRs mediating the organismic with the environmental factors, an approach that is Hullian and laden with intervening variables (Plaud 1995).

Behavioral Perspectives on Self

A behavior analytic perspective on the self asserts that a self is an abstraction derived from relations amongst different repertoires and response classes of the individual: “a device for representing a functionally unified system of responses” (Skinner 1953, p. 285). Skinner (1953) posed the question, “What is meant by the self in self-control or self-knowledge? When a man jams his hands into his pockets to keep himself from biting his nails, *who* is controlling *whom*?” (p. 283). Skinner answered his own query: one class of responses was being used to control another. For Skinner, the typical view of the self is an explanatory fiction, a hypothetical cause of action by the individual:

So long as external variables go unnoticed or are ignored, their function is assigned to an originating agent within the organism. If we cannot show what is responsible for a man’s behavior, we say that he himself is responsible for it (Skinner 1953, p. 283).

Skinner discussed how to exert or demonstrate self-control in a number of ways, none of which included the self as originating agent. Skinner (1953, 1989) discussed the ways in which a person could be said to have self-control, self-knowledge and be said to have different selves. Skinner (1989) devoted a chapter to the topic and the environmental contingencies responsible for different usages of this term. Skinner asked, “Under what verbal contingencies of reinforcement... do we observe our self and report what we are doing? An organism seldom behaves effectively without responding to its own body” (p. 29). The self of self-observation is the result of different contingencies including modeling, since to behave as a model one has to engage in behavior that can easily be imitated. Vocalizations under operant control make it easier to tell others what to do as well as show them, leading an individual to have higher probabilities to see and talk about what they themselves were doing. Some psychotherapies exert more explicit contingencies for self-observation as when individuals are asked to become aware of how many punitive or anxiety-provoking statements a person may utter to themselves in a given day (Skinner 1989).

Skinner (1989) also discussed the self as used in self-esteem or the confident self, which results from behavior being given positive reinforcement from others and resultant bodily feelings occurring to the individual receiving the reinforcement. The confident self has had frequent positive reinforcement for behaviors performed easily and seemingly effortlessly. The responsible self is the outcome of a culture exerting control with aversive consequences such as punishments for unwanted behavior and escape-avoidance contingencies to strengthen desired behavior. To “be responsible,” members of the community are reinforced for behavior such that the culture does not have to exert frequent aversive control. The self that is a rational self refers to our ability to generate rules to control and explain our behavior to others and ourselves as in rule-governed behavior (Skinner 1969, 1989).

In another noteworthy behavior analytic discussion of self, Keller and Schoenfeld (1950) proposed that the self consisted of relations amongst different behaviors of an individual and observations of one’s behaviors. These writers described the self as “a word that is meant to designate the ability to speak of (be ‘aware’ of) one’s own behavior, or the ability to use one’s own behavior as the S^D for further behavior, verbal or otherwise” (p. 369). “The ‘Self,’ in short, is the person, his body and behavior and characteristic interactions with the environment, taken as the discriminative objects of his own verbal behavior” (p. 369). “The ‘Self’ arises out of discrimination training and out of verbal behavior” (p. 369). Keller and Schoenfeld asserted that two things could be deduced from the fact that the self is the result of discrimination training and its effects on verbal behavior. First, that “a child starts out in life without a ‘Self,’ and must build one up through... a continuous learning process” (p. 369), and secondly, “a person possessing no verbal behavior of any sort would not have a ‘Self’...” (p. 370).

A logical next step in a review such as this could be to reference the literature of relational frame theory (RFT) and its discussion of the self might seem like a natural progression. It is true that RFT has a detailed analysis of the self and its different types, and the proponents of RFT purport their position to be an extension of Skinner’s analysis of verbal behavior (Barnes-Holmes et al. 2001; Skinner 1957; Törneke 2010). This proposition, however, is disputed (Moore 2009b); even its supporters admit that RFT has generated “...considerable controversy and debate” (Dymond et al. 2010, p. 97). This citation analysis by Dymond et al. (2010) pointed out that most of the literature regarding RFT was of a nonempirical-theoretical nature. Until RFT does establish itself firmly with additional empirical studies, it will likely remain controversial and including it in a review of behavioral literature would be a matter of debate. As a result, the RFT analysis of the self is not included in this review.

To summarize the behavioral view of self, this term is used to describe the individual's ability to fact his or her own behavior, body, and internal states (Keller and Schoenfeld 1950). Skinner argues that the self is the outcome of reinforcement contingencies, enforced by others for us to observe and report on our behavior. We can learn to be more acute in our observations of our behaviors and states by specifically arranged contingencies to gain self-knowledge. We feel specific emotional states due to environmental contingencies; we arrange other contingencies amongst our different behaviors to control our self and to be self-responsible (Skinner 1953, 1989). Behavioral perspectives on self do not view this concept as any sort of reified entity, as do many other theorists of the self (Harter 2007). To behavioral theorists, the self is a learned ability to make observations about one's body, internal states, and behaviors or to refer to relations amongst one's different behavioral repertoires (Keller and Schoenfeld 1950; Skinner 1953, 1974, 1989). The self is merely a means to describe "... a functionally unified system of responses" (Skinner 1953, p. 285) and controlling contingencies.

The behavioral views of personality can be summarized as follows: Behavioral theorists interpret personality as being learned behavior, with some contributions from the history of the species (Skinner 1953, 1974; Staats 2003; Watson 1919). Behavioral theorists do not conclude that personality is composed of inferred structures, although Staats does admit intervening variables into his unique conceptualization (Staats 2003), and behavioral theorists do not conclude that personality is a cause of other behavior (Skinner 1953, 1974; Staats 2003; Watson 1919). If, however, the traits that are argued to compose personality are merely a means of describing stable, consistent behavior over extended timeframes, the views of theorists such as McCrae and Costa (2003) are not wholly incompatible with molar behavior theory as well as teleological behavior theory (Baum 2002, 2005; Rachlin 1992; Vyse 2004).

Evaluating the Different Perspectives

This review summarized traditional views of personality and the positions of behavioral writers on this and the related topic, the self. Behavioral views are as different here from traditional psychology as in many accounts of human behavior. How does one attempt to evaluate or compare such different positions? In 1942, Gordon Allport made arguments regarding how to evaluate differing theoretical positions to explain and understand individuals. Any theoretical account should have the criteria of (1) completeness; the account should conform with as many facts about an individual as possible. A theoretical account should have (2) economy or parsimony; it should be made with as few assumptions as possible. (3) The theoretical account must have consistency throughout its various

principles. (4) Any theoretical account must have predictive power; predictions must be possible, and the account must be testable, and compatible with other scientific findings (Allport 1942). A point-by-point evaluation of traditional personality and self theories relative to behavioral perspectives on these topics would constitute another review itself but a brief attempt to apply Allport's arguments is possible here.

Applying Allport's criteria, the behavioral positions clearly have fewer assumptions, meeting one of Allport's criteria. It can be argued that behavioral positions are complete and consistent (Skinner 1974); however, the critics of behaviorism have disputed this assertion (Stich 1988). Behavioral theory on personality and self are variations on typical behavior theory, Skinner (1988) stated the claims of behavior analysis based on laboratory findings were testable and falsifiable, meeting another criteria of Allport. Skinner (1988) argued that the laboratory data of behavior analysis led to concepts and principles which were useful for interpreting behavior outside the laboratory. Behavior analytic and other behavior views of personality and self are best put in Skinner's latter category, principles extrapolated from laboratory data that are useful for understanding behavior. Behavior analytic and related viewpoints can be regarded as a empirical or theoretical body of knowledge with broad scope, that is increasingly cumulative and growing, and with a more parsimonious perspective on more aspects of human behavior, including personality and the self, than are widely known.

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Trait

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The Healthy Personality From a Basic Trait Perspective

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The Healthy Personality From a Basic Trait Perspective

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What basic personality traits characterize the psychologically healthy individual? The purpose of this article was to address this question by generating an expert-consensus model of the healthy person in the context of the 30 facets (and 5 domains) of the Revised NEO Personality Inventory (Costa & McCrae, 1992) system of traits. In a first set of studies, we found that the healthy personality can be described, with a high level of agreement, in terms of the 30 facets of the NEO-PI-R. High levels of openness to feelings, positive emotions, and straightforwardness, together with low levels on facets of neuroticism, were particularly indicative of healthy personality functioning. The expert-generated healthy personality profile was negatively correlated with profiles of pathological personality functioning and positively correlated with normative personality functioning. In a second set of studies, we matched the NEO-PI-R profiles of over 3,000 individuals from 7 different samples with the expert-generated healthy prototype to yield a *healthy personality index*. This index was characterized by good retest reliability and cross-rater agreement, high rank-order stability, and substantial heritability. Individuals with high scores on the healthy personality index were psychologically well-adjusted, had high self-esteem, good self-regulatory skills, an optimistic outlook on the world, and a clear and stable self-view. These individuals were low in aggression and meanness, unlikely to exploit others, and were relatively immune to stress and self-sufficient. We discuss the results in the light of their implications for both research and theory on healthy personality functioning.

Keywords: health, personality, Big Five, traits, virtues

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What basic personality traits characterize the psychologically healthy individual? Although contemporary researchers have used basic trait models such as the five-factor model/Big Five domains to characterize personality disorders (e.g., Lynam & Widiger, 2001), little attention has been paid to the characterization of healthy personality from a basic trait perspective. This gap exists despite considerable interest in describing healthy persons in the history of personality psychology and extensive validation of Big

Five traits for characterizing normal-range and maladaptive aspects of personality functioning. This article fills this gap by generating an expert-consensus model of the healthy person in the context of the five domains and 30 facets of the Revised NEO Personality Inventory (Costa & McCrae, 1992) system of traits. We describe the results of several studies designed to develop and provide initial validity evidence for an expert-consensus personality profile of the psychologically healthy person. Specifically, we

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determine how well lay people and experts in positive psychology agreed with trait experts regarding the healthy personality, identify correlations with pathological personality profiles, examine the heritability and psychometric characteristics of the healthy personality, and determine how much the healthy personality profile overlaps with a normative personality profile.

Historical Accounts of the Healthy Personality

Scholars have been interested in characterizing a healthy personality prototype since the beginning of the scientific study of personality. The father of modern personality trait theory, Gordon Allport (1955), distinguished the "mature person" based on their intentional pursuit of long-term goals. He argued that healthy people (a) extend aspects of themselves into other activities, people, or ideas; (b) relate warmly to others; (c) are self-accepting and emotionally secure; (d) are realistic in their perceptions of the world and other people; (e) show responsibility through industrious work; (f) possess self-insight; and (g) approach life with directedness and unified identity.

Psychoanalytic authors have also articulated the characteristics of healthy individuals. Erik Erikson (1950) famously claimed that Sigmund Freud described the healthy person as someone who can "love and work" (Elms, 2001). Erich Fromm (1955) argued that the central challenge of being human was overcoming the human inevitabilities of loneliness and insignificance through union with nature, other people, and the diverse aspects of the self. Individuals who meet this challenge are able to satisfy basic needs for (a) relatedness to others, (b) creative transcendence over ennui and lethargy, (c) rootedness in some personally meaningful aspect of society, (d) a secure and stable sense of identity, and (e) reasonable as opposed to superstitious inferences about the environment. For Erich Fromm (1955), healthy people are productive, happy, and self-directed.

Conceptualizing optimal functioning was a central preoccupation of humanistic personality theorists. Abraham Maslow (1970) famously hypothesized that individuals self-actualize only when their basic physical and psychological needs are met. Unlike the vast majority of people who live in states of becoming in which they focus on reducing internal tensions related to unmet basic needs, "self-actualizers" live in states of being focused on increasing tension by pursuing new challenges. Abraham Maslow (1970) described self-actualizing people as accepting, spontaneous, focused on the outside world, autonomous, socially interested, moral, funny, creative, immune to social pressure, and prone to peak experiences in which there is a mystical and blissful connection with the world. Carl Rogers (1961) asserted that healthy functioning is the natural outcome of removing barriers to health. "Fully functioning" people, he argued, are characterized by an (a) uninhibited openness to experience and (b) creative spontaneity; (c) they live in the here and now, (d) have faith in their internal experience, and (e) choose behaviors that accord with their inner standards. Viktor Frankl (1962), who survived two Nazi concentration camps, emphasized the pursuit of meaning in life as a distinguishing indicator of healthy personality functioning. He argued that people whose lives have meaning can endure difficult situations because life is worth living. Meaning is obtained by pursuing goals and interests that lie outside of one's own personal interest. In his scheme, healthy persons are (a) free to choose their

own course of action, (b) responsible for the choices they make, (c) focused on pursuing personally meaningful goals, (d) in conscious control of their behavior, (e) creative, (f) attentive to concerns beyond self-preservation, (g) future-oriented, and (h) capable of giving and receiving love.

As should be evident, significant points of divergence exist among these classic theorists. Whereas psychoanalytic theorists were mostly interested in the balance of conflicts between society and self or between different aspects of the self, humanistic theorists were more concerned with intrapsychic processes of individuation that culminate, under ideal developmental conditions, in human uniqueness and fulfillment. Yet, three similarities stand out. First, each of these otherwise competing visions of human personalities defined healthy functioning in terms of a specific personality prototype. Second, each of these perspectives interpreted the healthy prototype as a profile of certain personality characteristics. Third, across theories, the identified prototypes generally included the preponderance of positive as opposed to negative emotions, interpersonal warmth and connection, rationality and self-awareness, personal responsibility and achievement, and creative openness.

A limitation of these early accounts of healthy personality functioning is that many of them were not operationalized and systematically tested (Gable & Haidt, 2005). Despite some efforts to assess healthy personality functioning (e.g., Block, 1961; Cartwright & Mori, 1988; McLain, 1970; Siegman, Block, Block, & von der Lippe, 1970; Wagner & Morse, 1975; Westen & Shedler, 1999), as of yet, existing measures have not contributed to a coherent and systematic body of knowledge about the nature of the healthy personality. The dearth of integrative models and the lack of consensus about the most appropriate tools to assess the healthy personality led to moratorium on empirical research on this topic. This situation has changed, however, with the emergence of positive psychology and its focus on human virtues and character strengths over the last few decades.

Positive Psychology

Positive psychology, whose origins lie in the humanistic movement of the 1950s, focuses on three domains of human strength and flourishing: positive subjective experience, positive character traits, and positive institutions (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000). A distinctive feature of positive psychology is its focus on character strengths and virtues as key aspects of healthy personality functioning. As a step toward measuring and studying character strengths, Peterson and Seligman (2004) developed the values in action (VIA) taxonomy. This classification includes 24 character strengths organized under six universal virtue domains: (a) wisdom and knowledge (creativity, curiosity, judgment, love of learning, perspective); (b) courage (bravery, honesty, perseverance, zest); (c) humanity (kindness, love, social intelligence); (d) justice (fairness, leadership, teamwork); (e) temperance (forgiveness, modesty, prudence, self-regulation); and (f) transcendence (appreciation of beauty, gratitude, hope, humor, religiousness). According to Park, Peterson, and Seligman (2004), these strengths are "positive traits reflected in thoughts, feelings, and behaviors" (p. 603) which can be measured via self- and peer report questionnaires, such as the VIA inventory of strengths (VIA-IS).

Strong associations exist between VIA character strengths and well-being, moral competence, and personality functioning (e.g., Bleidorn & Denissen, 2015; Brdar & Kashdan, 2010; Nofhle, Schnitker, & Robins, 2011). However, the proposed VIA hierarchical structure of six broad virtue domains subsuming 24 narrower character traits has failed to replicate (e.g., Macdonald, Bore, & Munro, 2008; Nofhle et al., 2011; Peterson & Seligman, 2004) and questions have been raised about the distinctions between the VIA virtues and basic traits of systems like the Big Five (e.g., Nofhle et al., 2011). On the other hand, proponents of the VIA model of character strengths have critiqued basic personality models for being too descriptive, overly broad, and negligent of positive characteristics to be useful to capture healthy personality functioning (Peterson & Seligman, 2004).

Counter to this pessimistic perspective on the utility of basic trait models, we take the position that existing personality trait models are a viable avenue for describing the healthy personality. Contemporary trait models capture both normative and extreme patterns of thoughts, feelings, and behaviors and they have proven to be surprisingly comprehensive in the sense that multidimensional trait models seemingly capture most of the important variation in human personality (John, Naumann, & Soto, 2008). Thus, we think it is likely that the existing trait models will provide a useful starting point for characterizing a healthy personality prototype. Indeed, the healthy personality could be characterized as a profile of trait levels optimally suited for psychological adjustment (Cattell, 1973). A further advantage of drawing on existing trait models is that they provide a common language for describing both pathological and optimal expressions of personality functioning.

Trait Psychology

The last several decades have witnessed a resurgence of the trait construct (see, e.g., Funder, 1991; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007) and the tools used to assess global traits (e.g., Gucza & Goldberg, 2007). Trait psychology can be traced back to the early work of Allport and Odbert (1936), who argued that the trait-descriptive terms in the English language provided a window to the universe of personality content. Decades of research motivated by this insight and interested in finding a common structure for the myriad ways that people differ from one another has suggested that personality traits are hierarchically organized with five broad domains or factors: neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A), and conscientiousness (C; Digman, 1990; McCrae & Costa, 2003). These five trait dimensions reflect one particularly useful level of abstraction and are widely known as the Big Five or domains of the five-factor model (FFM;¹ Goldberg, 1993; McCrae & John, 1992). Each of these five broad domains subsume sets of narrower traits referred to as facets, which in turn have been theorized to be composed of even narrower traits, or nuances (Mõttus, Kandler, Bleidorn, Riemann, & McCrae, 2017).

Although the Big Five were designed to include largely neutral content that is descriptive of a person's normal personality traits, it also includes content related to healthy personality functioning. Some Big Five traits have clear links to concepts that previous theorists have used to describe the healthy person. An individual who is even-tempered (low N), sociable (high E), curious and

reflective (high O), cooperative and warm (high A), and responsible and goal-oriented (high C) offers an intuitive profile of the psychologically healthy person. There is also a large body of research showing that FFM traits predict positive life outcomes such as health (Goodwin & Friedman, 2006), self-esteem (Robins, Tracy, Trzesniewski, Potter, & Gosling, 2001), academic performance (Nofhle & Robins, 2007), marital quality (Donnellan, Conger, & Bryant, 2004), and work performance (Barrick & Mount, 1991; see Ozer & Benet-Martinez, 2006 and Roberts et al., 2007, for a general review) in ways that are consistent with this intuitive profile (e.g., low N is related to high self-esteem and high C is related to academic achievement and success in the workplace).

Despite this large body of evidence, there have been few systematic efforts to characterize the healthy personality from a basic FFM perspective (Seligman & Csikszentmihalyi, 2000). In one study, VIA scales were correlated with different patterns of Big Five traits and high scores across VIA scales were associated with low N and high E, O, A, and C (Macdonald et al., 2008). McGrath, Hall-Simmonds, and Goldberg (2017) found substantial redundancy between VIA scales and measures of normal range traits with respect to their prediction of criterion variables. Overall, this work suggests that measures of virtues and traits are capturing highly similar aspects of personality.

In contrast to the relatively limited empirical literature on healthy personality from a Big Five perspective, a considerable body of work has characterized unhealthy personality functioning using dimensions associated with the Big Five domains. Lynam and Widiger (2001) developed expert prototypes for the major personality disorders listed in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) using the 30 facets of one of the most commonly used FFM measures, the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992). Although different personality disorders were more similar at the level of broad Big Five domains, meaningful differences emerged at the level of the 30 facets. For instance, whereas most personality disorders were rated as high in N and low in E, A, and C, they tended to be characterized by more mixed patterns at the facet level. For example, schizotypal personality disorder was characterized by moderate ratings on O at the domain level but very high ratings on the facets of ideas and fantasy. Meta-analytic research collapsing studies in which measures of personality disorders were correlated with the NEO-PI-R has generally confirmed these expert-generated prototypes (Samuel & Widiger, 2008), and in recent years a suite of personality disorders-specific instruments has been created based on Big Five traits and facets scales (Widiger, Lynam, Miller, & Oltmanns, 2012).

In summary, the FFM is among the most prominent methods for characterizing pathological as well as normal personality functioning. A large body of evidence supports the theoretical structure, cross-cultural universality, heritability, temporal stability, predictive validity, and clinical utility of this model (for reviews, see John et al., 2008; Widiger, 2005). In light of this impressive scholarship, we

¹ While acknowledging that there are differences in their respective content and research traditions (particularly with respect to the factor of intellect or openness), in this article we use Big Five and FFM interchangeably.

attempted to use this model to characterize the psychologically healthy personality from a basic trait perspective.

Overview

Despite considerable historical interest in describing the prototype of healthy personality functioning, this issue has received limited sustained empirical attention in the recent literature. Past research and contemporary work that has been done in this area has not been consistently connected to contemporary models of personality traits, such as the Big Five (Digman, 1990; Costa & McCrae, 1995; John et al., 2008). One way to address this gap might be—oddly enough—to adopt techniques that have been used to study the attributes associated with personality pathology (Lynam & Widiger, 2001; Miller & Lynam, 2003).

In Study 1, we adopted the expert-rating approach by Lynam and Widiger (2001) to generate a consensus FFM profile of the psychologically healthy person. Specifically, we asked psychologists with expertise in trait psychology to act as “experts” and describe their idea of a psychologically healthy individual using the 30 facet scale terms of the FFM as derived from the NEO-PI-R. In addition, we collected ratings from scholars with expertise in positive psychology and two samples of undergraduate psychology students to examine the agreement within and between different groups of raters. Based on past models of healthy personality functioning, we expected experts to describe the healthy personality as being low in facets of N and relatively high in facets of E, O, A, and C.

In Study 2, we examined the reliability, heritability, rank-order stability, external validity, and normativeness of the expert-generated FFM profile of the healthy personality using data from seven different samples ($N > 3,000$). To do this, we computed a healthy FFM score for each participant by using intraclass q -correlation to match individual FFM profiles to the healthy personality prototype. Intraclass q -correlations take into account profile agreement with regard to magnitude and shape and can be used as an index of similarity to the healthy personality prototype (Lynam & Widiger, 2001; Miller & Lynam, 2003). Through these analyses, we hoped to provide an initial but nonetheless comprehensive description of the nature and correlates of the healthy personality from a contemporary basic trait perspective.

Study 1: What Is the Personality Profile of a Psychologically Healthy Individual?

The purpose of Study 1 was to generate the personality profile of a prototypical healthy individual using the 30 facets of the FFM. This was accomplished using an expert-consensus approach and ratings from different groups of raters. We examined the interrater agreement within different samples of raters, the profile agreement across different samples of raters, and compared the healthy personality profile with the personality disorder profiles published by Lynam and Widiger (2001).

Method

The Institutional Review Boards of Michigan State University and the University of Texas at Dallas declared the data collections used in Study 1 exempt from approval.

We identified scholars with expertise in trait psychology by sending requests to the professional e-mail listservs of the Society of Personality and Social Psychology (SPSP) and the Society of Personality Assessment (SPA). Following protocols of previous expert-rating studies (Lynam & Widiger, 2001; Vachon, Sellbom, Ryder, Miller, & Bagby, 2009), we asked experts to rate the prototypic psychologically healthy individual on the 30 facet scales of the NEO PI-R (Costa & McCrae, 1992, see Table 1) on a scale from 1 (*extremely low*) to 5 (*extremely high*). In total, 137 trait experts returned completed ratings. Their mean age was 38.12 years ($SD = 13.26$ years), 60% identified as female, 54% had a doctorate degree, and 71% reported being involved with research. We used the ratings from this sample to create an expert consensus profile of the psychologically healthy individual.

To further evaluate this expert-generated profile, we collected data from three independent samples of raters. Specifically, to examine whether psychologists from a positive psychology background would generate a similar profile, we solicited ratings from 77 scholars with expertise in positive psychology. These raters used the same scale and response format as the expert consensus sample described above. The mean age of this sample was 49.01 years ($SD = 12.67$ years), 51% were female, 70% had a doctorate degree, and 61% reported being involved with research.

In addition, we collected ratings from college students at two public universities in Michigan and Texas. The first sample was composed of 216 undergraduate students (age: $M = 21.06$ years, $SD = 4.41$; 68% female) who used the same scale and rating format as the expert samples to describe their idea of the psychologically healthy individual as part of a larger personality rating study. The second sample included 300 undergraduate students (age: $M = 21.16$ years, $SD = 3.58$; 76% female) who completed the Five-Factor Model Rating Form (FFMRF; Mullins-Sweatt, Jamerson, Samuel, Olson, & Widiger, 2006) to describe their idea of the psychologically healthy individual as part of a larger personality rating project. The FFMRF includes an identifying term for each of the 30 FFM facets, along with two to four adjectives that describe both poles of each facet. In both instances, participants received course credit for their participation in the study.

Results and Discussion

Expert rater profile of the healthy personality. We averaged the ratings of 137 experts in trait psychology (SPA/SPSP members, Sample 1) to create an expert-consensus profile of the psychologically healthy personality (see Table 1). Using a similar approach as Miller, Lynam, Widiger, and Leukefeld (2001), we considered those facets as particularly prototypical that were rated as higher than 4 or lower than 2. According to this heuristic, the expert-generated profile suggested that psychologically healthy individuals have particularly high scores on openness to feelings (O) and low scores on angry hostility (N). Other top-rated facets were warmth (E), positive emotions (E), straightforwardness (A), and competence (C). Facets rated as particularly low were depressiveness (N) and vulnerability (N).

We examined two measures of interrater agreement (see second and third column of Table 1) both of which capture the agreement in ratings of a single stimulus (i.e., the healthy personality). First, as a simple indicator of variation among raters, we inspected the standard deviations for each of the 30

Table 1
Five-Factor Model Personality Profiles for the Psychologically Healthy Person as Rated by Four Independent Samples of Raters

Domain and facet	Sample I			Sample II			Sample III			Sample IV		
	<i>M</i>	<i>SD</i>	<i>r_{wg}</i>	<i>M</i>	<i>SD</i>	<i>r_{wg}</i>	<i>M</i>	<i>SD</i>	<i>r_{wg}</i>	<i>M</i>	<i>SD</i>	<i>r_{wg}</i>
Neuroticism												
Anxiousness	<u>2.34</u>	.63	.80	<u>2.27</u>	.68	.77	<u>2.61</u>	.84	.65	<u>2.38</u>	.91	.65
Angry hostility	<u>1.77</u>	.65	.79	<u>1.83</u>	.68	.77	<u>2.07</u>	.82	.66	<u>1.83</u>	.87	.66
Depressiveness	<u>2.01</u>	.61	.82	<u>2.01</u>	.82	.66	<u>2.13</u>	.80	.68	<u>1.99</u>	.92	.68
Self-consciousness	2.72	.54	.85	2.73	.70	.76	2.74	.88	.61	2.47	.89	.61
Impulsivity	<u>2.47</u>	.58	.83	<u>2.48</u>	.70	.75	<u>2.77</u>	.86	.63	<u>2.27</u>	.94	.63
Vulnerability	<u>2.21</u>	.66	.78	<u>2.09</u>	.75	.72	<u>2.38</u>	.83	.66	<u>2.10</u>	.92	.66
Extraversion												
Warmth	3.95	.49	.88	3.86	.56	.84	3.97	.63	.80	3.86	.87	.80
Gregariousness	3.60	.59	.83	3.53	.60	.82	3.93	.67	.77	3.91	.83	.77
Assertiveness	3.26	.47	.89	3.16	.61	.81	3.38	.70	.75	3.25	.71	.75
Activity	3.67	.57	.84	3.81	.65	.79	3.84	.64	.79	3.91	.81	.79
Excitement-seeking	3.01	.45	.90	3.06	.57	.84	3.33	.68	.77	3.03	.78	.77
Positive emotions	3.91	.50	.88	3.78	.68	.77	3.96	.70	.75	4.04	.77	.75
Openness to experience												
Fantasy	3.03	.53	.86	2.99	.62	.81	3.35	.80	.68	3.13	.86	.68
Aesthetics	3.39	.60	.82	3.43	.70	.76	3.58	.60	.82	3.57	.84	.82
Feelings	4.00	.53	.86	4.00	.61	.81	3.92	.56	.84	4.19	.84	.84
Actions	3.01	.47	.89	3.18	.58	.83	3.29	.71	.75	3.03	.80	.75
Ideas	3.21	.46	.90	3.32	.59	.82	3.40	.73	.73	3.23	.75	.73
Values	3.66	.66	.78	3.70	.65	.79	3.57	.81	.67	3.53	.97	.67
Agreeableness												
Trust	3.24	.54	.86	3.34	.66	.78	3.40	.80	.68	3.19	.79	.68
Straightforwardness	3.90	.52	.87	3.97	.54	.86	3.93	.69	.76	4.02	.85	.76
Altruism	3.75	.57	.84	3.83	.55	.85	3.74	.71	.75	3.84	.87	.75
Compliance	3.22	.51	.87	3.23	.69	.76	3.62	.74	.73	3.64	.81	.73
Modesty	3.13	.51	.87	3.18	.68	.77	3.38	.75	.72	3.53	.94	.72
Tender-mindedness	3.66	.56	.84	3.68	.64	.80	3.57	.67	.77	3.72	.80	.77
Conscientiousness												
Competence	3.77	.53	.86	3.65	.63	.80	3.76	.64	.79	3.70	.82	.79
Order	3.56	.56	.85	3.49	.58	.83	3.72	.65	.79	3.79	.84	.79
Dutifulness	3.64	.51	.87	3.64	.67	.78	3.78	.74	.72	3.85	.85	.72
Achievement	3.53	.53	.86	3.57	.60	.82	3.65	.75	.72	3.54	.78	.72
Self-discipline	3.59	.54	.86	3.75	.62	.81	3.78	.75	.72	3.72	.84	.72
Deliberation	3.42	.54	.86	3.59	.55	.85	3.57	.70	.76	3.72	.81	.76

Note. Sample I = trait psychology experts ($N = 137$); Sample II = positive psychology experts ($N = 77$); Sample III = undergraduate students ($N = 216$); Sample IV = undergraduate students ($N = 300$); r_{wg} = proportional reduction in error variance relative to a discrete uniform distribution. Lowest five facets underlined and top five rated facets in bold.

facets, with lower values indicating better agreement among raters (cf. Schmidt & Hunter, 1989). All standard deviations were below .70 (average $SD = .55$). These standard deviations compared favorably to those obtained in past research on expert-consensus FFM profiles of personality disorders which ranged between .70 and .85 (Lynam & Widiger, 2001; Miller, Lynam, Widiger, & Leukefeld 2001). In addition, we examined the proportional reduction in error variance relative to a random rating process as indicated by the r_{wg} for each of the 30 FFM facets. The r_{wg} coefficient has been used in past research on expert-consensus profiles of personality disorders (e.g., Lynam & Widiger, 2001) and serves as a way of "assessing agreement among the judgements made by a single group of judges on a single variable in regard to a single target" (James, Demaree, & Wolf, 1984, as cited in James, Demaree, & Wolf, 1993). This statistic is a function of two factors: (a) the observed variance in experts' ratings and (b) the variance in ratings assuming they were entirely random (usually operationalized as uniform scale distribution). The proportion of random variance can be subtracted from 1 to estimate the proportion of variance due to

agreement among experts (O'Neill, 2017). LeBreton and Senter (2008) proposed standards for interpreting r_{wg} coefficients with $r_{wg} < .30$ indicating lack of agreement, $r_{wg} = .31-.50$ indicating weak agreement, $r_{wg} = .51-.70$ indicating moderate agreement, $r_{wg} = .71-.90$ indicating strong agreement, and $r_{wg} = .91-1.0$ indicating very strong agreement. In Sample I, the average r_{wg} was .85, indicating strong agreement among raters across facets. In all cases, the expert ratings achieved at least a 78% reduction in error.

Agreement with positive psychology experts and college students. We next examined the profile agreement between the expert-generated profile described above and healthy personality profiles derived from three other samples of raters. To obtain the degree of convergence between different profiles, we correlated the profiles with facets treated as cases and the profiles as variables (see Table 2).

Does interest in positive psychology matter? Column 4 of Table 1 shows the mean FFM profile for the psychologically healthy person as rated by 77 self-identified experts in positive psychology (Sample II). We found good agreement within our

Table 2
Correlations Between Five-Factor Model Profiles of the Healthy Personality Derived From Expert and Student Samples

	I	II	III
Sample I	—		
Sample II	.99	—	
Sample III	.97	.97	
Sample IV	.85	.85	.85

Note. Sample I = trait psychology experts ($N = 137$); Sample II = positive psychology experts ($N = 77$); Sample III = undergraduate students ($N = 216$); Sample IV = undergraduate students ($N = 300$).

sample of positive psychology experts as indicated by an average SD of .64 and an average r_{wg} of .79. Moreover, we found high convergence between the healthy personality profile generated by positive psychologists and the expert-generated profile described above ($r = .99$, see Table 2). Like Sample I, experts in positive psychology rated high scores on openness to feelings (O) and low scores on angry hostility (N) as particularly indicative of a healthy personality profile, closely followed by high scores on warmth (E), positive emotions (E), altruism (A), and straightforwardness (A) as well as low scores on all N facets.

What do students think? Columns 7 and 10 of Table 1 show the mean FFM profiles for the psychologically healthy person as rated by two undergraduate psychology student samples. We found good interrater agreement for both samples with average SD of .73 for Sample III and .84 for Sample IV and average r_{wg} coefficients of .73 for both samples. The profiles obtained from student ratings

were highly convergent with the two expert-generated profiles, with profile correlations ranging between .85 and .97 (see Table 2). Like the expert samples, students rated low scores on all N facets and high scores on openness to feelings (O), warmth (E), positive emotions (E), and straightforwardness (A) as particularly indicative of a psychologically healthy personality. Somewhat different from Sample I and II, however, both student samples rated facets related to E (i.e., gregariousness and excitement seeking) as more prototypical for a healthy personality than facets related to C.

Correlation with expert-generated profiles of personality pathology. We next examined the correlations between the healthy personality profile derived from the ratings by the experts in Sample I (see Table 1) and 11 expert-generated profiles of personality pathology (cf. Lynam & Widiger, 2001; Miller & Lynam, 2003). Figure 1 shows that the healthy personality profile was most negatively associated with the FFM profiles for borderline personality disorder ($r = -.69$), but only weakly with the FFM the profiles for dependent ($r = -.08$) and compulsive ($r = .08$) personality disorder. The pronounced correlation with borderline personality disorder is notable in view of recent findings suggesting that borderline personality disorder can be considered the “g”-factor of maladaptive personality functioning and is a particularly insidious constellation of pathological trait levels (Sharp et al., 2015).

Summary

In Study 1, we sought to create an expert-consensus FFM profile of the psychologically healthy personality. Agreement among experts was excellent as indicated by low standard deviations and

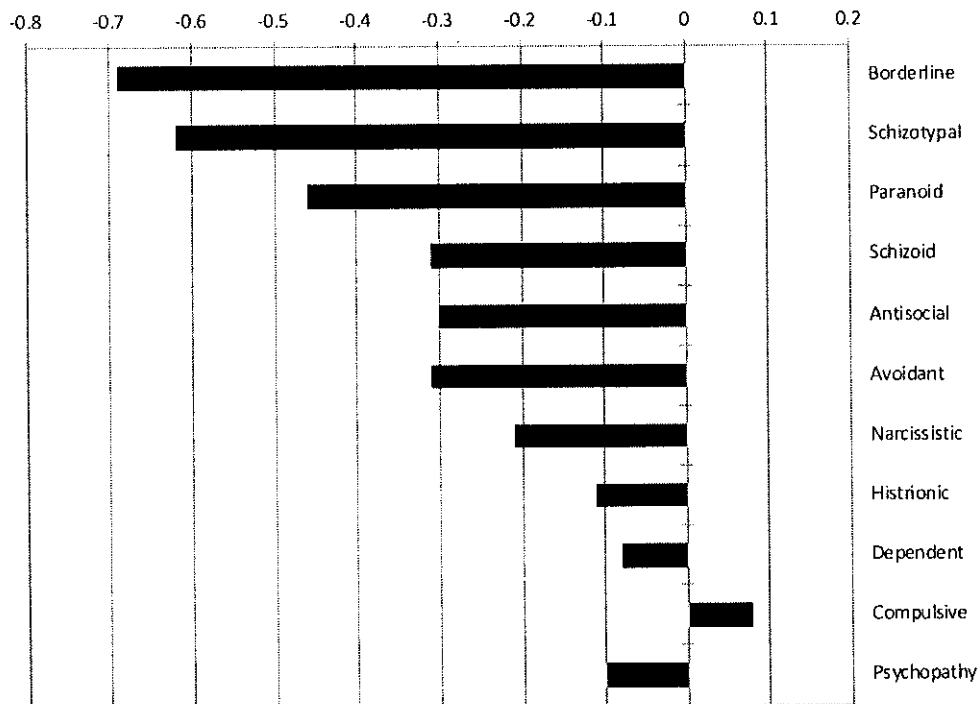


Figure 1. Correlations between the expert-generated five-factor model personality profile for the healthy personality and 11 expert-generated profiles of personality disorders published by Lynam and Widiger (2001) and Miller and Lynam (2003).

high proportional reductions in rating error variance. Furthermore, we found high convergence with healthy personality profiles as rated by scholars with expertise in positive psychology and two independent samples of undergraduate students. The high level of agreement within and between groups of raters was especially impressive given that experts and students were describing their own idea of a healthy personality and not a particular individual case. Finally, the FFM profile of the psychologically healthy individual was negatively correlated with most expert-generated FFM profiles of personality disorders, particularly with the FFM profiles for borderline personality disorder, which has been discussed as being highly related to the core of unhealthy personality functioning (Sharp et al., 2015).

Together, these results suggested that the psychologically healthy personality can be described, with a high level of agreement, in terms of the 30 facets of the FFM. Specifically, focusing on the facets with high prototypicality ratings across all four samples of raters, healthy personality functioning can be best characterized by high levels of openness to feelings (O), positive emotions (E), and straightforwardness (A) and low levels on all facets of N. In what follows, we will probe the reliability, heritability, validity, and normativeness of the expert-generated FFM profile of the healthy personality at the individual level.

Study 2: How Well Does the Healthy FFM Profile Capture Psychological Health?

In Studies 2a–2d, we used data from seven independent samples ($N > 3,000$, see Table 3) to examine the reliability, heritability, and validity of the expert-generated healthy personality profile. Participants in all samples provided self- and/or peer reports on the 30 facets of the FFM using either the NEO-PI-R (Costa & McCrae, 1992) or the 120-item International Personality Item Pool measure (IPIP-120; Johnson, 2014). In each of these samples, we matched participants' individual five-actor profiles to the healthy personality prototype derived from Sample 1 (see Figure 1) using intraclass q -correlation (cf. Miller et al., 2001). Intraclass q -correlations assess the similarity between each individual's FFM profile and the expert-consensus profile of the healthy personality in terms of both shape and magnitude. We used the resultant (Fisher's z -transformed) prototypicality index as a *healthy personality measure* in all subsequent analyses. In Samples 2–7, participants also provided self- and/or peer report data on various criterion measures related to psychological adjustment, self-control, aggression, maladaptive behavior, and psychopathy. In what follows, we de-

scribe how we used these data to examine the test–retest reliability (Study 2a), cross-rater reliability, long-term stability, heritability (Study 2b), convergent and divergent validity (Study 2c), and normativeness (2d) of the healthy personality profile.

The data collection for Sample 2a was approved by the Institutional Review Board at Purdue University (IRB #: 1110011403). The data collection for Study 2b was completed in 2008 before Bielefeld University had established an Institutional Review Board. The Institutional Review Boards of Michigan State University declared the data collections for Samples 3–7 exempt from approval. None of these data collections were designed for the purposes of the current study but have been used in prior studies to address research questions unrelated to the current project.

Study 2a: How Dependable Is the Healthy Personality Across 2 Weeks?

We examined the test–retest reliability of the healthy personality index using secondary data from a student sample. Part of these data have been previously published in Suzuki, Griffin, and Samuel (2017, cf. Sample 1 in Table 3).

Method

Data came from 185 college students at a large Midwestern university who completed all items of the NEO-PI-R at the first two assessment waves of a three-wave online study ($M_{age} = 19.5$, $SD = 2.3$; 59.5% female). Cronbach's alphas for the 30 facets ranged from .69 to .95 ($Mdn = .86$) at the first assessment and .76 to .96 ($Mdn = .86$) at the 2-week follow-up.

Results and Discussion

Descriptives. As described above, we matched participants' individual five-factor profiles to the expert-generated healthy personality prototype using intraclass q -correlation (cf. Miller et al., 2001) to compute a healthy personality index. The mean healthy personality score was $M = .35$ at the first assessment wave ($SD = .28$, range = $-.42$ to $.83$) and $M = .34$ 2 weeks later at the second assessment wave ($SD = .29$, range = $-.43$ to $.83$).

Test–retest reliability. The test–retest correlation of the Fisher's z -transformed healthy personality index was $r = .80$, $p < .001$, 95% CI [.74, .85] across a 2-week interval. This retest reliability is comparable to those typically reported for FFM facet and domain scales (cf. McCrae, Kurtz, Yamagata, & Terracciano,

Table 3
Validation Samples

Sample #	Reference	Subjects	N	Female	FFM measure
1	Suzuki, Griffin, and Samuel (2017)	Students	185	60%	NEO-PI-R
2	Kandler et al. (2013)	Twins	844	81%–84%	NEO-PI-R
3	Unpublished Report	Students	292	73%	NEO-PI-R
4	Unpublished Report	Students	415	77%	IPIP-120
5	Donnellan and Burt (2016)	Students	637	50%	IPIP-120
6	Ruchensky, Edens, Donnellan, and Witt (2017)	Students	380	75%	NEO-PI-R
7	Unpublished Report	Students	309	82%	IPIP-120

Note. FFM = five-factor model; NEO-PI-R = Revised NEO Personality Inventory (Costa & McCrae, 1992); 120-item International Personality Item Pool measure (IPIP-120; Johnson, 2014).

2011) indicating considerable dependability of the healthy personality index.

Study 2b: What Is the Inter-Rater Consistency, Rank-Order Stability, and Heritability of the Healthy Personality?

We used existing twin data from the Bielefeld Longitudinal Study of Adult Twins (BiLSAT; Kandler et al., 2013) to examine the (a) interrater consistency, (b) longitudinal stability, and (c) heritability of the healthy personality index. Parts of these data have been previously published in Bleidorn, Kandler, Riemann, Spinath, and Angleitner (2009) and Möttus, Kandler, Bleidorn, Riemann, and McCrae (2017).

Method

Data came from 844 twins (see Table 3, Sample 2) who completed the German version of NEO-PI-R ($M_{age} = 38.9$, $SD = 12.6$; 81% female) at the third assessment wave of BiLSAT (here: Time 1). Among these participants were 338 complete twin pairs: 225 monozygotic (MZ) pairs (27 male pairs and 198 female pairs) and 113 dizygotic (DZ) pairs (17 male, 69 female, and 27 opposite sex pairs). Alphas for self-reported facet scores ranged between .46 and .85 ($Mdn = .72$). For 840 participants, up to two informant reports (mostly from spouses and friends) were available. Alphas for peer-reported facets ranged between .44 and .82 ($Mdn = .73$) for Peer 1 and between .43 and .82 ($Mdn = .72$) for Peer 2, respectively. Across facets, the median correlation between informant ratings was $r = .38$. When available, we averaged NEO-PI-R reports from both informants. Aggregating informant-reports has been a standard procedure in past BiLSAT studies to reduce both random and systematic error (e.g., Kandler et al., 2010; Möttus et al., 2017).

Of these participants, 430 twins ($M_{age} = 47.1$, $SD = 13.8$; 84% female) also provided NEO-PI-R data 5 years later at the fourth assessment wave (here: Time 2) of BiLSAT. Alphas ranged between .42 and .85 ($Mdn = .74$). The follow-up sample consisted of 200 twin pairs including 138 MZ pairs (12 male pairs and 126 female pairs) and 62 DZ pairs (12 male, 35 female, and 15 opposite sex pairs). For all twins, up to two NEO-PI-R informant ratings were available at Time 2. Across the 30 facets, alphas ranged between .45 and .82 ($Mdn = .73$) for Peer 1 and between .36 and .83 ($Mdn = .73$) for Peer 2, respectively; the median correlation between informant ratings was $r = .39$.

Results and Discussion

Descriptives. Healthy personality scores ranged between $-.46$ and $.92$ ($M = .48$, $SD = .28$) for self-reports and $-.36$ and $.92$ ($M = .58$, $SD = .23$) for averaged peer reports at Time 1. At the 5-year follow up, self-reported healthy personality scores ranged between $-.52$ and $.86$ ($M = .53$, $SD = .34$); peer-reported healthy personality scores ranged between $-.36$ and $.88$ ($M = .60$, $SD = .22$).

Cross-rater reliability. The cross-rater agreement between self- and averaged peer ratings was $r = .48$, $p < .001$, 95% CI [.43, .53] at Time 1 and $r = .47$, $p < .001$, 95% CI [.39, .54] at Time 2, respectively. These estimates are comparable with those re-

ported for FFM facet and domain scales indicating good agreement between self- and other reported healthy personality scores (e.g., Kandler, Riemann, Spinath, & Angleitner, 2010).

Longitudinal stability. The 5-year rank-order stability of self-reported healthy personality scores was $r = .79$, $p < .001$, 95% CI [.75, .82]. This stability is comparable to those typically reported for FFM domain scales and higher than those of facet scales (e.g., Bleidorn et al., 2009 reported an average stability of $r = .77$ for domain and $r = .68$ for facet scales). For peer reports, the rank-order stability was somewhat lower ($r = .46$, $p < .001$, 95% CI [.38, .53]). Notably, peers were not always the same at both assessment waves. Thus, the peer-rated stability of the healthy personality indirectly takes into account the potential impact of shared method variance, the presence of which might have inflated stability estimates.

Heritability. We used structural equation modeling based on a classic twin design to estimate the genetic and environmental contributions to individual differences in self- and peer-rated healthy personality scores at Time 1. The classic twin design model compares the covariance between MZ twins, who share 100% of their genes, with the covariance between DZ twins, who share on average 50% of their segregating genes. To decompose the variance in a personality measure into additive genetic (A), shared environmental (C), and nonshared (E) environmental variance components. The larger the MZ covariance compared with the DZ covariance, the larger is the genetic variance component; the smaller the difference between MZ and DZ covariance, the larger is the shared environmental variance component. Because MZ twins raised together are assumed to share 100% of their genes and 100% of their shared environmental experiences, any differences between MZ twin siblings must be due to nonshared environmental influences (for more details, see Knopik, Neiderhiser, DeFries, & Plomin, 2013).

Because age and sex differences can bias the covariance among family members, we regressed the self- and peer reported healthy personality scores on participants' age and sex and used these standardized residual scores in our behavioral genetic analyses (McGue & Bouchard, 1984). We first fit a baseline ACE model separately to self- and peer report data using AMOS Version 24 (Arbuckle, 2014) with full information maximum likelihood (FIML) to handle missing data. We then fit reduced models (AE vs. CE vs. E) and used model comparison tests to identify the most parsimonious/best-fitting model.

Table 4 shows the fit statistics for all models and the standardized variance components for both self- and peer rated healthy personality scores. Consistent with the vast majority of behavioral genetic studies on other personality variables in adult samples (e.g., Krueger, South, Johnson, & Iacono, 2008; Turkheimer, 2000), the AE model provided the best fit to both self- and peer reports. This model suggested that between 30% (peer report) and 43% (self-report) of the variance in healthy personality scores were explained by additive genetic influences. The remaining variance reflected nonshared environmental influences whereas shared environmental influences played a negligible role.

In summary, heritability estimates for the healthy personality scores were comparable with those typically obtained for FFM domain and facet scales (Jang, Livesley, & Vernon, 1996). Moreover, consistent with previous behavioral genetic research on other personality traits, nonshared environmental effects accounted for

Table 4
Genetic (a^2) and Environmental ($C^2 + E^2$) Influences on Individual Differences in Self- and Peer-Rated Healthy Personality Scores

Model	Self-rated healthy personality								
	Model fit statistics					Standardized variance components			
	χ^2	<i>df</i>	<i>p</i>	CFI	RMSEA	a^2	c^2	e^2	
ACE	1.046	3	.790	1.000	.000	.378*	.046	.576*	
AE	1.112	4	.892	1.000	.000	.428*	.572*		
CE	4.913	4	.296	.978	.021	.356*	.644*		
Model	Peer-rated healthy personality								
	ACE	.975	3	.807	1.000	.000	.299*	.000	.701*
	AE	.975	4	.914	1.000	.000	.299*	.701*	
	CE	5.493	4	.240	.918	.027	.231*	.769*	
	E	24.425	5	.000	.000	.089	1.000*		

Note. 225 monozygotic twin pairs, 113 dizygotic twin pairs (self-ratings); 224 monozygotic twin pairs, 112 dizygotic twin pairs (peer ratings). The best-fitting model is shown in bold.

* $p < .001$.

the largest proportion of individual differences in healthy personality scores, whereas shared environmental influences were indistinguishable from zero. Notably, the classic twin design is based on several assumptions which, if violated, can bias the results of classic twin design models. Most importantly, the ACE model assumes the absence of nonadditive genetic effects, assortative mating, gene-environment correlation and Gene \times Environment ($G \times E$) interaction. Extended twin designs including data from other relatives and/or data of relevant environmental influences would be needed to examine the impact of these factors on individual differences in healthy personality scores (cf. Bleidorn, Hufer, Kandler, Hopwood, & Riemann, 2018; Krueger et al., 2008).

Study 2c: Is the Healthy Personality Associated With Health-Related Criterion Variables?

The purpose of Study 2c was to investigate correlates of the healthy personality. To do this, we examined the associations between the healthy personality index and criterion variables related to five major research domains at the intersection of personality, social, and clinical psychology: subjective well-being (e.g., life satisfaction), positive adjustment (e.g., optimism), self-control (e.g., effortful control), aggression (e.g., verbal aggression), narcissism (e.g., grandiosity), and psychopathy (e.g., meanness). Compared with individuals with lower healthy personality scores, we expected individuals with healthier personality scores to be happier, better adjusted, better able to self-regulate their impulses, and less aggressive. We further predicted healthy personality scores to be negatively associated with maladaptive aspects of narcissism and psychopathy, such as entitlement and meanness but positively associated with the more adaptive aspects of these constructs such as boldness, self-sufficiency and stress immunity (cf. Ackerman et al., 2011; Crego & Widiger, 2015; Miller & Lynam, 2012).

Method

Samples. We used data from six independent samples. Sample 2 was the same as in Study 2b and consisted of 430 twins

($M_{age} = 47.1$, $SD = 13.8$; 84% female). In addition to providing NEO-PI-R self- and peer-report data, this sample also completed three self-report measures of subjective well-being. Sample 3 consisted of 292 college students (73% female). In addition to the NEO-PI-R, participants completed various measures related to their psychological adjustment, aggression, and maladaptive personality traits. Sample 4 consisted of 415 college students (77% female). In addition to the 120-item IPIP, participants completed questionnaires related to their psychological adjustment, self-control, and psychopathology. Both samples are previously unpublished. Sample 5 appeared previously in Donnellan and Burt (2016) and consisted of 637 college students (50% female) who, in addition to the 120-item IPIP, also completed various measures related to aggression and maladaptive personality traits. Sample 6 appeared previously in Ruchensky, Edens, Donnellan, and Witt (2017) and consisted of 380 college students (75% female). This sample completed the NEO-PI-R and an omnibus measure of psychopathic personality traits. Sample 7 is previously unpublished and consisted of 309 college students (75% female) who completed the 120-item IPIP and various measures related to maladaptive personality characteristics and psychopathology. In all samples, age was assessed with a categorical variable ranging from 18 to 25 years and older. In Samples 3–7, age was assessed with either a 4-point (1 = 18–20 years to 4 = 25+), 5-point (1 = 18 years to 5 = 22+), or 7-point (1 = 18 years to 7 = 24+); across samples, more than 90% of the participants were between 18- and 22-years-old.

Criterion measures.

Well-being. Sample 2 completed self-report measures of life satisfaction and affective well-being (see Table 5 for internal consistencies). Affective well-being was measured using the Positive and Negative Affect Scale (PANAS, Watson, Clark, & Tellegen, 1988). Using a 5-point scale (1 = *very slightly or not* to 5 = *extremely*), participants indicate the extent they typically feel positive affect (e.g., "excited") and negative affect (e.g., "upset"). Life satisfaction was assessed using the five-item Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). Participants completed the SWLS (e.g., "I am satisfied with my life")

Table 5
Correlations Between the Healthy Personality Index and Criterion Measures

Constructs and measures	Sample	α^a	r	p	[95% CI]
Positive adjustment					
Self-esteem (Rosenberg, 1965)	3, 4, 5, 7	.88–.90	.58	<.001	[.55, .61]
Core self-evaluations (Judge, Erez, Bono, & Thoresen, 2003)	3, 4	.84	.60	<.001	[.55, .65]
Need for cognition (Cacioppo, Petty, & Kao, 1984)	4	.89	.24	<.001	[.15, .33]
Optimism (Carver & Scheier, 2002)	4	.82	.53	<.001	[.46, .60]
Self-concept clarity (Campbell et al., 1996)	4	.90	.52	<.001	[.46, .59]
Planful competence (Clausen, 1993)	4	.79	.27	<.001	[.18, .36]
Self-control					
Self-control (Tangney, Baumeister, & Boone, 2004)	4, 7	.86–.87	.47	<.001	[.41, .53]
Effortful control (Rothbart, Ahadi, & Evans, 2000)	4	.81	.46	<.001	[.38, .53]
Activational control	4	.68	.32	<.001	[.23, .40]
Attentional control	4	.69	.46	<.001	[.38, .53]
Inhibitory control	4	.59	.34	<.001	[.25, .42]
Subjective well-being					
PANAS positive affect (Watson, Clark, & Tellegen, 1988)		.85			
FFM self-report	2		.48	<.001	[.40, .55]
FFM peer report	2		.24	<.001	[.15, .33]
PANAS negative affect (Watson et al., 1988)	2	.85			
FFM self-report	2		–.54	<.001	[–.60, –.47]
FFM peer report	2		–.25	<.001	[–.34, –.16]
Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)	2	.86			
FFM self-report	2		.42	<.001	[.34, .49]
FFM peer-report	2		.28	<.001	[.19, .37]
Aggression					
Aggression (Buss & Perry, 1992)	3	.92	–.58	<.001	[–.65, –.50]
Physical	3	.86	–.44	<.001	[–.53, –.34]
Verbal	3	.72	–.25	<.001	[–.35, –.14]
Anger	3	.83	–.56	<.001	[–.63, –.48]
Hostility	3	.82	–.55	<.001	[–.63, –.46]
Proactive aggression (Raine et al., 2006)	5	.81	–.37	<.001	[–.44, –.30]
Reactive aggression (Raine et al., 2006)	5	.85	–.41	<.001	[–.47, –.34]
Subtypes of antisocial behavior (Donnellan & Burt, 2016)					
Rule breaking	5	.84	–.33	<.001	[–.40, –.26]
Social aggression	5	.88	–.40	<.001	[–.46, –.33]
Physical aggression	5	.87	–.40	<.001	[–.46, –.33]
Narcissism					
Psychological entitlement (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004)	3, 5, 7	.80–.88	–.02	.556	[–.08, –.04]
Grandiosity (Rosenthal et al., 2007)	5, 7	.94–.95	.14	<.001	[.08, .20]
Narcissistic personality inventory (Raskin & Terry, 1988)	7	.83	.02	.665	[–.09, .13]
Authority	7	.73	.12	.044	[.01, .23]
Self-sufficiency	7	.41	.26	<.001	[.15, .36]
Superiority	7	.43	.07	.215	[–.04, .18]
Exhibitionism	7	.65	–.12	.045	[–.23, –.01]
Exploitativeness	7	.58	–.22	<.001	[–.33, –.11]
Vanity	7	.68	.11	.056	[.00, .22]
Entitlement	7	.51	–.13	.020	[–.24, –.02]
Psychopathy					
Psych. personality inventory-revised (Lilienfeld & Andrews, 1996)					
Coldheartedness	6	.82	–.13	.013	[–.23, .03]
Fearlessness	6	.87	.02	.676	[–.08, .12]
Social influence	6	.87	.31	<.001	[.22, .40]
Stress immunity	6	.84	.36	<.001	[.27, .45]
Machiavellian egocentricity	6	.82	–.39	<.001	[–.47, –.30]
Rebellious nonconformity	6	.85	–.24	<.001	[–.33, –.14]
Carefree nonplanfulness	6	.84	–.53	<.001	[–.60, –.45]
Blame externalization	6	.87	–.45	<.001	[–.53, –.37]
Patrick triarchic psychopathy inventory (Patrick, 2010)					
Boldness	5	.82	.48	<.001	[.42, .54]
Meanness	5	.89	–.36	<.001	[–.43, .29]
Disinhibition	5	.87	–.54	<.001	[–.59, –.48]
Self-Report Psychopathy Scale (Paulhus, Neumann, Hare, Williams, & Hemphill, 2016)					
Interpersonal manipulation	4	.86	–.29	<.001	[–.38, –.20]
Callous affect	4	.81	–.22	<.001	[–.31, –.13]
Erratic lifestyle	4	.84	–.22	<.001	[–.31, –.13]
Criminal tendencies	4	.88	–.20	<.001	[–.29, –.11]

^a Range of alphas across samples; Fisher r -to- z transformed healthy personality scores and criterion measures across participants (correlations within each sample are presented in Table S1 in the online supplemental materials).

using a 7-item response scale (1 = *strongly disagree* to 7 = *strongly agree*).

Self-esteem. We used the 10-item version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965) to measure global self-esteem in Samples 3, 4, 5, and 7. Responses were made on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Sample items include "I feel that I am a person of worth, at least on an equal basis with others" and "I feel that I have a number of good qualities." Table 5 shows the range of internal consistencies (alphas) across samples.

Core self-evaluations. Participants in Samples 3 and 4 completed the 12-item Core Self-Evaluations Scale (CSES, Judge, Erez, Bono, & Thoresen, 2003) using a 5-point rating scale (1 = *strongly disagree* to 5 = *strongly agree*). This scale attempts to measure individuals' fundamental evaluations about themselves, their abilities, and locus of control. Sample items include "Sometimes when I fail I feel worthless" (reverse scored) and "I complete tasks successfully." The alpha consistency was .84 in both samples (see Table 5).

Need for cognition. Participants in Sample 4 completed the 18-item Need For Cognition Scale (Cacioppo, Petty, & Kao, 1984) using a 5-point response scale (1 = *strongly disagree* to 5 = *strongly agree*). Need for cognition refers to an individual's relatively stable tendency to engage in challenging cognitive endeavors. Sample items include "I prefer my life to be filled with puzzles that I must solve" and "The notion of thinking abstractly is appealing to me."

Optimism. Participants in Sample 4 completed a six-item optimism scale by Carver and Scheier (2002) using a 5-point response scale (1 = *strongly disagree* to 5 = *strongly agree*). Sample items are "In uncertain times, I usually expect the best" and "If something can go wrong for me it will" (reverse scored).

Self-concept clarity. We assessed the extent to which participants in Sample 4 perceived their self-beliefs to be clearly and confidently defined, internally consistent, and stable using the 12-item Self-Concept Clarity Scale (Campbell et al., 1996). Responses were made on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Sample items include "In general, I have a clear sense of who I am and what I am" and "I seldom experience conflict between the different aspects of my personality."

Planful competence. Participants completed a six-item Planful Competence Scale modified from a description in Clausen (1993) using 5-point rating scale (1 = *strongly disagree* to 5 = *strongly agree*). This scale assesses individuals' ability to choose roles that suit their interests and talents, and to pursue these roles effectively and with perseverance.

Self-control. We used the 13-item Self-Control Scale (Tangney, Baumeister, & Boone, 2004) to assess participants' ability to exert self-control and inhibit impulses in Samples 4 and 7. Sample items are "I am good at resisting temptation" and "I am lazy" (reverse scored). Participants in Sample 4 also completed three effortful control scales by Rothbart, Ahadi, and Evans (2000): activation control (seven items, e.g., "I am often late for appointments"), attentional control (five items, e.g., "It is very hard for me to focus my attention when I am distressed"), and inhibitory control (seven items, e.g., "It is easy for me to inhibit fun behavior that would be inappropriate"). Participants responded to all items using 5-point rating scales (1 = *strongly disagree* to 5 = *strongly agree*).

Aggression. Sample 3 completed the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992) using a 5-point rating scale (1 = *extremely uncharacteristic of me* to 5 = *extremely characteristic of me*). This 29-item questionnaire consists of four subscales related to physical aggression (nine items, e.g., "If somebody hits me, I hit back"), verbal aggression (five items, e.g., "I often find myself disagreeing with other people"), anger (seven items, e.g., "I have trouble controlling my temper"), and hostility (eight items, e.g., "I am sometimes eaten up with jealousy").

Sample 5 completed the 23-item Reactive-Proactive Aggression Questionnaire (Raine et al., 2006). Sample items include "Had temper tantrums" (reactive) and "Hurt others to win a game" (proactive). Responses were made on a 3-point scale (0 = *never* to 2 = *often*). Sample 5 further completed the 32-item Sub-Types of Antisocial Behavior Questionnaire (STAB; Burt & Donnellan, 2009) which assesses different forms of antisocial behavior: non-aggressive rule-breaking (11 items), social aggression (11 items), and physical aggression (10 items). Responses were made on a 5-point scale (1 = *very inaccurate* to 5 = *very accurate*). Sample items include "Broke into a store, mall, or warehouse" (non-aggressive rule-breaking), "Intentionally damaged someone's reputation" (social aggression), and "Got into physical fights" (physical aggression).

Narcissism. We measured several aspects of narcissism. *Entitlement* was measured in Samples 3, 5, and 7 using the nine-item Psychological Entitlement Scale by Campbell, Bonacci, Shelton, Exline, and Bushman (2004). Responses were made on a 7-point scale (1 = *strong disagreement* to 7 = *strong agreement*). Sample items include "Great things should come to me" and "I feel entitled to more of everything." *Grandiosity* was measured in Sample 5 and 7 with the Rosenthal, Hooley, and Steshenko (2007) Narcissistic Grandiosity Scale (Rosenthal et al., 2007). This scale consists of 16 adjectives that were rated on a 7-point scale (1 = *not at all* to 7 = *extremely*). Sample adjectives include "extraordinary" and "superior." Sample 7 also completed the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), which consists of 40 forced-choice, paired statements that include a "narcissistic" response and a "non-narcissistic" response. For example, one NPI item pair is "I like to be the center of attention," paired with "I prefer to blend in with the crowd." The NPI provides a total score and scores on seven subscales with the Raskin and Terry (1988) solution: authority, superiority, exhibitionism, entitlement, vanity, exploitativeness, and self-sufficiency.

Psychopathy. Sample 6 completed the 154-item Psychopathic Personality Inventory (PPI, Lilienfeld & Andrews, 1996). The PPI is a self-report survey intended to measure personality traits associated with psychopathy. Participants rated the PPI items on a 4-point scale (1 = *false* to 4 = *true*). In addition to a total score, the PPI can be used to assess eight subscales: cold-heartedness, fearlessness, social potency, stress immunity, Machiavellian egocentricity, rebellious nonconformity, carefree nonplanfulness, and blame externalization.

Sample 5 completed the 58-item Triarchic Psychopathy Inventory (TriPM; Patrick, 2010) using a 4-point scale (1 = *true* to 4 = *false*). The TriPM measures three facets of psychopathy: boldness (19 items), meanness (19 items), and disinhibition (20 items). Sample items include "I am well-equipped to deal with stress" (boldness), "I return insults" (meanness), and "I jump into things without thinking" (disinhibition). Sample 4 completed the 64-item

Self-Report Psychopathy Scale (SRP; Paulhus et al., in press) on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). The SRP comprises four subscales: interpersonal manipulation, callous affect, erratic lifestyle, and criminal tendencies.

Results and Discussion

Table 5 shows the correlations between the healthy personality index and the criterion measures across all participants (see Table S1 in the online supplemental materials for correlations within each sample). Given the large number of tests, we only interpreted associations with a p value smaller than .005 and effect sizes greater than $r = .15$ to reduce the risk of Type-I errors and making exaggerated claims from small effect size estimates.

As predicted, we found strong associations between the self-reported healthy personality scores and indicators of well-being (r s: [.42–.55]). Correlations between peer-reported healthy personality scores and subjective well-being measures were somewhat attenuated but still significant (r s: [.24–.28]), indicating a lower limit to which these correlations reflect substantive associations beyond shared method variance.

Consistent with our hypotheses, the healthy personality was also positively associated with each of the six positive adjustment measures. We found particularly strong associations with self-esteem, core self-evaluations, self-concept clarity, and optimism (r s: .53–.61) and somewhat weaker links with need for cognition and playful competence (r s: .24–.29). We further found significant positive correlations with all measures of self-control, indicating that individuals with healthier personality scores were more likely to describe themselves as being able to resist impulses, regulate their behavior, and focus their attention.

As predicted, the healthy personality was negatively associated with overall aggression. We found the strongest links with hostility and anger ($r \sim -.56$) and somewhat weaker links with verbal ($r = -.23$) and physical aggression ($r = -.44$). We further found negative correlations with both proactive and reactive aggression as well as measures of antisocial behavior ($r \sim -.40$). This pattern suggested that individuals with less healthy personalities were more aggressive and more likely to engage in antisocial behavior such as rule breaking or social aggression.

The correlations with measures of narcissism yielded a more complex picture. Only the NPI subscale of exploitativeness was negatively associated with the healthy personality. Overall narcissism as measured with the NPI and psychological entitlement were unrelated to the healthy personality; and we found small positive associations with grandiosity and NPI-self-sufficiency (r s: .15–.26). These results converged with past research indicating that the NPI facets associated with leadership and authority tend to be related to positive outcomes and unrelated to pathological narcissism (Ackerman et al., 2011).

Largely confirming our predictions, we found the healthy personality to be negatively related to maladaptive subscales of the three psychopathy measures but positively related to the aspects of psychopathy related to boldness and stress immunity. We observed the strongest negative relations with carefree nonplanfulness, blame externalization, and disinhibition ($r \sim -.50$); the strongest positive correlations occurred with stress immunity and boldness ($r = .35-.49$).

Together, these results paint a first draft of the psychologically healthy personality as measured with a contemporary basic trait measure. Specifically, we found that people with healthier personality profiles tend to be satisfied with their life and experience relatively more positive than negative affect; they are psychologically well-adjusted, have high self-esteem, good self-regulatory skills, an optimistic outlook on the world, and a clear and stable self-view; they tend to be low in aggression and meanness, unlikely to exploit others, relatively immune to stress, bold, and self-sufficient.

Study 2d: Is the Healthy Personality Related to But Also Distinct From a Normative Personality Profile?

To what degree does the healthy personality reflect a normative or average personality profile? Theory and research have emphasized that a normative personality profile likely has psychological meaning, particularly in terms of psychological adjustment and health (e.g., Bleidorn, Kandler, Riemann, Angleitner, & Spinath, 2012; Furr, 2008; Wood & Furr, 2016; Wood & Wortman, 2012). In Study 2d, we examined the degree to which the healthy personality profile converged versus diverged from a normative personality profile of college students.

Method

Data came from Samples 3–7 ($N = 2,025$) used in Study 2c. We merged the data from these samples to compute an average FFM profile for our pooled sample of college students. We then examined the convergence between this normative personality profile and the expert-generated healthy personality profile in four ways: First, to obtain the degree of convergence between the healthy and the normative personality profile, we correlated the two profiles with facets treated as cases and the profiles as variables. Second, applying the previously mentioned heuristic by Miller et al. (2001), we compared the most prototypical facets of both profiles (i.e., facets with scores greater 4 and lower than 2). Third, using intraclass q -correlation, we matched each participants' FFM profiles to the normative personality profile and correlated the resulting *normativeness score* (cf. Wood & Furr, 2016) with the healthy personality score. Fourth, we inspected the squared mean-level differences between the 30 facets of the normative and the healthy personality profiles.

Results and Discussion

The correlation between the normative FFM profile (see Table 6) and the expert-generated healthy FFM profile was $r = .81$, indicating high convergence between the shapes of the two profiles. Notably, this correlation was lower than the correlations with other expert- or student-generated healthy personality profiles (see Study 1, Table 2), particularly those that used facets derived from the same rating instrument (i.e., NEO-PI-R). To contextualize this finding, we also estimated the profile correlation between the healthy profile and the NEO-PI-R norm profile of 1,000 adults (50% female) published in Costa and McCrae (1992). This correlation was slightly higher ($r = .86$) alleviating potential concerns regarding the non-normativeness of our combined college sample.

We then computed a normativeness index by matching participants' individual five-factor profiles to the normative personality

Table 6
Normative and Healthy Five-Factor Model Personality Profile

	Healthy		Normative		$(M_1 - M_2)^2$
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Neuroticism					
Anxiousness	<u>2.34</u>	.63	<u>3.20</u>	.68	.74
Angry hostility	<u>1.77</u>	.65	<u>2.82</u>	.68	1.10
Depressiveness	<u>2.01</u>	.61	<u>2.50</u>	.82	.24
Self-consciousness	<u>2.72</u>	.54	<u>2.90</u>	.70	.03
Impulsivity	<u>2.47</u>	.58	<u>3.01</u>	.70	.29
Vulnerability	<u>2.21</u>	.66	<u>2.71</u>	.75	.25
Extraversion					
Warmth	<u>3.95</u>	.49	<u>3.74</u>	.62	.04
Gregariousness	3.60	.59	3.41	.72	.04
Assertiveness	3.26	.47	3.36	.68	.01
Activity	3.67	.57	3.15	.59	.27
Excitement-seeking	3.01	.45	3.42	.64	.17
Positive emotions	<u>3.91</u>	.50	<u>3.78</u>	.62	.02
Openness to experience					
Fantasy	3.03	.53	3.52	.67	.24
Aesthetics	3.39	.60	3.42	.74	.00
Feelings	<u>4.00</u>	.53	3.71	.56	.08
Actions	3.01	.47	<u>2.93</u>	.59	.01
Ideas	3.21	.46	3.35	.70	.02
Values	3.66	.66	3.14	.71	.27
Agreeableness					
Trust	3.24	.54	3.44	.67	.04
Straightforwardness	<u>3.90</u>	.52	3.64	.65	.07
Altruism	3.75	.57	<u>3.96</u>	.53	.04
Compliance	3.22	.51	3.44	.73	.05
Modesty	3.13	.51	3.06	.62	.00
Tender-mindedness	3.66	.56	3.58	.56	.01
Conscientiousness					
Competence	<u>3.77</u>	.53	<u>3.78</u>	.48	.00
Order	3.56	.56	3.28	.78	.08
Dutifulness	3.64	.51	<u>3.74</u>	.54	.01
Achievement	3.53	.53	3.61	.63	.01
Self-discipline	3.59	.54	3.30	.62	.08
Deliberation	3.42	.54	3.24	.75	.03

Note. Normative profile is the average five-factor model profile derived from self-report data of $N = 2,025$ college students (Samples 3, 4, 5, 6, 7). Healthy Five-factor Model profile as derived from ratings by $N = 137$ experts (Sample 1). Lowest five facets underlined and top five rated facets in bold. $(M_1 - M_2)^2 =$ squared mean-level differences between facets of the normative profile and the healthy profile.

profile using intraclass q -correlation (cf. Miller et al., 2001). Across all participants in Samples 3–7, the mean-level of the normativeness index was $M = .33$ ($SD = .24$, range = $-.49$ to $.77$). The correlation between the normative and the healthy personality index was $r = .88$, $p < .001$, 95% CI [.87, .89], suggesting a high convergence between the healthy personality and normative personality profile.

Compared with the healthy personality profile, the normative profile was characterized by fewer extreme facet-level means with students' average scores ranging between $M = 2.50$ for depressiveness and $M = 3.96$ for altruism. Thus, none of the facets of the normative profile met Miller and colleagues' (2001) cut-off value for particularly prototypical scores. The squared mean-level differences (see Table 6) between facets of the healthy personality and the normative personality profile indicated particularly pronounced differences in N indicating that the normative personality profile was characterized by higher scores on all six facets of N, particularly angry hostility and anxiousness.

General Discussion

The purpose of this article was to advance the psychological understanding of the healthy personality from a basic trait perspective. Using the FFM as a framework and an expert-consensus approach, we first attempted to generate a basic trait profile of a prototypical healthy individual. In a second step, we tested whether this FFM profile can be used to assess healthy personality functioning at the individual level. To do this, we used data from seven independent samples and a prototypicality index based on intraclass q -correlations to examine the reliability, heritability, validity, and normativeness of the healthy personality profile.

What Basic Personality Traits Characterize the Psychologically Healthy Individual?

We found that the healthy personality can be described, with a high level of agreement, in terms of the 30 facets of the NEO-PI-R model of the FFM. The resultant expert-generated prototype indicated that high levels of openness to feelings (O), positive emotions (E), and straightforwardness (A) together with low levels on facets of neuroticism (N), are particularly indicative of healthy personality functioning. Similar to Carl Roger's portrayal of the "fully functioning" person (1961), the psychologically healthy person can be characterized as being capable to experience and express emotions, straightforward, warm, friendly, genuine, confident in their own abilities, emotionally stable, and fairly resilient to stress (for FFM facet-level descriptions, see Costa & McCrae, 1992).

As predicted, the healthy personality profile was negatively associated with pathological personality functioning (Lynam & Widiger, 2001). Consistent with research highlighting that borderline personality approximates the core of personality pathology (Sharp et al., 2015), we found the strongest association with the FFM profile for this personality disorder profile. However, a comparison to the facet-level profile of borderline personality shows that healthy personality is not simply the opposite or absence of personality problems (Peterson & Seligman, 2004). To illustrate, Figure 2 shows the expert-consensus FFM profiles of the healthy personality and borderline personality (derived from Lynam & Widiger, 2001). The strong negative correlation between the two prototypes is reflected in pronounced differences between N, A, and C at the domain level. Within these domains, however, the facet-level profiles of the healthy personality profile are not just mirror images of borderline personality. Within N, impulsivity is a central feature of borderline personality but is not remarkable for healthy personality, which may reflect the spontaneity thought to characterize healthy people. Despite substantial mean-level differences, the facet-level patterns within C are similar across the two profiles, with competence being highest and deliberation the lowest rated facet for both prototypes. For A, low compliance is a cardinal feature for the borderline but not for the healthy prototype. Borderline and healthy personality are also not opposite on the other two domains. In fact, the pattern of O facets is similar with the exceptions that borderline individuals are rated as being more open to action and less open to values. There is significant facet-level heterogeneity for the E domain, with

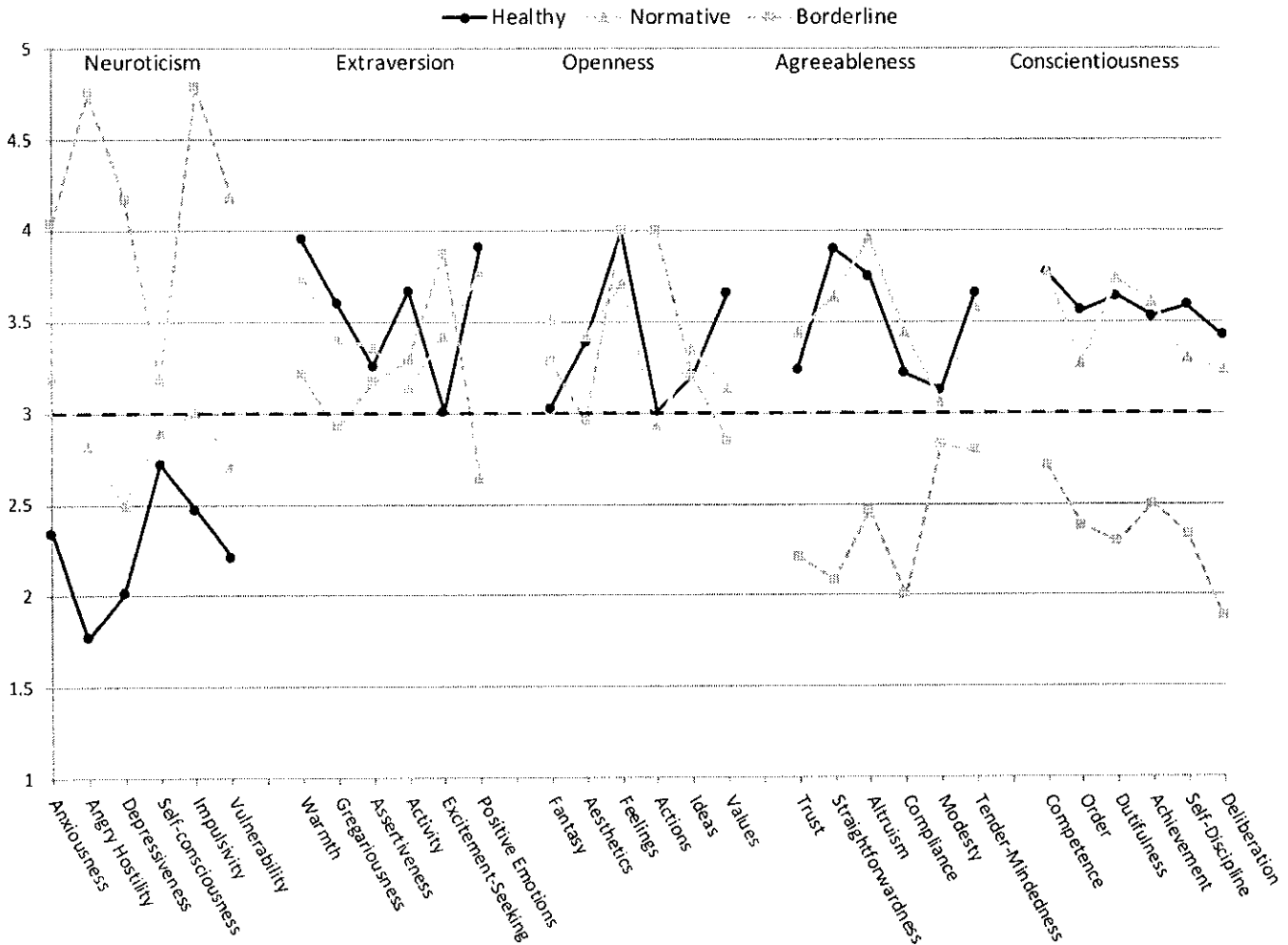


Figure 2. Five-factor model personality profiles for the psychologically healthy personality, normative personality, and borderline personality (dashed line represents scale midpoint).

people rated as warmer and more prone to positive emotions whereas borderline individuals were rated as more excitement-seeking.

We also found a strong positive correlation between the healthy personality profile and a normative FFM profile (derived via self-report from $N > 2,000$) supporting the perspective that normative personality functioning has psychological meaning and reflects psychological adjustment and mental health (e.g., Furr, 2008; Wood & Furr, 2016). An implication of this finding is that maladaptive personality may be found at both tails of these traits (Samuel, 2011). Yet, despite their similar shapes, we also found important differences between the normative and the healthy profile, which can be seen in Figure 2. For instance, although both normative and healthy profiles were characterized by low N, healthy personality scores were substantially lower for all of the facets of N except self-consciousness. Healthy people were also rated as relatively more active and open to values but less prone to fantasy. Together, these patterns underline the notion that healthy personality functioning is more than the opposite of malfunction or the same as normal functioning and is thus worth studying in its own right.

Assessing Healthy Personality Functioning With the Healthy FFM Profile

We used self- and peer report data from over 3,000 individuals to examine the psychometric qualities of the healthy FFM profile at the individual level. To do this, we computed a healthy personality index based on the similarity between each individual's FFM personality profile and the expert-generated FFM-profile of the healthy personality. Comparable with findings for other personality scales, we found that the healthy personality index was characterized by good retest reliability and cross-rater agreement as well as substantial 5-year rank-order stability and heritability. Together, these results indicated that the psychometric quality of the healthy personality index is comparable to those typically obtained for FFM domain and facet scales (McCrae et al., 2011).

To begin to investigate the construct validity of the healthy FFM profile, we examined its associations with a broad set of criterion variables related to positive adjustment, self-control, aggression, narcissism, and psychopathy. As predicted, individuals with healthy personality profiles tended to be better adjusted as indicated by higher self-esteem, core self-evaluations, self-concept

clarity, and optimism. Individuals with healthy personality scores were also more likely to describe themselves as being able to resist impulses, regulate their behavior, and focus their attention as well as being low in aggression and antisocial behavior. The associations with measures of narcissism and psychopathy yielded a more complex picture. While overall narcissism as measured with the NPI was unrelated to the healthy personality, we found individuals with healthy personalities to score lower in exploitativeness but relatively higher in grandiosity and self-sufficiency. In a similar vein, we found negative associations with maladaptive facets of psychopathy measures (e.g., blame externalization, disinhibition) and positive associations with the more adaptive facets of these scales (e.g., stress immunity, boldness). Overall, these results provide initial evidence for the convergent and divergent validity of the healthy personality index.

Implications

We believe these results have both practical implications for the assessment of and research on healthy personality functioning as well as deeper implications for theories about psychological adaptation and functioning. In addition to providing a comprehensive description of a psychologically healthy individual in terms of basic FFM traits, the profile generated and tested herein provides a practical assessment tool for research on healthy personality functioning. Scoring individual trait profiles in terms of their similarity to the healthy FFM prototype provides a simple way to capture relatively optimal personality functioning. The integration of this measure in the well-established and widely used FFM model is associated with several advantages. At an abstract level, the FFM prototype may help scholars interested in connecting the somewhat independent literatures on personality traits and positive adaptation (e.g., Nofle et al., 2011). More concretely, scholars can reanalyze existing data sets including FFM measures using the healthy personality index to further examine the nomological network of healthy personality functioning.

We also suggest that this work touches upon a number of interesting questions concerning the determinants of psychological health and the fulfillment of human potential. In particular, a trait model of healthy personality functioning comes with certain theoretical assumptions about the nature of adaptation and enables further opportunities for continued research on this topic. Several points are worth mentioning.

First, an underlying assumption of the present research is that a healthy personality prototype can be measured along multiple dimensions of relatively stable thoughts, feelings, and behaviors that are descriptive of personality in general. This assumption is consistent with the historical and contemporary theories of healthy personality functioning discussed above. Psychodynamic, humanistic, and positive psychology accounts of the healthy personality emphasized several different features that characterize a psychologically healthy personality (e.g., Erikson, 1950; Peterson & Seligman, 2004; Rogers, 1961). It is notable that all of their characterizations are basically congruent with our prototype, which also asserts that healthy personality functioning involves more positive than negative emotions, openness and spontaneity, responsibility and achievement, and warm connections to others. Accordingly, the FFM profile presented in this article can be regarded as a relatively comprehensive portrait that captures im-

portant insights from theories of optimal functioning that may tend to emphasize some attributes but neglect others.

Second, there was a high degree of interrater reliability of expert ratings. This might suggest that there is a commonly understood definition of the healthy personality. This view is consistent with theorists from different perspectives credited earlier, who emphasized the features of prototypically healthy human beings. However, it also provides a coherent model of individual differences with which to test possible alternative pathways to optimal functioning, or environments in which different personality configurations might be more optimal (cf. Le et al., 2011). Denissen et al. (2018) showed, for instance, that extraversion is a more beneficial trait in some work contexts than in others, and that this match versus mismatch of traits and work contexts is associated with individual differences in income. Thus, our results do not counter the possibility that different trait profiles or levels would be more or less adaptive in certain environments. Indeed, our research enables researchers to test whether environment-specific adaptation strategies manifest in empirical deviations from the expert-generated healthy personality prototype.

Third, the present results offer some insights into the question of how people become healthy in the first place. The healthy profile indicated that experts consider those traits as particularly healthy that tend to be most pronounced during middle adulthood. This finding is consistent with the large body of literature on personality maturation (Bleidorn, 2015; Roberts, Wood, & Caspi, 2008). According to this research, the average young adult tends to increase in traits that reflect maturity and psychological health, such as emotional stability or agreeableness. Longitudinal and behavioral genetic research suggest that both genes and life experiences contribute to individual differences in personality maturation. The processes that give rise to personality maturation may be the same as the processes that underlie healthy personality functioning. Our behavioral genetic analyses support this view. However, longitudinal research is needed to advance our understanding of the factors that drive healthy personality development.

Fourth, trait psychologists generally assume that hierarchical models such as the Big Five are more or less comprehensive, meaning that they account for all of the major differences in personality at the level of basic dispositions. This view seems to contrast with theorists who have proposed and studied factors that are relevant to healthy personality functioning but not easily placed within the universe of the FFM. Such factors might include authenticity (how much you let your traits through; Sedikides, Slabu, Lenton, & Thomaes, 2017), self-insight (how much insight you have about your traits; Vazire & Carlson, 2011), balance (how flexible you are in enacting any level of a trait depending on the circumstance; Jung, 1953), and competence (how capable you are to adapt any personality trait to certain situations; White, 1959), or other virtues hypothesized to lie outside of trait distributions (Peterson & Seligman, 2004, but see Macdonald et al., 2008 and Nofle et al., 2011). Research on the incremental validity of these extratrait factors is needed to test whether they can contribute meaningful insights to a comprehensive trait description of healthy personality functioning. We hope that the trait prototype identified in this study could facilitate this kind of work.

For example, the strong correspondence between healthy and normative personality functioning observed here is concordant with Carl Jung's assertion that *balancing* different extremes

(which should average to the norm) is key to healthy personality functioning. However, we also find important differences, and the presence of a relatively normative score does not necessarily mean that a person can flexibly show behavior representative of both extremes of a trait, as Jung's (1953) theory implies. Accordingly, the healthy prototype generated by experts in this study can be used to test this idea empirically, for instance by testing the degree to which people with the levels implied by the prototype are indeed more flexible and adaptive across situations.

Limitations

We anchored our model of healthy personality functioning in a particular FFM inventory, the 30 facets of the NEO-PI-R. While this measure has been widely used and extensively validated, any single instrument can be challenged in terms of its accuracy for representing certain aspects of personality. For instance, there are differences between the FFM and Big Five conceptions of openness (also known as intellect) that may be relevant for understanding healthy functioning (Trapnell, 1994). There are also different models of the facet structure of personality (e.g., DeYoung, Quilty, & Peterson, 2007). Evidence in maladaptive personality research suggests that variance at the maladaptive tails of trait dimensions extends past the normal range (Morey et al., 2012; Suzuki, Samuel, Pahlen, & Krueger, 2015), and a parallel argument could be made that trait measures focused on adaptive content would better capture healthy personality than a normal-range instrument. From a broader perspective, many theorists regard traits as just one level of personality (e.g., DeYoung, 2015; Hopwood, 2018; Leary, 1957; McAdams & Pals, 2006; McCrae & Costa, 2003). Other levels, such as characteristic adaptations or dynamic signatures that play out in particular environmental contexts, are also likely to be important for understanding healthy personality functioning, but they are not captured in our approach. While there are practical advantages to using the NEO-PI-R model to understand the pattern of facets associated with healthy functioning, it would be useful for future work to elaborate these ideas in terms of other models of personality traits (e.g., McGrath et al., 2017) and concepts (e.g., McAdams & Pals, 2006).

The expert-rating approach has significant strengths and weaknesses for this kind of research. As discussed above, this approach has been successfully used to understand the normal trait variation underlying maladaptive personality constructs. It also overcomes some of the limitations of single-authored theories, including blind spots and an overemphasis on a single individual's preferred ideas. That being said, ultimately this descriptive approach does not inform us about why different facets were thought to be optimal, and human history has proven many times that it is entirely possible for the views typical of a large body of experts to be wrong. Ultimately, concatenating different visions of the healthy personality from well-regarded theorists, different theoretical viewpoints (e.g., positive, psychoanalytic, and trait psychology), and empirical data will be needed to move the field toward a more functional understanding of why certain kinds of personalities tend to flourish.

Our use of a single profile to represent healthy personality traits is both a strength and a limitation. As described above, the profile approach allows us to quantify overall psychological health using a single number that takes into account the scores of a relatively comprehensive set of personality traits. However, substantial in-

formation about specific traits is lost in this approach, and it masks the fact that different personalities may be more or less adaptive for different people in different contexts. For example, findings have suggested that elevated levels of conscientiousness may be adaptive in high-complexity jobs, but increasing levels results in diminished performance for low-complexity roles (Le et al., 2011). There are also empirical issues with the profile approach, such as the influence of normativeness that we addressed in this article, and the fact that different aspects of a profile can impact similarity coefficients (e.g., Furr, 2008). With these issues in mind, we believe that the healthy personality profile derived in this study has an important place in future research, but that it should be complemented with other approaches to fully understand healthy personality functioning from a trait perspective.

Finally, our extensive use of Western convenience samples limited the generalizability of our findings in several ways. First, it remains an open question whether and to what degree the identified healthy personality profile generalizes to other cultures. We hope that future studies will extend our work by examining healthy personality profiles in different cultures using data from population-representative samples. Second, the majority of our validation samples were college students. More research is needed to test whether the healthy profile generated in this study is also adaptive in samples with different social backgrounds (e.g., low socioeconomic status) and across different life stages (e.g., old age).

Conclusion

This study supports the perspective that the healthy personality can be understood as a configuration of normal personality traits as represented by the FFM. Individuals with a personality profile composed of low neuroticism along with high levels of openness to feelings, warmth, positive emotions, and straightforwardness, behave in a manner consistent with healthy personality functioning. This research integrates a number of historical threads in the literature on optimal human personality configurations and provides a practical means for future research on this important and interesting topic.

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Selective Social Learning: New Perspectives on Learning From Others

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This special issue was motivated by the recent, wide-ranging interest in the development of children's selective social learning. Human beings have a far-reaching dependence on others for information, and the focus of this issue is on the processes by which children selectively and intelligently learn from others. It showcases some of the finest current work in this area and also aims to encourage new lines of investigation and new ways of thinking about how children learn from others. This issue also serves to highlight this new direction in basic research for the broader community of researchers, educators, and practitioners. Research on issues related to the facilitation of social learning has clear relevance to early educational contexts. In addition, by bringing together a varied pool of research on the same general topic, developmental scientists can discern the consistencies and themes that emerge from their collective efforts. The work presented here illustrates the breadth of children's selectivity across ages and domains of development, and it highlights the growing range of methods that can be recruited to investigate selectivity. This new research leads the field to reconsider the various ways in which social information guides learning and calls for novel theoretical accounts of these developments.

Keywords: social learning, cognitive development, selective trust

The articles in this special issue pose important questions concerning how children learn from others, what the characteristic signatures of social learning might be, and how this learning changes over time. In a historical sense, much of the work here carries a distinctly Vygotskian spirit, by investigating the means by which children gain information from social partners. Key aspects of cognitive development, such as children's epistemic evaluations, likely occur first in the realm of social interaction. But the research is also inspired by Piaget, who conceived of the child as an active, self-motivated seeker of knowledge, constrained by their own state of logical thinking. Current research on children's selective learning lies at the interface of these theoretical perspectives and represent a happy marriage of these two great theorists. As children and adults interact, adults indirectly teach children how to make inferences about behavior, causality, natural categories, and human intentions. However, children do not blindly trust the words of others, and their changing conceptual understanding is often not a simple reflection of what they have been told to believe (or not to believe). New lines of research, many of which appear in the following pages, have led the field to reconsider the ways in which social information is transmitted, the epistemic properties that constrain social learning, as well as the roles played

by the learner, speaker, and learning environment in this transmission process.

When Are Children Selective?

Much of what we know comes secondhand, by being told the relevant information by others. In some cases, such as the learning of word meanings, other people are the sole source of information available to us. In some other cases, we rely on others because we lack the knowledge or conceptual understanding needed to gain the relevant information ourselves. The bulk of the literature on our topic to date has played out with respect to how children's social and conceptual understandings might lead them to be selective in what they learn from what others say, or their "testimony." For instance, the early work focused on whether children would learn well from speakers who lacked knowledge (e.g., Sabbagh & Baldwin, 2001) or from a speaker who had a history of being inaccurate (Koenig, Clément, & Harris, 2004). Since then, there has been a steady stream of studies focused on mapping out the range of circumstances under which children will show selective learning. Mills (2013) reviews the extant evidence on the question and draws some compelling conclusions about what is known about the character of children's selective social learning and how it develops in parallel with children's cognitive and conceptual understandings. It appears that selective social learning is an early emerging feature of children's learning more generally and that it becomes increasingly refined as children's understandings of knowledge and the factors that affect its social transmission become more sophisticated.

Several of the articles we have included here represent the next steps in the process of mapping out the extent to which children's selective social learning is affected by various kinds of specifically epistemic information. Some epistemic properties are carried primarily by the speech act itself (Chen & Waxman, 2013), some are

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inherent in the source (Corriveau, Kinzler, & Harris, 2013; Kushnir, Vredenburg, & Schneider, 2013; Scofield, Gilpin, Pierucci, & Morgan, 2013), some are signaled by the relation between the statement and the world (Gillis & Nilsen, 2013), and some are implicit in our use of language (Gelman, Ware, Mancoff, & Graham, 2013). Some of this research branches out to new explorations of children's uses of previously unstudied sources of information, such as text (Robinson, Einav, & Fox, 2013) or non-verbal conventional gestures (Fusaro & Harris, 2013). Other studies look at children's use of remarkably subtle variations in message quality (Gillis & Nilsen, 2013) and formal aspects of language (Sobel & Macris, 2013) that affect older children's selective learning. Several studies also consider how far children generalize their trust in a given speaker in the domains of causal knowledge (Kushnir et al., 2013), language (Sobel & Macris, 2013), and moral behavior (Doebel & Koenig, 2013). In line with recent findings that children monitor a speaker's visual access when learning visual information and monitor their expertise when learning object labels (Brosseau-Liard & Birch, 2011), several articles find further support for the idea that children appreciate certain domain-specific connections between the competence of the source and the knowledge to be gained (Fitneva, Lam, & Dunfield, 2013; Kushnir et al., 2013; Sobel & Macris, 2013). When taken together, these findings are changing how we understand the nature of children's learning from others. By carefully examining the information speakers provide as well as the nature of the learner, we are starting to get a sense for the active role that children play in their own conceptual development and knowledge acquisition.

Beyond Epistemic Considerations: Conventions, Social Group Status, and Motives

There is growing recognition that in many of the research paradigms that have been used to measure selective social learning, children may be making judgments about speakers that go beyond categorical epistemic judgments (e.g., knowledgeable vs. ignorant; see, e.g., Lucas & Lewis, 2010, for a review). For instance, in some variations of the paradigm, speakers establish their epistemic reliability in a "history phase" wherein they either correctly or incorrectly label well-known items (i.e., calling a ball a shoe). These inaccurate speakers are many things—they are factually wrong in their statements, they deviate from the conventions of a given language community, they are bizarre in their unmarked expression of an overt naming error, and they violate the cooperative norm of truthfulness that characterizes communication. This leaves the basis for children's selectivity unclear, and recognition of this has led to investigations that examine the importance of conventional, socially relevant characteristics of speakers. In one set of investigations, Corriveau et al. (2013) examined whether young children might consider a speaker's nonnative accent as a basis for selective learning, even when that speaker has a history of being reliable. Reyes-Jacquez and Echols (2013) report findings showing that nonepistemic information such as how similar or familiar an informant might be to children can also affect the extent to which children learn from that informant, sometimes independent of the informant's epistemic status. In Scofield et al. (2013), the authors pull apart the success of the outcome and the conventionality of the means in the *action* do-

main. Equally intriguing are findings from Chen and Waxman (2013), who examine whether 14-month-olds' tendency to imitate an unusual action is affected by whether an adult labels the action or not. These findings are important because they clearly indicate that young children's selective learning can be shaped not only by epistemic considerations but also by their appeal to cultural beliefs and values.

The exchange of social information almost always involves some interaction of people's practical interests. Heyman, Fu, and Lee (2013) examine the extent to which school-age children judge positive messages as more credible than negative ones and whether this might vary by age and by culture. This research highlights the idea that as listeners, although our interest may often lie in learning reliable information, our own motives and self-conceptions often influence what we judge to be true. As speakers, our interests are not as easy to describe: We are not aptly characterized as recording devices in the service of providing others with reliable information. Instead, as speakers, we are interested in having the freedom to express our beliefs as we so choose, when we so choose (Mercier & Sperber, 2011). Given that listeners and speakers are not always governed by shared goals, child listeners take the right lead by monitoring situations for evidence of speakers' goodwill. For example, Liu, Vanderbilt, and Heyman (2013) investigate children's use of information regarding a speaker's intention as well as the outcome caused by the message, and Doebel and Koenig (2013) examine the role played by valence in children's evaluations of morally good and bad agents. Taken together, these findings suggest that children use both positive and negative information when deciding what to believe at the level of the behavior, intention and outcome, and the challenge for researchers is to integrate effects of positivity and negativity in children's evaluations. For the learner, the optimal approach is one that is efficient at dealing with the most frequent occurrences (e.g., positive messages, accurate statements), but also the most important occurrences (e.g., harmful agents, misinformation). Another implication is that children's willingness to learn from someone often goes well beyond information conveyed by the statements themselves to incorporate speakers' moral behavior, the desirability of statements, as well as the more general situations in which they occur.

New Challenges

There remain fundamentally important issues for this relatively young area of research. Though there are many, here are three that we think are particularly pressing. The first concerns being clear about the kinds of general conclusions that we can draw given the experimental paradigms that are being used. For instance, in some paradigms, children are presented with two speakers who differ from one another on a particular relevant dimension (e.g., historically accurate vs. inaccurate, native vs. nonnative accent, etc.). When researchers find evidence for selective learning in these cases, what they typically mean is that children as a group were more likely to endorse one speaker's information relative to the other. These findings demonstrate clearly children's sensitivity to the dimension, and it is possible that they do this because the experimenter has emphasized the pragmatic relevance of that contrast. Yet it is important to avoid recasting these findings into generalizations that go beyond claims of sensitivity. For instance, one

should not conclude that children do not learn well from speakers with non-native accents simply because of a preferential endorsement of a native-accented speaker. Of course, single-speaker paradigms in which children's learning from just one speaker under different between-subjects conditions might be vulnerable to the opposite concern. Positive findings might be strongly interpreted as indicators of circumstances under which children will and will not learn, but null findings should not be taken as evidence of a wholesale insensitivity. With this in mind, we might argue that a complete characterization of children's selective social learning may require new and multiple methods that take into account the kind of information being scrutinized, the precise research question being posed (e.g., "Are children sensitive to x?"; "How well do children learn?"), as well as children's ages.

A second set of questions centers on how, from a mechanistic standpoint, children actually instantiate selective social learning. The findings that have mapped out the kinds of situations in which children will show selective social learning bear on the mechanistic question by showing the kinds of conceptual understandings that children take into account when learning from others (see Mills, 2013). Yet, fundamental questions remain regarding at what stage in the learning process children start to show their selectivity. Do they show selectivity at encoding whereby they ignore or otherwise weaken their encoding of the information that comes from speakers they select against? Or, do they show their selectivity at recall whereby they make an online decision involving a careful consideration of both options and ultimately a selection of the one they think is optimal given the situation? Perhaps selective social learning involves some combination of encoding and recall modifications. We are pleased to note that some of the articles we included begin to take these issues seriously by, for instance, examining the extent to which children encode the difference between two speakers, the extent to which they recall and use the information in a learning phase, how they explicitly rate the proficiency of the two speakers, and whether properties of the speaker effect speed of processing (e.g., Ahnert, Milatz, Kappler, Schneiderwind, & Fischer, 2013; Doebel & Koenig, 2013; Gillis & Nilsen, 2013; Scofield et al., 2013). Although there has been variation in what individual researchers do with these data and the conclusions they draw, these approaches nonetheless underscore the larger goal of gaining a detailed understanding of the cognitive along with the conceptual factors that affect selective social learning.

A third set of questions concerns *why* children are selective. Much of the work that introduced children's selectivity started with the "argument from error" and stressed the risks inherent in testimony as a source of information. Though this "epistemically adaptive" framework has provided a useful way of framing many of the hypotheses from the selective social learning literature, there are a couple of evident challenges. The first and most obvious is that it pertains primarily to the findings that have speakers' broad epistemic characteristics at stake and does not straightforwardly account for why children might show selective social learning based on more explicitly social aspects of characteristics like group membership or prior goodwill. A second difficulty is that this framework tends to interpret children's performance against a yardstick of rationality when we know that adults and children often endorse and accept all sorts of questionable and arguably false ideas. An important lesson, often missed when we focus on

the normative paths taken by typically developing, middle-class children is that children encounter a wide range of information, differing in its support, and this likely effects aspects of both the nature of knowledge and the factors that characterize its transmission. A third difficulty is that the "epistemically adaptive" framework says little about where the motivation comes from. Approaches to this difficult issue might come in two complementary forms. On the one hand, there might be ways in which processes of development and evolution have endowed children with a disposition to learn only from trusted others. For instance, there is some evidence from neuroendocrinology that those in the presence of a loved one experience a surge in oxytocin, which itself has been associated with taking a more trusting stance toward others (see Donaldson & Young, 2008, for a review). On the other hand, some aspects of the selective learning strategy might be acquired with experience. With respect to this second approach, Shutts, Kinzler, and DeJesus (2013) suggest that important insights into the bases of children's selectivity might be found in children's early learning about foods. Learning about food is a social learning problem with significant consequences for health and survival. It may be that children's early reliance on others for information about the sociobiological practice of eating may provide a foundation for selective learning from others in nonfood domains.

Extending the Scope of Selective Social Learning

In putting together this collection of articles, we were consistently struck by a close resonance between the general topic of selective social learning and sociocultural approaches to cognitive development. Sociocultural approaches to cognitive development emphasize the importance of children's attention to sociocultural norms and practices as a means of acquiring the cognitive and practical skills that are necessary to become a participating member of one's community (e.g., Rogoff, 2003). Of particular importance in this regard is the role of more knowledgeable others in providing opportunities for learning. Though the role of more knowledgeable others may not be strictly codified (i.e., a "teacher"), interactions with more knowledgeable others provide learners with the opportunities to both observe skillfully executed cultural practices and be supervised in their own practice of an emergent skill (Rogoff, Paradise, Arauz, Correa-Chávez, & Angelillo, 2003). The work on children's selective social learning complements and extends this perspective by showing that children can have sensitive understandings of what makes a more knowledgeable other. Moreover, children use this information when determining whether they should take a given exchange as an opportunity for learning about social-cultural norms and practices (such as story-telling; Tsethlikai & Rogoff, 2013).

Beyond what we believe is a natural fit between sociocultural approaches and selective social learning, taking an explicit sociocultural approach to the study of selective social raises questions about the role that cultural experience might play in shaping selective social learning. One article examines the ways in which cultural experience and formal linguistic features within particular languages (i.e., evidential markers) might sensitize people to the epistemic states of information providers (Lucas, Lewis, Pala, Wong, & Berridge, 2013). Another article considers how the typical structure of formal learning opportunities across cultures might be more or less conducive to children's expressions of doubt

and skepticism (Chan & Tardif, 2013). This work is illustrative of two facets of the connection between selective social learning and sociocultural approaches to cognitive development. First, as described above, children appear to be adept at identifying more knowledgeable others' in their social world and using that information to take appropriate opportunities. Second, the extent to which children are willing and able to guide their learning may be shaped at least to some extent by the flexibility with which learning opportunities are structured within a given sociocultural community.

One exciting development from our perspective is that taking a broadly sociocultural approach to selective social learning has led to important novel directions. One direction has been to focus on the experiential factors that might affect underlying expectations about what constitutes "reliable" information. Along these lines, one article examines how individual differences in children's talk about evidence relates to their parents' beliefs about the empirical bases of knowledge (Luce, Callanan, & Smilovic, 2013). Another article that was meant to be included in this issue but was accidentally published in advance showed that there are meaningful formal differences in how parents provide generalizable semantic information (i.e., "generics") about the world as compared with idiosyncratic facts about individuals (Gelman et al., 2013). A second direction has been to consider how cultural experience may direct learners' attention toward particularly relevant information in their surroundings. For instance, one article explores how individual differences in children's participation in traditional cultural practices relate to their recall for a folktale in that culture (Tsethlikai & Rogoff, 2013). These new directions are important in that they underscore a general point that there may be aspects of our society that actively instigate and encourage a given pattern of selective learning.

Equally exciting are findings that have important implications for understanding how such learning might play out in more formal educational settings. To the extent that teachers manifest characteristics that the experimental work has shown leads children to select against endorsing or learning information from a given speaker, it is reasonable to expect predictable effects in the classroom. Although not directly investigating this particular question, we have been able to include in this issue studies that investigate how the quality of the relationship between a teacher and child may affect cognitive performance in the classroom (Ahnert et al., 2013) and the role of culture and development on children's evaluation of critical feedback (Heyman et al., 2013). Finally, we would like to echo Tsethlikai and Rogoff's (2013) point that taking a sociocultural approach to selective social learning may be instructive in finding ways for Western practices to coexist with non-Western ones in the classroom to promote an expanded repertoire of practices that benefit children's learning.

Conclusion

All models of cognitive and conceptual development, especially those that descend from the general approaches set out by Piaget and Vygotsky, admit a critical role for experience in shaping the content and character of development. Though very different in terms of their characterization of how, specifically, experience affects development, all have in common a relatively idealized model of experiential effects. Children are implicitly viewed as

recipients of information that is faithfully provided by some source that is invested in children's cognitive development. Within this very general model, children are viewed as active insofar as they evaluate the information they receive with respect to their current knowledge of the world or abilities. Those evaluations then shape the extent to which children apply the information they receive to the various jobs of cognitive development, such as the development of abstract causal understandings of how the world works or of how to complete increasingly complex tasks. Of course, this idealized model is likely incomplete in several ways. The work included in this special issue shows that children are active and selective in the extent to which they seek and integrate information from social sources. Whether information gleaned from a social source affects children's cognitive and conceptual development is shaped by a host of factors related to the nature of knowledge and the fundamentally social processes of transmitted information. It is our hope that the work assembled in this special issue will show what we currently know to be the bases of children's selective social learning. More broadly, we hope that this work, demonstrating the effects of explicitly social and social cognitive factors on knowledge and skill acquisition, can lead to a greater acknowledgement of the importance of these factors in establishing best practices in both formal and informal educational settings.

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Both 'being with' and 'doing to': Borderline personality disorder and the integration of humanistic values in contemporary therapy practice

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Content and Focus: Taking one of the key dimensions of counselling psychology as a focal point, namely its 'humanistic value base', this article explores how humanistic values can be integrated into therapeutic work with clients diagnosed with borderline personality disorder in contemporary health care settings. It starts by outlining borderline personality disorder as a diagnostic category, highlighting some of the associated controversies discussed in the literature, followed by a consideration of clients' perspectives as presented by qualitative research. It then considers key humanistic values relevant to the philosophical basis of counselling psychology and discusses some of the dilemmas that may arise when applying these values to practice. Finally, it examines potential overlaps and conflicts between humanistic principles and one particular therapeutic approach for working with borderline presentations, Dialectical Behaviour Therapy (DBT).

Conclusions: While a humanistic perspective on borderline personality disorder accords with the philosophical basis of counselling psychology, adopting a purely humanistic stance could sometimes be counter-productive when working with this client group. However, when skilfully interwoven with more directive strategies as in dialectical behaviour therapy, humanistically-informed relational work may be a key ingredient in working effectively with this client group. While such integration may be problematic, the dilemma could be fruitfully approached from different perspectives.

Keywords: Behaviourism; borderline personality disorder; counselling psychology; dialectical behaviour therapy; humanistic values; therapeutic relationship.

AN INCREASING NUMBER of counselling psychologists now work in secondary and tertiary health care services, taking up roles that hardly differ from those of their clinical psychology colleagues and seeing clients who present with very severe and longstanding difficulties, for example, those as represented by the diagnostic category of 'borderline personality disorder'. Any psychological work that is based on or targeted at a particular diagnosis is to a greater or lesser extent in contact with the medical model, something that may pose problems for those practitioners who wish to approach clients as individual human beings rather than as representatives of a particular category that may also be in danger of

'othering' them by means of a pathologising discourse. Working with 'borderline personality disorder' as a counselling psychologist could be seen as bringing up such tensions to a particular high degree. Not only is the question of diagnosis as a precondition for therapy a potential stumbling block for counselling psychologists, but even where diagnosis is seen as useful, the borderline label may not be very clear or straightforward. For example, when attempting to define 'borderline personality disorder', a number of controversies present themselves. Firstly, the term 'borderline' itself is controversial, deriving from psychoanalytic understandings of patients who neither fit the 'neurotic' nor the 'psychotic' categories.

Secondly, the validity of the concept of 'personality disorder' has not only been questioned in itself (Ramon, Castillo & Morant, 2001) but doubts about its applicability to people who present with difficulties that are regarded as 'borderline' have also been raised (Tyrer, 1999). Thirdly, the legitimacy of a single diagnostic category for the diversity of presentations falling under it can be questioned. Borderline personality disorder has been termed a 'motley diagnosis' (Tyrer, 1999), a 'diagnostic dump' (Appignanesi, 2008) for anyone fitting five out of nine different criteria (which makes for more than 200 possible combinations) as set out in *DSM-IV*, that is, fear of abandonment, unstable relationships, identity disturbance, impulsivity, recurrent suicidal behaviour, affective instability, chronic feelings of emptiness, anger management problems, transient dissociative states or paranoid ideation (APA, 2000). These criteria, along with the criteria for other personality disorders, have been reviewed in preparation for *DSM-5* (APA, 2012), scheduled to be published in May 2013. It is noteworthy that the new criteria underwent several major revisions due to the controversies sparked by the initially proposed changes. The final version seems to remain relatively close to the former construct and emphasises traits such as emotional lability, anxiousness, separation insecurity, depression, impulsivity, risk taking and hostility.

In view of the inevitably great heterogeneity among those diagnosed with the disorder – and considering that the majority are diagnosed with additional disorders – it comes perhaps as no surprise that the validity of this diagnostic category has been criticised not only by those who position themselves outside the medical model but also by those clearly located within it. For example, the National Institute for Health and Clinical Excellence guidelines on the treatment and management of borderline personality disorder describe it as 'the most contentious of all the personality disorder subtypes' (NICE, 2009, p.7), noting consid-

erable fluctuation of the number of criteria any one person can present with over time and that over 50 per cent no longer meet criteria for borderline personality disorder five to 10 years after first diagnosis (Zanarini et al, 2003), which contradicts the general definition of personality disorders as stable over time.

Despite the openly acknowledged difficulties regarding the validity of this diagnostic category, the ontological reality of borderline personality disorder is rarely questioned within the medical model. With 70 per cent of those diagnosed being women and with a large proportion reporting childhood sexual abuse, criticism from a feminist perspective has called the diagnosis 'a controlling classification' (Appignanesi, 2008, p.503) that explains away 'the strategies which some women use to survive and resist oppression and abuse' and fails 'to locate and understand distress within its social context' (Shaw & Proctor, 2005, p.484). Further criticism concerns the psychiatric requirement to apply a label to sufferers before help is extended (Warner, 2005) so that people are fitted to a category of mental illness, even if this entails losing validity. Although assigning sufferers to overarching diagnostic categories may cost-effectively simplify service delivery, one can ask how much of the client is lost within this classification system and to what extent this can be acknowledged or, if possible, alleviated.

Client perspectives

While clients' perspectives have traditionally been missing from dominant accounts in the field of mental health, some recent qualitative research has focused on service users' views. According to Horn, Johnstone and Brooke (2007), being diagnosed with borderline personality disorder was sometimes experienced as being about 'not fitting' and being rejected while also leading to a sense of control through knowledge, eliciting hope and the possibility of change. Similarly, Nehls (1999) showed that ambivalent responses to being diagnosed referred

to hope for help on the one hand and fear of being marginalised and negatively perceived on the other. The validity of the concerns regarding being labelled has been confirmed by research into the attitudes of mental health professionals. For example, psychiatric nursing staff have been shown to express more empathy to people with schizophrenia than borderline personality disorder (Gallop et al., 1989) and as being less optimistic about this disorder and more negative about working with this presentation compared to schizophrenia or depression (Markham, 2003). Stigmatisation of clients with this diagnosis has been explained as due to the erroneous assumption that sufferers have control over their behaviour, leading to the recommendation that the problems should be viewed as reflecting 'pathology' rather than the person (Aviram, Brodsky & Stanley, 2006). Seen in this light, a medicalised view in which individuals are seen as 'sick' rather than 'bad' (Gallop et al., 1989) could reduce stigma and be perceived as helpful by clients.

However, such a view might fall into the trap of the 'false dichotomy between health and illness' (du Plock, 2010, p.140), neglecting the fundamentally subjective, context-bound and human experience of mental distress. Using the life history narrative method, Miller (1994) explored the experiences of people diagnosed with this disorder and found that despite the heterogeneity of presentations there were striking similarities in people's narratives and these differed substantially from clinical descriptions of the disorder. Common themes identified were estrangement and despair linked with a sense of overwhelming emotional pain as well as a sense of inadequacy. Ramon et al. (2001) make a related point, describing participants diagnosed with personality disorders as 'unhappy and lonely people, rather than angry, unable to reason, irresponsible or callous' (p.10). These studies would suggest that what is missing in the current diagnostic system is not necessarily a clearly delineated core concept of the disorder but recognition

of the individually varying experiences of distress and suffering that drive people to despair and desperate actions which may become entrenched within their behavioural repertoire. To capture and do justice to the actual experience of sufferers, priority may need to be given to people's phenomenological realities and meaning-making, a key element of a humanistic stance vis-à-vis psychological distress. It constitutes a particular concern for counselling psychologists, forming part of the discipline's commitment to a humanistic value system (Milton, Craven & Coyle, 2010).

Humanistic values and practice dilemmas

While counselling psychology views the humanistic paradigm as a therapeutic approach as only one of several perspectives to draw on, the fact that, as a discipline, it subscribes to its value base accords this paradigm special status and merits a brief exploration before focusing attention on its application to the presenting concerns under discussion. Having developed as the 'third force' in opposition to the dominant paradigms of behaviourism and psychoanalysis (McLeod, 2003), the humanistic paradigm embraces a holistic view of human beings and rejects diagnosis as reducing clients to pre-determined categories within a generalised classification (Gillon, 2007). The idea of 'wholeness' also implies a belief in the potential of human beings to be truly 'whole' (or 'healed'), to carry within themselves the seeds for self-actualisation and growth, for example, conceptualised as 'the actualising tendency' in person-centred theory (Rogers, 1951). Additionally, human beings are regarded as autonomous, conscious and free agents, and there is an emphasis on the uniqueness of human beings, the importance of subjective experience and personal meaning-making. It must be conceded with du Plock (2010) that these assumptions may be 'overly optimistic' (p.134) and that a humanistic outlook may need to be balanced by existentialist reflections on the limitations of human existence

(du Plock, 2010) and social-constructionist and postmodernist considerations of the cultural and historical situatedness of persons (Strawbridge & Woolfe, 2010). However, despite these concessions a humanistic perspective remains of fundamental importance within (pluralistic) counselling psychology practice and can be reflected in practitioners' attitudes or the ethos that they bring to practice (Ashley, 2010).

Counselling psychologists approaching their work with clients diagnosed with borderline personality disorder with a humanistic attitude may, however, face some dilemmas. Being critical of the pathologising impact of diagnostic labels, it must nevertheless be recognised that for many clients the recognition of being 'ill' rather than 'bad' comes as a relief, as the externalisation of distress and difficulties through 'illness' can help to develop a 'less punitive self-concept' (Douglas, 2010). Furthermore, focusing on potentiality over deficiency and communicating belief in the client's actualising tendency could sometimes be perceived as invalidating the client's experience of excruciating pain and of themselves as fundamentally flawed. Equally, communicating the humanistic assumption that the client is an autonomous, freely choosing agent could further contradict the client's experience of being out of control, a central feature for many clients who engage in suicidal, self-harming or otherwise (self-)damaging behaviours. Thus, adopting a purely humanistic stance could at times even be counter-productive with this client group.

Relational challenges

Considering some of the main humanistic principles with regard to therapeutic practice, additional dilemmas may emerge. Although the paradigm emphasises potentiality over deficiency (Gillon, 2007), some explanations for the development of psychological distress have been advanced. In the person-centred perspective human distress is viewed as resulting from 'incongruence', that is, discrepancies between experiences of the

organism as a whole and what is acknowledged within the 'self' (Gillon, 2007), often due to an invalidating environment and its particular 'conditions of worth', in which the pursuit of positive regard has led to a devaluation of a person's organismic valuing process (Wilkins, 2005). Humanistically-orientated therapeutic core assumptions, therefore, include an emphasis on process, underpinned by trust in the client's potential for growth and a belief in the healing potential of the therapeutic relationship (McLeod, 2003). This relationship is seen as central and is characterised as a 'real' encounter between authentic human beings, a kind of 'fellow-travelling relationship' (du Plock, 2010, p.131) with the therapist taking a non-authoritative, often non-directive stance and offering Rogerian 'core conditions' including empathy, congruence and unconditional positive regard, which – in person-centred therapy, for example – are seen as 'necessary and sufficient' to facilitate client change.

Adapting these principles to working with clients labelled as 'borderline', Warner (2000, 2005) has put forward a developmentally based person-centred model on how to work with what she calls 'fragile process' in clients who, as a result of 'empathic failure' in childhood, have difficulties modulating the intensity of their experiences. This requires the 'ongoing presence of a soothing, empathic person', as clients 'want to be understood and affirmed in the rightness of the experience' (Warner, 2000, p.151) and need 'more than an accepting presence' (p.153) for example highly advanced listening skills, higher frequency of sessions and a connection with the therapist between sessions through telephone contact or holding objects belonging to the therapist (p.155). While counselling psychologists may not necessarily adhere to model-specific humanistic guidelines and may draw on a variety of other methods and techniques, the humanistic element of their work can be seen to lie in 'the philosophical position from which they do it' (Strawbridge & Woolfe, 2010, p.11), often described as a stance of 'being with' rather than 'doing

to' (e.g. Ashley, 2010; du Plock, 2010; Gillon, 2007), thus embracing much of what has been stated above concerning the therapeutic relationship.

Approaching the work with highly suicidal clients from a perspective of 'being with' rather than 'doing to', however, raises conflicts and dilemmas, not to mention anxieties for the practitioner and possibly increases risks for the client. For example, empathising with clients who want to kill themselves and trusting in their autonomy and freedom to choose may not only constitute a neglect of the therapist's responsibility with regard to risk issues – and the risk of actual completion of suicide is 10 per cent among people diagnosed with this disorder (NICE, 2009) – but empathy alone may not necessarily be helpful to suicidal clients for other reasons too, as it could confirm their experience of themselves as unworthy of being protected and cared for and that suicide is a viable option. Furthermore, a non-directive attitude in the light of a highly suicidal or highly aroused and angry client can significantly stretch or violate a therapist's personal boundaries, which in turn poses a threat for the beneficial workings of the therapeutic relationship. Humanistic approaches would acknowledge that high-risk situations call for greater intervention, that is, a degree of 'doing to'; however, when working with suicidal threats and behaviours as a recurrent issue, there could be a temptation for the therapist to become increasingly risk-averse and overly directive in style at the expense of a more client-focused exploration of the meanings and functions of the suicidal material (Milton, 2001). This suggests that counselling psychologists may need to develop ways of working safely with highly suicidal and otherwise (self-)destructive presenting issues that do not involve forsaking their humanistic commitments.

Dialectical behaviour therapy and humanistic concerns

While Warner's (2000) suggestions above regarding work with 'fragile process' may

perhaps best be applied in private practice and with clients who are not acutely suicidal, some of the suggestions she makes, that is, telephone contact and adapting the frequency of sessions, bear resemblance to adaptations in contemporary clinical settings for therapeutic practice with clients diagnosed with borderline personality disorder, for example as in dialectical behaviour therapy (DBT). DBT has been developed in the US by Marsha Linehan (1993) for clients diagnosed with borderline personality disorder and has been endorsed as one of the treatments of choice in the UK (NICE, 2009). DBT, which explains borderline personality disorder as an emotion regulation disorder caused by a combination of biological factors and an invalidating environment, is an intensive therapy programme based on cognitive-behavioural principles and Zen philosophy and aims to help clients reduce suicidal and other damaging behaviours by bridging paradoxes through a dialectical process, for example, most prominently through the dialectic of acceptance and change. An increasing number of counselling psychologists now work in DBT services, and the question Douglas (2010, p.24) has raised on 'how to retain a humanistic value base within a framework dominated by a medical model of distress' can be legitimately asked in this context, as DBT is at least partly grounded in the medical model and employs behaviourist principles and strategies to effect change, placing it squarely in opposition to humanistic principles.

However, DBT attaches equal importance to the principle of acceptance, employs mindfulness as a major technique as well as Zen Buddhist ideas, views the 'real' relationship between therapist and client as central and makes use of a variety of validation strategies. This validation aspect accords more easily with a humanistic stance. The core DBT principle of validation has, for example, been described as 'a higher-order construct that involves all three of Carl Rogers's therapeutic conditions' (Bohart & Greenberg, 1997, p.435). However, validation in DBT is also interwoven with change

strategies. While this may contradict humanistic concerns, it can also be seen as a way of managing the challenging dynamic of working with suicidal clients and is designed to serve the long-term goals of self-validation and self-actualisation. By using the dialectical process of moving from validating the client's wish to die (as problem-solving) to the potentially invalidating but life-saving suggestion to try distress tolerance skills and stay alive, the therapist can avoid either 'falling into the pool with the client' (Linehan, 1997, p.363) or jumping into action at every mention of suicide.

While the importance of the therapeutic relationship has always been emphasised in DBT, it has only recently become the focus of research designed to contribute to the model's substantial evidence base. For example, a randomised controlled trial (RCT) by Bedics et al. (2012a) which compared the therapeutic relationship in DBT with that in 'community treatment by experts' found that DBT participants reported significantly greater self-affirmation, self-love and self-protection at one-year follow-up. It was also shown that participants who experienced their therapist as affirming and protecting engaged in less self-injury. However, the researchers emphasised the particular mix of acceptance and change or autonomy and control as essential and associated with better outcome. A second RCT study by the same team of researchers (Bedics et al., 2012b), which studied the therapeutic relationship more intensively, confirmed the previous results. However, it was observed that stringent adherence to dialectics could also be counter-productive. Therapists who rated themselves as more highly adherent tended to have worse outcomes, and, as the authors noted, while a commitment to the philosophy of DBT is important, a rigidly adherent stance to the manual is not actually model-adherent, as, for example, a greater emphasis on validation could be warranted at times. Achieving a balanced relationship is thus not a text-book exercise but something that could be

more likened to a dance, requiring not only model-specific knowledge and skill but also sensitivity and humanity.

Towards a human therapeutic relationship

So, the real opposite to doing DBT is to be static, rigid and set in one's ways as a therapist, by using particular techniques and strategies inflexibly. With regard to a humanistic value base, the point here is that remaining flexible (and not to reject the directive and behaviourist aspects of therapy out of hand) could actually serve the therapeutic relationship and could even be well in line with humanistic values. According to a study by Cunningham, Wolbert and Lillie (2004) into client perceptions of DBT, achieving a balance between validation and change as well as experiencing genuineness and equality in a therapeutic relationship characterised as friendship or partnership were seen as most important ingredients of DBT. Similarly, Hodgetts, Wright and Gough (2007) found that clients saw the relationship with their therapist as most valuable, particularly when they had a collaborative working relationship which also included therapist self-disclosure. As one participant put it, '[t]he sharing that goes on in, like in individual therapy, is it's really human' (p.175). DBT may, therefore, provide a potential structure within which humanistic values can be maintained, even with this frequently very challenging client group, requiring perhaps a highly developed way of skilfully moving between 'being with' and 'doing to' in pursuit of achieving synthesis and balance to meet the clients' needs.

Implications for counselling psychology practice

Although DBT could thus be said to be partly amenable to the application of humanistic values and attitudes, some fundamental aspects of this approach are clearly in opposition, for example, its medicalised discourse, its manualised, highly structured form and its behaviourist assumptions and

procedures. The resulting dilemmas faced by counselling psychologists could, however, be thought about in different ways. The behavioural element could, for example, be regarded as ultimately serving humanistic objectives, for example, keeping clients alive as a requirement for continued therapy. In this perspective, behaviourist strategies may be regarded as a 'necessary evil' providing effective ways of helping very fragile clients reach sufficient stability as an essential step on the road to a life worth living. Alternatively, the acceptance-change dialectic in DBT could be reframed in order to recognise that both poles relate to some humanistic values, with validation or 'being with' resonating with client-centred relational values, and change or 'doing to' tapping into humanistic endeavours to foster growth and self-fulfilment which, similar to coaching, would mean to adopt a role in which the therapist is committed to enhancing the client's life very actively. In this perspective, what matters is the humanistic spirit in which any intervention, whether related to acceptance or change, is delivered. Another response to the dilemma could be to view behaviourism as yet another paradigm to add to the counselling psychologist's pluralistic practice repertoire. This is, of course, not without tensions. As posited by Milton,

Craven and Coyle (2010), integration is not necessarily straightforward, and counselling psychologists may need to draw on the post-modern aspects of their philosophical basis to live with 'the tensions that exist between knowledge and values and the contexts in which they are used' (p.65). Taking this perspective, 'being with' and 'doing to' need not constitute an 'either-or' dilemma but could be constructed in terms of 'both-and'. Such a dialectical perspective would not only fit with the philosophy of DBT but also with an attitudinal stance of 'reflexive pluralism' (McAteer, 2010) that counselling psychologists are well-placed to draw on.

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