

# Who Wants to Change and How? On the Trait-Specificity of Personality Change Goals

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The study of volitional personality change has received increasing attention in recent years, suggesting that individuals want to change for the better particularly on those socially desirable characteristics that they lack. However, individuals do not want to change for the better on all (even socially desirable) traits alike. In a meta-analytic summary of evidence on the Big Five, we demonstrate that individuals' trait levels are only negatively related to their change goals for Neuroticism, Extraversion, and Conscientiousness, but not for Agreeableness and Openness to Experience. In three studies, two of them preregistered, we replicated these meta-analytic findings using the HEXACO model, showing negative relations between trait levels and change goals for all dimensions, except Honesty-Humility and Openness to Experience. Strikingly, however, these trait-specific differences in correlations of trait levels and change goals disappeared once providing individuals with personality feedback before assessing their change goals, suggesting that individuals may generally want to change for the better once having sufficient self-knowledge. Nonetheless, the mechanisms driving this desire differ between traits: Whereas the perceived social desirability of individuals' trait levels accounted for change goals on most HEXACO dimensions, it did not account for change goals on Honesty-Humility and Openness to Experience. By implication, a desire to have socially desirable characteristics that one lacks can explain change goals for some traits, but not for those traits underlying individual differences in values. As an aside, the studies offer vital information on personality development of the HEXACO dimensions over time, spanning 10 and 3.5 years, respectively.

*Keywords:* change goals, HEXACO, meta-analysis, social desirability, volitional personality change

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Personality traits are, by definition, relatively stable (Johnson, 1997; Roberts, 2009), yet people undergo consistent personality change over the course of their lives (e.g., Caspi & Roberts, 2001; Roberts et al., 2006). One determinant of these developmental processes that has gained increasing attention in recent years is the desire to change one's personality (Baumeister, 1994; Denissen et al., 2013; Hennecke et al., 2014; Kiecolt, 1994). According to this idea, personality development is to some extent self-regulated, meaning that people may change in line with how they *want* to be.

Indeed, evidence suggests that most people want to change certain aspects of their personality (e.g., Baranski et al., 2017; Hudson & Fraley, 2015; Hudson & Roberts, 2014; Robinson et al., 2015), and these desires to change can trigger corresponding personality development (e.g., Asadi et al., 2020; Hudson, Briley, et al., 2019; Hudson, Fraley, Briley, et al., 2020; Hudson, Fraley, Chopik, et al., 2020; Hudson & Fraley, 2015; Stieger, Wepfer, et al., 2020; but see Baranski et al., 2020).

However, what makes people want to change certain aspects of their personality? That is, who wants to change and how? Evidence addressing this question comes from studies showing that the desire to change on a certain trait in a socially desirable direction is negatively related to individuals' concurrent levels on that trait (e.g., Hudson, Derringer, et al., 2019; Hudson, Chopik, et al., 2020; Hudson & Fraley, 2015, 2016b; Hudson & Roberts, 2014; Quintus et al., 2017). For example, individuals who are low on Extraversion may want to become higher on this trait, arguably because higher levels on Extraversion are perceived to have desirable consequences (e.g., Hennecke et al., 2014; Wood & Denissen, 2015). However, as we will detail below, the relation between one's own level on a trait and the desire to change on that trait in a socially desirable way varies systematically across traits, showing a relatively strong (negative) correlation for some traits, but a weak or even zero correlation for other traits. Here, for the first time, we provide

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Additional materials (including the instructions and materials used in the studies as well as the data, analysis scripts, and complementary analyses) are available online at the Open Science Framework and can be accessed via the following link: <https://osf.io/trhzs/>.

We embrace the values of openness and transparency in science (Schönbrodt et al., 2015). Therefore, we followed the 21-word solution provided by Simmons et al. (2012). The Vrije Universiteit Amsterdam receives royalties from sales of the HEXACO-PI-R, which are used to support research by Reinout E. de Vries (no personal profit is made from those sales).

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a systematic empirical test of these trait-specific effects of individuals' trait levels on their personality change goals.

### Personality Change and Change Goals

Although personality is relatively stable (Anusic & Schimmack, 2016), there is now consistent evidence—most of it based on the Big Five—that people change over the entire life span. Most substantial trait changes occur in early adulthood (Lucas & Donnellan, 2011; Roberts et al., 2006), arguably because individuals have to adapt to new social roles and master corresponding developmental tasks, such as finding a partner, having a family, and starting a career (Hutteman et al., 2014). But even in middle and late adulthood, personality change continues, albeit at a slower pace (e.g., Bleidorn et al., 2009; Damian et al., 2019; Kandler et al., 2015; Lucas & Donnellan, 2011; Soto et al., 2011; Wortman et al., 2012). Accordingly, rank-order stability of personality traits increases from adolescence to adulthood where it remains relatively high (Ferguson, 2010; Roberts & DelVecchio, 2000), and it only starts to decrease again in (very) old age (Lucas & Donnellan, 2011; Specht et al., 2011; Wortman et al., 2012).

The processes leading to personality change are manifold (Bleidorn et al., 2020; Specht et al., 2014; Wagner et al., 2020; Wrzus & Roberts, 2017), including genetic as well as environmental influences such as life events (Bleidorn et al., 2018; Denissen et al., 2019; Specht et al., 2011). Crucially, research suggests that personality change can also be self-regulated to some extent, meaning that individuals' desires to change—that is, their *change goals*<sup>1</sup>—affect how they change (Denissen et al., 2013; Hennecke et al., 2014). From a functionalist perspective (e.g., Allport, 1937; Denissen & Penke, 2008; McCabe & Fleeson, 2012; Morf, 2006; Snyder, 1993; Wood et al., 2015), personality traits are sought to serve certain purposes or *functions*, respectively, thus reflecting means to desired ends. According to such a view, self-regulated personality change should occur whenever individuals perceive their current level on a trait as less functional and/or desirable and thus want to change for the better (Hennecke et al., 2014; Wood & Denissen, 2015).

Indeed, there is now consistent evidence that most people want to change certain aspects of their personality. For instance, when asked about personal goals in general, most people reported goals related to changing their personality (Miller et al., 2019). In turn, those having such desires to change usually want to change several aspects of their personality (Asadi et al., 2020; Baranski et al., 2017; Hudson, Derringer, et al., 2019; Hudson & Fraley, 2015, 2016a, 2016b; Hudson & Roberts, 2014; Robinson et al., 2015; Sun & Goodwin, 2020). Most commonly, individuals desire to increase in Extraversion and Conscientiousness and to decrease in Neuroticism. Moreover, some studies show desires to increase in Agreeableness and Openness to Experience, although evidence for these change goals is mixed (Baranski et al., 2017, 2020; Hudson, Briley, et al., 2019; Miller et al., 2019; Robinson et al., 2015).

### Change Goals and Concurrent Trait Levels

But who wants to change and how? According to prior research, individuals have a desire to have socially desirable characteristics (see, e.g., Hudson, Briley, et al., 2019). Indeed,

having socially desirable characteristics can have various benefits in interactions with others because they are more socially acceptable. In line with this reasoning, it has been argued that “the big five personality dimensions are socially desirable in and of themselves . . . , and accordingly, people want to increase in desirable traits that they lack” (Hudson & Roberts, 2014, p. 72).<sup>2</sup> Thus, according to such a “social desirability account,” individuals' trait levels should show a negative association with their change goals for any socially desirable characteristic: Those having relatively undesirable (e.g., low) levels on a certain trait should want to have more desirable (e.g., higher) levels on that trait in particular.

Table 1 provides a summary of evidence linking change goals to concurrent trait levels on the Big Five.<sup>3</sup> As is apparent, for Neuroticism, Extraversion, and Conscientiousness, trait levels and change goals indeed showed medium to large negative correlations of  $-.50 \leq r \leq -.37$  (i.e., sample size-weighted average; Field, 2001; Hunter & Schmidt, 1990). Complementing this evidence, recent research has shown that for these three traits in particular, individuals' change goal priorities match their relative standing on a trait: Those who want to increase (decrease) on one of these traits have lower (higher) levels than those who want to change on any other trait (Stieger, Eck, et al., 2020). By contrast, a much weaker correlation between trait levels and change goals emerged for Agreeableness ( $r = -.12$ ) and a zero relation was apparent for Openness to Experience ( $r = .00$ ; see Table 1). High levels in both these traits are, however, highly socially desirable and indeed more so than, for instance, high levels in Extraversion (John & Robins, 1993), for which the correlation between trait levels and change goals was much stronger (i.e.,  $r = -.37$ ; Table 1). Likewise, recent evidence suggests that people have a relatively low desire to change on morality-related traits—which are highly desirable, too (e.g., Allison et al., 1989; De Vries, Realo, et al., 2016; Van Lange & Sedikides, 1998)—and that (self-reported) trait levels on morality-related traits also show only weak associations with corresponding change goals (Costantini et al., 2020; Sun & Goodwin, 2020). Overall, this evidence stays somewhat in

<sup>1</sup> In line with prior literature on volitional personality change, we use the term *change goals* such that high change goals imply a desire to increase on a certain trait whereas low change goals imply a desire to decrease on a certain trait.

<sup>2</sup> This reasoning (i.e., desire to *increase* on all traits) refers to the Big Five as follows: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Emotional Stability (rather than its low pole Neuroticism). Conceptualized this way, high levels of all Big Five dimensions can be considered desirable (e.g., John & Robins, 1993). In the present article focusing on the HEXACO model, changing in a socially desirable way implies to *increase* in Honesty-Humility, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience and to *decrease* in Emotionality. This is because higher levels in Emotionality are usually considered less desirable than lower levels, even though Emotionality generally has a relatively neutral tone (see, e.g., De Vries, Realo, et al., 2016).

<sup>3</sup> To identify the relevant literature, we conducted a search on *PsycInfo* using the following search string: (“change goal\*” OR “goal\* to change” OR “desire\* to change” OR volitional) AND (personality OR trait) AND (“big five” OR “five factor model” OR hexaco). Moreover, we checked all resulting articles for further data that may be relevant for our meta-analytic summary. If an article included a study that contained a measure of change goals and concurrent trait levels but did not report the respective correlations, we contacted the corresponding author and asked for the data.

**Table 1**

Overview of Studies on the Relation Between Change Goals and Concurrent Trait Levels for the Big Five, With Sample Size-Weighted Meta-Analytic Correlations (Bold-Faced)

Reference	N	Big Five questionnaire	Change goals questionnaire	Correlations				
				N	X	O	A	C
Asadi et al. (2020) <sup>a</sup>	160	Big Five Inventory, self-report	Big Five Trait-Change Goal Inventory, self-report	.01	.03	.31	.02	.02
Costantini et al. (2020), Study 2 <sup>b</sup>	329	Big Five Inventory-2, self-report	Big Five Trait-Change Goal Inventory; Change Goals Big Five Inventory, self-report	-.44	-.42	.05	-.11	-.36
Hudson and Fraley (2016b)	6,800	Big Five Inventory, self-report	Change Goals-Big Five Inventory, self-report	-.54	-.38	.01	-.09	-.42
Hudson and Roberts (2014), Study 1	264	Big Five Inventory, self-report	Change Goals-Big Five Inventory, self-report	-.65	-.52	.00	-.30	-.46
Hudson and Roberts (2014), Study 4	314	Big Five Inventory, self-report	Change Goals-Big Five Inventory, self-report	-.55	-.31	.15	-.02	-.48
Hudson, Derringer, et al. (2019)	146	Big Five Inventory-2, self-report	Change Goals-Big Five Inventory-2, self-report	-.68	-.37	-.14	-.27	-.42
Hudson et al. (2020) <sup>c</sup>	2,238	Big Five Inventory; Big Five Inventory-2; Hybrid (Big Five Inventory + IPIP-NEO-120 Extraversion scale), self-report	Change Goals-Big Five Inventory; Change Goals-Big Five Inventory-2; Hybrid (Change Goals-Big Five Inventory + IPIP-NEO-120 Extraversion scale), self-report	-.61	-.39	.03	-.16	-.45
Miller et al. (2019), Sample 1 <sup>d</sup>	1,339	Big Five Inventory, self-report	Coding of change goals as specified in open-ended assessment of 10 personal goals	-.19	-.23	-.02	-.15	-.07
Miller et al. (2019), Sample 2 <sup>d</sup>	447	Big Five Inventory-2, self-report	Coding of change goals as specified in open-ended assessment of 10 personal goals	-.19	-.17	.00	-.11	-.07
Quintus et al. (2017), older sample <sup>e</sup>	124	Big Five Inventory, self- and observer reports	Change Goals-Big Five Inventory, 16-item short version, self-reports	-.43	-.45	-.28	-.24	-.34
Quintus et al. (2017), younger sample <sup>e</sup>	254	Big Five Inventory, self- and observer reports	Change Goals-Big Five Inventory, 16-item short version, self-reports	-.50	-.44	-.12	-.19	-.34
Robinson et al. (2015), Study 4 <sup>f</sup>	170	Big Five Inventory, self-report	Big Five Trait-Change Goal Inventory, self-report	-.25	-.16	.13	-.06	-.31
Sun and Goodwin (2020), Study 1 <sup>g</sup>	300	Big Five Inventory-2, self- and observer reports	Change Goals Scale, self- and observer reports	-.69	-.53	-.16	-.22	-.51
Sun and Goodwin (2020), Study 2 <sup>g</sup>	500	Big Five Inventory-2, self- and observer reports	Change Goals Scale, self- and observer reports	-.60	-.34	-.09	-.20	-.37
<b>Σ</b>	<b>13,385</b>			<b>-.50</b>	<b>-.36</b>	<b>.00</b>	<b>-.12</b>	<b>-.37</b>

Note. N = Neuroticism; X = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness; Big Five Inventory (John et al., 1991); Big Five Inventory-2 (Soto & John, 2017); IPIP-NEO-120 (International Personality Item Pool representation of the NEO-PI-R; Goldberg, 1999); Big Five Trait-Change Goal Inventory (Robinson et al., 2015); Change Goals-Big Five Inventory (Hudson & Roberts, 2014); Change Goals-Big Five Inventory-2 (Hudson, Derringer, et al., 2019); Change Goals Scale (Sun & Goodwin, 2020); Hybrid (Hudson & Fraley, 2015).

<sup>a</sup> Correlations are aggregated across two measurement occasions while taking differences in sample size ( $N = 170$  vs.  $160$ ) into account. <sup>b</sup> Correlations are aggregated across different change goal inventories. <sup>c</sup> Dataset contains data from studies reported in Hudson & Fraley (2015, 2016a) as well as otherwise unpublished data. Different subsamples used different change goal inventories. <sup>d</sup> Correlations apply to desire to increase in the respective Big Five dimension (Neuroticism was framed as Emotional Stability in the study). <sup>e</sup> Correlations are aggregated across self- and observer ratings of personality while taking differences in sample sizes for participants with and without observer reports into account (for change goals, we only considered self-reports to maximize comparability across studies). <sup>f</sup> Correlations are aggregated across two measurement occasions. <sup>g</sup> Correlations are aggregated across three facets per Big Five dimension.

conflict with the idea that individuals *generally* desire to have socially desirable characteristics that they lack. Instead, it appears that different mechanisms may underlie change goals for different traits.

Here, we propose a theoretical account beyond social desirability that may specifically explain why personality change goals are related to concurrent trait levels for some traits, but not for others. We do so by drawing on evidence on the relation between personality traits and values<sup>4</sup> and resulting differences in the traits' self-relevance. Specifically, in the Big Five framework, Agreeableness and Openness to Experience bear the strongest associations with values (Fischer & Boer, 2015). Likewise, in the HEXACO framework,<sup>5</sup> Honesty-Humility and Openness to Experience are most strongly linked to values (Anglim et al., 2017; K. Lee et al., 2010). In turn, "because values are presumably an

<sup>4</sup> Values can be defined as "moral, social, or aesthetic principle(s) accepted by an individual or society as a guide to what is good, desirable, or important" (APA Dictionary of Psychology; VandenBos, 2007).

<sup>5</sup> The HEXACO model proposes a six-factorial alternative to the Big Five. Most prominently, the HEXACO model adds Honesty-Humility as a sixth basic trait dimension capturing characteristics related to sincerity, fairness, greed-avoidance, and modesty. As such, Honesty-Humility shares some of its variance with Big Five Agreeableness, but it adds characteristics that are not well accommodated by the Big Five (e.g., Ashton & Lee, 2008, 2019; Heck et al., 2018; Pletzer et al., 2019). By contrast, Openness to Experience—the other HEXACO dimension we focus on here—is highly comparable across models (e.g., Ashton et al., 2014; see also Ashton & Lee, 2020, for a recent discussion). In addition, the HEXACO model incorporates changes with regard to Emotionality—the counterpart of Big Five Neuroticism—and Agreeableness (Ashton et al., 2014).

important part of one's identity" (K. Lee et al., 2009, p. 464), these trait dimensions underlying individual differences in values appear to be particularly important for how individuals see themselves, meaning that they bear high *self-relevance*. That is, I may consider it crucial for my identity that I am an honest person—with honesty being a value-related characteristic—whereas it may be less relevant for my identity that I am sociable—with sociability being a value-unrelated characteristic. Indeed, evidence suggests that individuals judge those characteristics that are strongly linked to values as more important for their identity than other characteristics. Specifically, when participants were asked to rate the importance of the HEXACO dimensions for describing themselves as a person, they assigned the highest importance on average to Honesty-Humility, followed by Openness to Experience (Thielmann, Hilbig, et al., 2020).

In light of this evidence, we reasoned that the apparent trait-specific differences in the relation between change goals and concurrent trait levels may result from systematic differences in the self-relevance between traits. Specifically, individuals may want to remain (largely) the same on those traits that are particularly important for who they are and how they see themselves—given that these traits are at the heart of individuals' identity. This also implies that individuals may perceive their level on value-related traits as matching their own ideal, thus seeing little need to change on these traits in particular. Conversely, individuals may want to change for the better particularly on those traits that are less relevant to their self-concept and on which they see potential for changing in a socially desirable way. On the aggregate level, this reasoning implies that individuals' trait levels on Agreeableness and Openness to Experience in the Big Five and Honesty-Humility and Openness to Experience in the HEXACO model should yield (near) zero correlations with corresponding change goals, arguably because these traits are—owing to their strong links to values—particularly relevant to one's identity. For the remaining dimensions in either framework, in turn, trait levels should be negatively linked to individuals' change goals, given that those individuals with less desirable trait levels should strive for more desirable levels in particular—a finding that is confirmed in previous studies (see Table 1; see also Costantini et al., 2020; Sun & Goodwin, 2020).

## The Present Investigation

The main goal of the present set of studies was to provide a direct test of the proposed self-relevance account of personality change goals vis-à-vis a social desirability account. To this end, we relied on the HEXACO model because it includes Honesty-Humility as a sixth basic trait dimension which is both highly socially desirable (De Vries, Realo, et al., 2016) and highly relevant to individuals' self-concept (Thielmann, Hilbig, et al., 2020). Thus, according to the self-relevance account, trait levels on Honesty-Humility should yield (close to) zero relations with corresponding change goals, which we hypothesized. By contrast, according to a social desirability account, trait levels on Honesty-Humility should yield a strong negative association with corresponding change goals, simply because individuals with relatively low trait levels should want to have higher (i.e., more socially desirable) levels in particular, and more so than

individuals with relatively high trait levels. Moreover, we expected a (close to) zero relation between trait levels and change goals for Openness to Experience—replicating prior research on the Big Five (see Table 1) and being again in line with the self-relevance account. As detailed above, Openness to Experience is also strongly linked to values and has, accordingly, been found to bear high self-relevance. Thus, just as for Honesty-Humility, the self-relevance account predicts a (close to) zero relation between trait levels and change goals for Openness to Experience, whereas a social desirability account would—again—predict a negative relation. Finally, for the remaining HEXACO dimensions, we expected meaningful negative associations comparable to prior evidence on the Big Five (see Table 1).

To provide further insights into the underlying mechanisms of trait-specific relations between trait levels and change goals, we additionally assessed satisfaction with life and with one's personality—based on evidence that individuals who are less satisfied with their life or certain aspects thereof have a stronger desire to change their personality (Hudson, Derringer, et al., 2019; Hudson & Fraley, 2016a; Hudson & Roberts, 2014; Stieger, Eck, et al., 2020; but see also Quintus et al., 2017). Crucially, assessing individuals' satisfaction with their personality also allowed us to test another implication of the self-relevance account as proposed here (vis-à-vis a social desirability account). Specifically, we argued that individuals may not want to change for the better on those traits that are strongly linked to values—and thus highly relevant to the self—because they may view their levels on these traits as being close to or even matching their own ideal. Thus, individuals with relatively low (undesirable) levels on these traits (i.e., Honesty-Humility and Openness to Experience in the HEXACO model) should *not* be less satisfied with their personality than individuals with relatively high (desirable) levels. This suggests that trait levels on Honesty-Humility and Openness to Experience should show only weak, if any, positive relations with individuals' overall satisfaction with personality. By contrast, for those traits that are less relevant to the self and on which individuals should generally strive for socially desirable trait levels—that is, the remaining dimensions in the HEXACO model—individuals with more desirable trait levels should be more satisfied with their personality than individuals with less desirable trait levels. Thus, for these traits, individuals' trait levels should show stronger relations with their satisfaction with personality, in the sense that more desirable trait levels should be associated with greater satisfaction. A social desirability account, in turn, implies that relations between trait levels and satisfaction with personality follows the traits' social desirability for *all* traits (i.e., positive relations for all HEXACO dimensions except Emotionality). We investigated this question in a mostly exploratory fashion.

## Study 1

Study 1 sought to provide a first test of the predictions derived from the self-relevance account vis-à-vis a social desirability account in a community sample of Dutch adults. Specifically, we reassessed a sample of participants who had provided self-reports on the HEXACO dimensions 10 years earlier to (again) measure their trait levels (thus also providing information on actual

change<sup>6</sup>), their goals to change on the HEXACO dimensions in the future, and their desired trait levels. We assessed both change goals and desired trait levels to gain a more holistic view of individuals' desire to change their personality, including their motives to change in terms of desired end states (Hudson & Roberts, 2014). However, corresponding to the theoretical accounts to be tested here, we focus on change goals as dependent measures in what follows, and all analyses on desired trait levels are purely exploratory in nature.

## Method

All materials as well as the data, analysis scripts, and additional analyses and results are available on the Open Science Framework (OSF; <https://osf.io/trhzs/>). Moreover, in the [online supplemental materials](#) we provide additional information (e.g., full correlation tables) on the variables focused on herein. Ethical approval was obtained by the Vrije Universiteit Amsterdam through an umbrella application (VCWE-2016-188).<sup>7</sup> We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

## Materials

Personality traits were measured using the Dutch version (De Vries et al., 2009) of the HEXACO Personality Inventory—Revised (HEXACO-PI-R; K. Lee & Ashton, 2006). This questionnaire contains 32 items to measure each of the six HEXACO dimensions, which are comprised of four facets each. Moreover, the questionnaire includes eight items to assess Altruism, and we additionally included eight items to measure Proactivity on the second measurement occasion (De Vries, Wawoe, et al., 2016; De Vries & Born, 2013). Both these interstitial facets are, however, beyond the scope of the present investigation, which is why we neglect them in what follows. Responses on all 208 items were collected on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Alpha reliabilities were satisfactory for all HEXACO scale scores (i.e.,  $.85 \leq \alpha \leq .90$  and  $.87 \leq \alpha \leq .91$  at the first and second measurement occasion, respectively; see [Table S1](#) in the online supplemental materials).

To measure individuals' personality change goals, we first provided participants with detailed information about each of the six HEXACO dimensions (based on the scale descriptions as provided on <http://hexaco.org/scaledescriptions>) and asked them to rate for each dimension (on a single item) the extent to which they wanted to have a higher or lower level (vs. staying the same). Specifically, for each dimension, participants read the statement "If I could change myself, I would like to be lower/higher on X" (with X being replaced by the name of the respective dimension) and provided their judgment on a 7-point Likert-type scale ranging from 1 = *much lower* to 7 = *much higher* and with 4 = *neither lower nor higher*. As such, our measure of change goals uses a similar approach as implemented in the Big Five Trait-Change Goal Inventory (Robinson et al., 2015), which likewise relies on single items to measure change goals on each Big Five dimension. In a similar vein, we measured participants' desired trait levels using one item per HEXACO dimension (i.e., "If I could choose, I would like to be . . . on this characteristic") that participants answered on a 9-point Likert-type scale ranging from 1 = *very low* to 9 = *very high* (and with 5 = *average*).

In addition to change goals and desired trait levels, we used similar formats to assess individuals' retrospective perceptions of (a) how (strongly) they had changed over the years and (b) their past trait levels. However, both these questions are beyond the scope of the present paper and were exclusively included for exploratory reasons, which is why we report corresponding results in the additional analyses on the OSF only. To measure subjective perceptions of change, participants were asked to evaluate the statement "In the past 10 years, I have become lower/higher on X" (with X again being replaced by the name of the respective HEXACO dimension) using a 7-point Likert-type scale ranging from 1 = *much lower* to 7 = *much higher* (and with 4 = *neither lower nor higher*). To measure participants' retrospective perceptions of their personality 10 years earlier, participants were asked to judge their relative standing on each of the six HEXACO dimensions in the past (i.e., "Compared with others, I was . . . on this characteristic ten years ago") using a 9-point Likert-type scale ranging from 1 = *very low* to 9 = *very high* (and with 5 = *average*).

Moreover, as sketched above, we measured satisfaction with life in general and with personality in particular. To assess individuals' satisfaction with life, we used the Dutch version of the five-item Satisfaction with Life Scale (Diener et al., 1985), which participants answered on a 7-point Likert-type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. However, to avoid response biases—which might affect responses given that the original scale has no reverse-keyed items—we slightly reformulated two items such that strong agreement indicated *dissatisfaction* with one's life (and we recoded responses on these items prior to creating a sum score across items). In turn, to assess individuals' satisfaction with their personality, we developed a new, eight-item scale based on items from the Rosenberg Self-Esteem Scale (Franck et al., 2008; Rosenberg, 1979) and the Riverside Life Satisfaction Scale (Margolis et al., 2019), which we reformulated to refer to individuals' personality, and we also created two items from scratch. Sample items are "In most ways, how I am is close to my ideal" and "I am content with my personality"; the complete scale is provided on the OSF. Participants responded to these items on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Finally, we assessed experiences of major life events. Specifically, participants were presented with 24 life events (e.g., getting married, losing a close other, becoming the victim of a violent crime; see OSF for the full list) and asked to indicate which of these events they had experienced in the past 10 years. The list of life events was compiled based on the Social Readjustment Rating Scale (Holmes & Rahe, 1967), the Student Life Event Scale (Clements & Turpin, 1996), and prior research (Bleidorn et al., 2018; Hentschel et al., 2017).

<sup>6</sup> An overview of results on actual personality change of the HEXACO dimensions over time (i.e., 10-year stability and mean-level changes) is provided in the online supplemental materials (see [Tables S1](#) and [S2](#)) as well as in the additional analyses on the OSF. Summarized briefly, the average 10-year stability was  $\bar{r}_{T1,T2} = .77$  and mean-level change was highest for Honesty-Humility ( $d = 0.14$ , 95% CI [0.07, 0.21],  $p < .001$ ).

<sup>7</sup> Ethical approval was only obtained for the second data collection in 2018 because formal approval was not yet required at the time of the first data collection in 2008. However, the ISO-certified panel (ISO 20252 and ISO 26362) collecting the data generally fulfilled all ethical requirements with respect to (active) consent and privacy regulations; full information can be obtained through the authors.

## Procedure

The study was conducted online via a professional ISO-certified panel provider in The Netherlands (Flycatcher), and it comprised two measurement occasions. The first measurement occasion (T1) took part in 2008 in which participants completed the self-report form of the HEXACO-PI-R along with several other personality questionnaires not pertinent to the current investigation (see materials on the OSF for details). The T1 data have already been used in several other publications (a complete list is provided on the OSF). Ten years later, in 2018, we reinvited participants who were still on the panel to complete the second measurement occasion (T2). T2 consisted of two waves of data collection (T2.1 and T2.2), which were spaced 9 days apart. In T2.1, participants provided demographic information and information about their perceived social support (see materials on the OSF for details) and completed the 208-items self-report form of the HEXACO-PI-R. In T2.2, they were presented with detailed descriptions of the HEXACO dimensions and asked to rate for each dimension (a) their change goals, (b) the extent to which they had changed over the past 10 years, (c) their desired trait levels, and (d) their retrospective trait levels (i.e., their relative standing on a dimension 10 years ago), in that order. Finally, participants completed measures of satisfaction with personality, major life events, and satisfaction with life. Participants received credit points for participation, which they could exchange for a gift voucher, plus a ticket for a chance to win in a quarterly lottery organized by the panel.

## Participants

The final sample at T1 comprised  $N = 1,352$  participants; sample characteristics and exclusion criteria are reported in De Vries and Van Kampen (2010). At T2, 631 individuals of the T1 sample were still part of the panel, all of which were approached. Of these,  $N = 432$  (68.5%) completed the questionnaire at T2.1 and  $N = 390$  at T2.2 (61.8%).<sup>8</sup> However, three participants had to be excluded due to the same exclusion criteria applied to the T1 data (i.e., low within-person standard deviations ( $<.70$ ) and long ( $>30$ ) strings of the same answer) leaving a final sample of  $N = 429$  for T2.1 and  $N = 387$  for T2.2. Note that we did not run an a priori power analysis to determine the required sample size but simply opted for the largest sample size possible. The sample size of  $N = 387$  allowed us to detect small correlations ( $r = .14$ ) with sufficient power ( $1-\beta = .80$ ) and  $\alpha = .05$  (G\*Power; Faul et al., 2009).

Participants (T2.1 sample) were almost equally distributed across the sexes (i.e., 48.5% female), and they covered a broad age range from 19 to 80 years ( $M = 51.1$ ,  $SD = 12.6$ ) as measured at T1 (and 10 years older at T2, i.e., 29–90 years,  $M = 61.0$ ,  $SD = 12.6$ ). The sample was also diverse with regard to educational background, with roughly a third of participants having a low (primary school or lower-level high school; 24.0%), medium (higher-level high school, lower- or medium-level tertiary education; 38.2%), or high (college or university degree; 37.8%) level of education. The majority of participants (73.2%) was either married or living together as a couple.

## Results and Discussion

### Hypothesis Tests: Change Goals

The main goal of the present investigation was to examine individuals' goals to change their personality and to test our hypotheses concerning the trait-specific effects of individuals' trait levels on their change goals. Table 2 summarizes the descriptive statistics of change goals for all HEXACO dimensions, together with statistics from one-sample  $t$  tests against the scale's midpoint of 4 (no goals to change), the prevalence of reported desires to decrease (values 1–3 on the change goals scale), stay the same (value 4), or increase (values 5–7) on a dimension, and intercorrelations of change goals with concurrent trait levels on the corresponding dimension (for intercorrelations among change goals, see Table S3 in the online supplemental materials).

Considered for each HEXACO dimension individually, most individuals reported a desire to stay the same on most dimensions (averaging 54.6% across dimensions). Importantly, however, almost all participants (89.4%) reported goals to change on at least one of the six HEXACO dimensions, and the majority (85.0%) of these individuals desired to change several aspects of their personality (i.e., on more than one dimension). This demonstrates the (very) high prevalence of goals to change one's personality in general. In turn, participants on average had goals to change in a socially desirable way on all HEXACO dimensions. That is, considering the means of our change goals variable, participants indicated goals to increase in Honesty-Humility, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience, and to decrease in Emotionality (see Table 2). Effect sizes (Cohen's  $d$ ) of comparisons of these means against the scale's midpoint indicating no goal to change were medium to large for Extraversion and Openness to Experience and small to medium-sized for the remaining dimensions. Importantly, the prevalence of goals to change (i.e., increase or decrease) on a dimension showed meaningful differences across dimensions. Participants reported most desires to change in any direction (vs. stay the same) on Extraversion (62.3%) and Emotionality (50.9%), followed by Conscientiousness (43.9%) and Agreeableness (43.7%), and least desires to change on Openness to Experience (40.6%) and Honesty-Humility (31.0%). As such, findings replicated prior evidence on the Big Five, which likewise showed the lowest prevalence of change goals for Openness to Experience and Agreeableness (e.g., Baranski et al., 2017; Miller et al., 2019). Moreover, they were compatible with the idea that individuals want to change the least on those traits bearing strong links to values and, thus, high self-relevance.

More importantly, however, change goals showed differential relations with individuals' concurrent trait levels on the same dimension (measured at T2). Whereas change goals were essentially unrelated to individuals' trait levels on Honesty-Humility ( $r = .01$ ) and Openness to Experience ( $r = .05$ ), they yielded small to medium-sized negative correlations ( $-.28 \leq r \leq -.19$ ) with

<sup>8</sup> Participants who completed T2 did not significantly differ from those who completed T1 with regard to sex,  $\chi^2(df = 1) = 0.31$ ,  $p = .577$ ,  $OR = 0.93$ , 95% CI [0.75, 1.17], and level of education,  $\chi^2(df = 2) = 0.29$ ,  $p = .863$ , Cramer's  $V = .01$ , 95% CI [.006, .067], but they were slightly older when considering age as reported at T1,  $t(1,779) = 4.14$ ,  $p < .001$ ,  $d = -0.23$ , 95% CI [-0.34, -0.12].

**Table 2**

*Descriptive Statistics of HEXACO Change Goals, With Statistics From One-Sample *t* Tests Against the Scale's Midpoint, Prevalence of Change Goals (in %), and Correlations With Concurrent Trait Levels (Study 1)*

Variable	<i>M</i> ( <i>SD</i> )	<i>t</i> test against $\mu = 4$		Prevalence (in %) of goals to			<i>r</i> trait level
		<i>t</i> (386)	<i>d</i>	Decrease	Stay same	Increase	
H change goals	4.27 (0.80)	6.76***	0.34 [0.24, 0.45]	5.4	69.0	25.6	.01 [−.09, .11]
E change goals	3.74 (1.02)	4.99***	−0.25 [−0.35, −0.15]	33.6	49.1	17.3	−.25*** [−.34, −.15]
X change goals	4.61 (0.92)	13.11***	0.67 [0.56, 0.78]	6.7	37.7	55.6	−.28*** [−.37, −.18]
A change goals	4.36 (0.79)	8.96***	0.46 [0.35, 0.56]	7.8	56.3	35.9	−.19*** [−.29, −.09]
C change goals	4.27 (0.87)	6.08***	0.31 [0.21, 0.41]	12.9	56.1	31.0	−.22*** [−.31, −.12]
O change goals	4.42 (0.71)	11.68***	0.59 [0.49, 0.70]	3.1	59.4	37.5	.05 [−.05, .15]

*Note.*  $N = 387$ . H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience. Change goals were measured at T2 on a scale from 1 (*low change goals*) to 7 (*high change goals*), with a midpoint of 4 (*no goal to change*). Trait levels measured at T2. Values in square brackets indicate the 95% confidence intervals.

\*\*\*  $p < .001$ .

individuals' trait levels on Emotionality, Extraversion, Agreeableness, and Conscientiousness (see Table 2).<sup>9</sup>

To obtain further insights into how these differences in correlations came about, we also investigated the proportions of participants who wanted to change in any direction (vs. stay the same) on a dimension as a function of their concurrent trait levels. That is, for each of the six HEXACO dimensions, we classified participants into those with a relatively low level (i.e., lower third of the distribution of trait levels) and those with a relatively high level (i.e., upper third of the distribution of trait levels) and compared these two groups with regard to whether participants had goals to change (increase or decrease) on the respective dimension or not using Fisher's exact test.<sup>10</sup> As depicted in Figure 1, for Emotionality, Extraversion, Agreeableness, and Conscientiousness, distributions of goals to change in any way differed between individuals with less versus more socially desirable trait levels. Specifically, individuals with less socially desirable trait levels indicated considerably higher desires to change on the respective dimension than individuals with more socially desirable trait levels (all  $ps \leq .012$ ; odds ratios ranging between  $0.26 \leq OR \leq 0.53$ ). By contrast, for Honesty-Humility and Openness to Experience, the prevalence of goals to change in any way did not differ significantly between individuals with less versus more socially desirable trait levels ( $p = .229$ ,  $OR = 0.71$ , 95% CI [0.40, 1.24] and  $p = .899$ ,  $OR = 0.95$ , 95% CI [0.56, 1.61], respectively), and desires to change were relatively low in general. Indeed, those with less socially desirable levels on Honesty-Humility and Openness to Experience were approximately as inclined to change as were those with more socially desirable levels on any other dimension (see Figure 1).

Overall, results supported the predictions derived from the self-relevance account of personality change goals: On those traits whose links to values arguably renders them most relevant to individuals' self-concept, there was *no* greater striving to acquire socially desirable trait levels among individuals with less desirable trait levels as compared to individuals with more desirable trait levels. Stated differently, individuals with less socially desirable trait levels indicated a willingness to change in a socially desirable way, but *only* on traits that are arguably less relevant to the self.

### Further Exploratory Analyses

**Desired Trait Levels.** As described above, our data also provide vital insights into other concepts and processes related to

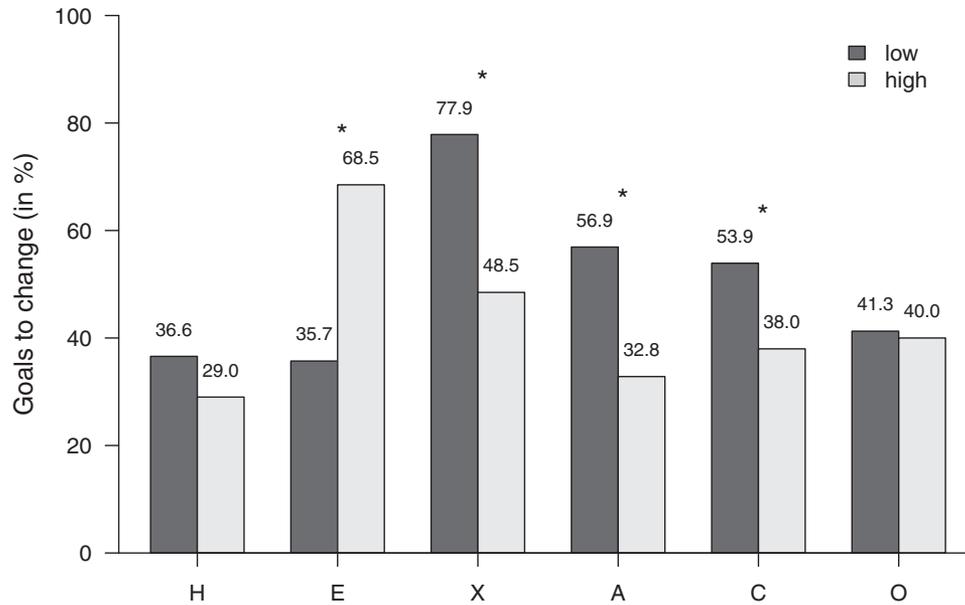
(volitional) personality change. First, we not only assessed individuals' goals to change on the HEXACO dimensions, but also their desired trait levels, which can be interpreted in terms of motives to change to reach desired ends. As summarized in Table 3, for all dimensions except Emotionality, individuals judged relatively high trait levels (i.e., values above the scale's midpoint of 5) as desirable, and this was most pronounced for Honesty-Humility, emphasizing its socially desirable nature. Moreover, desired trait levels showed small to medium-sized positive correlations with change goals on all dimensions (i.e.,  $.15 \leq r \leq .29$ ; see also Table S3 in the online supplemental materials for the full correlation matrix). This shows that individuals want to change in ways they consider desirable, which is in line with a functionalist perspective on personality change (Wood & Denissen, 2015). In turn, desired trait levels were positively related to individuals' concurrent trait levels on all HEXACO dimensions (i.e.,  $.19 \leq r \leq .41$ ) except Emotionality ( $r = .02$ ; Table 3). This replicates prior evidence on the Big Five which likewise showed positive relations between self-reported and desired trait levels for all dimensions but Emotional Stability (Hudson & Roberts, 2014). Indeed, irrespective of their own trait levels, individuals tended to view

<sup>9</sup> The pattern of results also replicated for trait levels measured at T1, yielding close-to-zero, nonsignificant relations for Honesty-Humility ( $r = -.06$ ,  $p = .277$ ) and Openness to Experience ( $r = .06$ ,  $p = .225$ ), but small to medium-sized, significant relations for the remaining HEXACO dimensions ( $-.29 \leq r \leq -.14$ ; all  $ps \leq .007$ ). See additional analyses on the OSF for details.

<sup>10</sup> To ensure that the results were not attributable to the specific approach used to classify participants into low versus high trait level groups, we repeated these analyses once participants were classified according to a median split, which led to virtually the same results (see additional analyses on the OSF for details). Moreover, to be as conservative as possible, we considered both goals to increase *and* goals to decrease on a certain trait dimension as indicating a desire to change in our primary analyses—rather than considering goals to change in a socially desirable way only. However, comparing the prevalence of change goals among participants who wanted to stay the same versus those who wanted to change in a socially desirable way (while excluding those who wanted to change in an undesirable way) provided even stronger evidence in favor of our reasoning (i.e.,  $0.19 \leq |OR| \leq 0.44$  for Emotionality, Extraversion, Agreeableness, and Conscientiousness;  $OR = 0.75$ , 95% CI [0.46, 1.21] for Honesty-Humility and  $OR = 0.99$ , 95% CI [0.64, 1.54] for Openness to Experience)—thus supporting the relatively conservative nature of our primary analyses.

**Figure 1**

Prevalence of Goals to Change in Any Way (i.e., Increase or Decrease vs. Stay the Same) on the Six HEXACO Dimensions in Study 1 (in %), Separated for Individuals With Low Versus High Trait Level (i.e., Lower vs. Upper Third of Trait Level Distributions) on the Respective Dimension



Note. H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience.  
\*  $p < .05$  (in Fisher's exact test).

average levels of Emotionality as desirable. Nonetheless, on the whole, the (largely) positive relations between self-reported and desired trait levels imply that even though most individuals want to change certain aspects of their personality, they are also somewhat satisfied with what they are like.

**Satisfaction With Personality.** Supporting this latter conclusion that individuals were somewhat satisfied with their personality, we also found relatively high levels of satisfaction with one's personality ( $M = 3.66, SD = 0.62$ , on a scale ranging from 1 to 5). In turn, satisfaction with personality was (descriptively) negatively

correlated with change goals for almost all dimensions (i.e.,  $-.26 \leq r \leq -.11$ ), albeit reaching statistical significance for Agreeableness only and again with the exception of Emotionality ( $r = .09, 95\% \text{ CI} [-.01, .18], p = .095$ ). Nonetheless, this pattern overall implies that those individuals who are more satisfied with their personality have a (slightly) weaker desire to change in a socially desirable way than those who are less satisfied with their personality.

More interestingly with regard to the issue at hand, we also found a differential pattern of correlations between trait levels and

**Table 3**

Descriptive Statistics of Desired Trait Levels on the HEXACO Dimensions, With Statistics From One-Sample *t* Tests Against the Scale's Midpoint and Correlations With Change Goals as Well as Concurrent Trait Levels (Study 1)

Variable	<i>M</i> ( <i>SD</i> )	<i>t</i> test against $\mu = 5$		<i>r</i> change goals	<i>r</i> trait level
		<i>t</i> (386)	<i>d</i>		
H desired level	6.54 (1.39)	21.79***	1.11 [0.98, 1.23]	.24*** [.14, .33]	.21** [.11, .30]
E desired level	5.10 (1.24)	1.55	0.08 [-0.02, 0.18]	.29*** [.20, .38]	.02 [-.08, .12]
X desired level	5.62 (1.12)	10.91***	0.55 [0.45, 0.66]	.24*** [.15, .34]	.26*** [.17, .36]
A desired level	6.29 (1.27)	19.99***	1.02 [0.89, 1.14]	.25*** [.16, .35]	.19** [.09, .28]
C desired level	5.89 (1.21)	14.59***	0.74 [0.63, 0.85]	.15** [.05, .25]	.27*** [.17, .36]
O desired level	6.07 (1.17)	18.03***	0.92 [0.80, 1.03]	.27*** [.17, .36]	.41*** [.33, .49]

Note.  $N = 387$ . H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience. Desired trait levels were measured at T2 on a scale from 1 (low trait level desired) to 9 (high trait level desired), with a midpoint of 5 (average trait level desired). Trait levels and change goals measured at T2. Values in square brackets indicate the 95% confidence interval.

\*\*  $p < .01$ . \*\*\*  $p < .001$ .



individuals' satisfaction with personality. Specifically, trait levels only yielded meaningful relations to satisfaction with personality for Emotionality ( $r = -.36$ , 95% CI  $[-.45, -.27]$ ,  $p < .001$ ), Extraversion ( $r = .56$ , 95% CI  $[.49, .63]$ ,  $p < .001$ ), Agreeableness ( $r = .27$ , 95% CI  $[.17, .36]$ ,  $p < .001$ ), and Conscientiousness ( $r = .18$ , 95% CI  $[.09, .28]$ ,  $p < .001$ )—in the direction dictated by the (social) desirability of the traits—but relations were weaker (and partly nonsignificant) for trait levels on Honesty-Humility ( $r = .07$ , 95% CI  $[-.03, .17]$ ,  $p = .184$ ) and Openness to Experience ( $r = .11$ , 95% CI  $[.01, .20]$ ,  $p = .035$ ). That is, individuals reported higher satisfaction with their personality when they had more socially desirable trait levels, except for Honesty-Humility and Openness to Experience. This shows that individuals with high and low levels on these latter dimensions are equally satisfied with their personality, suggesting that even those with lower (i.e., less socially desirable) trait levels on Honesty-Humility and Openness to Experience may perceive their current trait levels as matching their own ideal. As such, results were once more at odds with a strict social desirability account of change goals, which would have suggested that relations between trait levels and satisfaction with personality followed the traits' social desirability for *all* dimensions. Instead, the findings can be reconciled with a self-relevance account.

## Study 2

Overall, Study 1 provided initial support for the self-relevance account of personality change goals as proposed here: Individuals with less socially desirable trait levels were only more inclined to change for the better than individuals with more socially desirable trait levels on those HEXACO dimensions that are arguably less relevant to the self, but *not* on those dimensions bearing high self-relevance due to their strong associations with values. Study 2 aimed at replicating this finding in a younger (student) sample. Prior research suggests that change goals decrease with age and that priorities for changing specific traits vary with age (Hudson & Fraley, 2016b). Moreover, personality change is more pronounced in young adulthood than in middle and late adulthood (Lucas & Donnellan, 2011; Roberts et al., 2006). Thus, it is conceivable that the relation between trait levels and change goals might be affected by individuals' age. To address this possibility, in Study 2 we assessed the HEXACO dimensions among psychology freshmen in two cohorts (2015 and 2016) and reassessed participants three years and five months later after most of them had finished their bachelor's degree.<sup>11</sup> As such, the data provide information on volitional personality change during a transitional period of young adulthood, namely, university life (Lüdtke et al., 2011).

Moreover, Study 2 sought to overcome some methodological limitations of Study 1. First, given that we assessed change goals only at T2, it was impossible to evaluate whether change goals influenced how individuals had changed over time. Thus, in Study 2, we assessed change goals (as well as desired trait levels) at both measurement occasions, which also allowed us to provide information on the stability of these variables over a three-and-a-half-year period. Second, given that participants in Study 1 were unfamiliar with the HEXACO dimensions prior to participating in the study, it might have been difficult for them to process the trait descriptions that served as a basis to assess change goals and related variables in sufficient detail. In Study 2, we therefore

recruited psychology students attending a personality psychology course in which the HEXACO model was thoroughly discussed. This ensured that participants were familiar with the trait dimensions under scrutiny and could thus provide an informed judgment. Finally, we not only assessed self-reports of individuals' trait levels, but we also collected observer reports provided by family or close friends. Most prior research on volitional personality change solely relied on self-reported personality traits to study the relation between change goals and concurrent trait levels (for notable exceptions, see Quintus et al., 2017; Stieger et al., 2018; Sun & Goodwin, 2020). However, observer reports can often provide unique insights into one's personality (Vazire, 2010; Vazire & Carlson, 2011). Thus, in line with repeated calls emphasizing the usefulness of collecting observer ratings (e.g., Connelly & Ones, 2010; Funder, 1995; McCrae & Möttus, 2019), we complemented self-ratings of participants' personality by observer reports. This allowed us to test the generalizability of findings to a different rating source of participants' personality.

## Method

We preregistered the hypotheses and (some) analyses prior to collecting T2 data in the 2016 cohort (see <https://aspredicted.org/qn4zw.pdf>).<sup>12</sup> Thus, by the time of preregistration, T1 data as well as part of T2 data had already been collected (as also acknowledged in the preregistration). All materials, data, scripts, and additional analyses are available on the OSF (<https://osf.io/trhzs/>). Again, we report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures included in the study. In general, the materials and procedure were very similar to Study 1. We received ethical approval by the Vrije Universiteit Amsterdam through the same umbrella application as in Study 1 (VCWE-2016-188); however, approval was again only obtained after T1 data had been collected (see Footnote 7).

## Materials

Personality traits were again assessed using the Dutch version (De Vries et al., 2009) of the HEXACO-PI-R (K. Lee & Ashton, 2006), comprising 208 items in total (and thus again including measures of the interstitial Altruism and Proactivity facets). Responses were collected on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. This time, however, we used both the self-report and observer report forms of the inventory to gather data on participants' HEXACO trait levels from different perspectives. Alpha reliabilities were satisfactory for all scales (i.e.,  $.89 \leq \alpha \leq .91$  and  $.90 \leq \alpha \leq .93$  for self-reports at the first and second measurement occasion, respectively, and

<sup>11</sup> Results on actual personality change of the HEXACO dimensions over time (i.e., 3.5-year stability and mean-level changes) are provided in the online supplemental materials (Tables S5 and S6) as well as in the additional analyses on the OSF. In short, the average 3.5-year stability was  $\bar{r}_{T1,T2} = .73$  and mean-level change was strongest for Conscientiousness ( $d = 0.35$ , 95% CI  $[0.21, 0.49]$ ,  $p < .001$ ), followed by Honesty-Humility ( $d = 0.25$ , 95% CI  $[0.14, 0.37]$ ,  $p < .001$ ).

<sup>12</sup> We preregistered several hypotheses, not only those referring to the relation between trait levels and change goals as specified here. However, because the focus of this article is on change goals and their relations to concurrent trait levels, we will not reiterate all hypotheses here. Nonetheless, if not provided in the manuscript, tests of all preregistered hypotheses are available on the OSF.

.89  $\leq$   $\alpha$   $\leq$  .92 for observer reports; see Table S5 in the online supplemental materials as well as the additional analyses on the OSF for details).

To measure change goals and desired trait levels, we used the same materials as in Study 1. That is, for each of the six HEXACO dimensions, participants were asked to rate (a) the extent to which they wanted to change on the dimension (change goals) and (b) the trait level they desired for themselves (desired traits levels). Likewise, we again measured individuals' retrospective perceptions of their trait levels at T1 (three-and-a-half years earlier) as well as perceptions of the extent to which they had changed on the HEXACO dimensions in the past three-and-a-half years using the same questions as in Study 1.

We also again assessed individuals' satisfaction with life using the Dutch version of the Satisfaction with Life Scale (Diener et al., 1985), reversing two items to avoid response biases to affect scale scores, as well as their satisfaction with personality using the scale developed for Study 1. Moreover, we assessed major life events using the same list as in Study 1.

### Procedure

The study was again conducted online, and it comprised two measurement occasions. This time, T1 data were collected in two separate sessions (T1.1 and T1.2) whereas T2 data were collected in one session. Participants were recruited at a Dutch university in the context of a personality psychology course. Participants came from two consecutive cohorts participating in their first-year personality psychology course in 2015 and 2016, respectively.

At T1.1, participants provided demographic information and personality self-reports using the HEXACO-PI-R. Moreover, they completed two other personality questionnaires not pertinent to the current investigation (see materials on the OSF for details). Finally, participants were asked to nominate an informant (i.e., a family member or close friend) to provide an observer rating of the participant's personality. Informants were personally contacted by the participant, who provided them with a link through which informants could access the online questionnaire. Besides the observer-report form of the 208-item HEXACO-PI-R, the questionnaire also contained questions about observers' demographic information as well as their relationship with the participant. Both self- and observer-report data were used by a fellow student to write a personality report about the participant as a course requirement.

At T1.2, which was distributed two weeks after T1.1, participants first completed two individual differences measures not pertinent to the current investigation (see materials on the OSF for details), followed by measures of personality change goals and desired trait levels, in that order. By the time of completing the T1.2 survey, participants had already received the reports about their HEXACO profile as provided by a fellow student, so they had detailed insight into their personality as assessed by themselves and a close other. Finally, participants were asked whether they agreed that their data would be used for scientific purposes.

Three years and five months after T1 (i.e., in 2018 and 2019, respectively), we reinvited all participants who had completed T1 to take part in the T2 survey. First, participants provided informed consent, demographic information, and information about their perceived social support (see materials on the OSF for details).

Afterward, participants (again) completed the self-report form of the HEXACO-PI-R, followed by our measures of change goals, perceived trait changes in the past three-and-a-half years, desired trait levels, and retrospective trait levels three-and-a-half years earlier, in that order. Finally, participants were asked to provide ratings on the satisfaction with life and satisfaction with personality scales as well as to report on major life events they had experienced in the past three-and-a-half years. As compensation for participation, participants obtained feedback on their personality scores and could take part in a raffle of 10 generic gift vouchers worth 50€ each.

### Participants

A total of  $N = 636$  students participated at T1,  $N = 553$  (i.e., 86.9%) of which provided consent for the data to be used for scientific purposes (76.9% female, aged 17–43 years,  $M = 20.5$ ,  $SD = 2.7$ ). Of these, 149 participants also completed T2 ( $n = 63$  from the 2015 cohort and  $n = 86$  from the 2016 cohort).<sup>13</sup> No participant had to be excluded from analyses following our (pre-registered) exclusion criteria (i.e., taking less than 2 s on average per HEXACO-PI-R item, showing response overuse, i.e.,  $SD < 0.6$ , or showing inconsistencies in responses, i.e.,  $SD > 1.6$ ; see Barends & De Vries, 2019). Thus, the final sample size generously exceeded the minimum required sample size of  $N = 84$  that we specified a priori (G\*Power; Faul et al., 2009) and which would have allowed to detect medium-sized correlations ( $r = .30$ ) with satisfactory power of  $1 - \beta = .80$  and  $\alpha = .05$ . The majority of participants were female (81.9%). They were aged between 17 and 40 years at T1 ( $M = 20.4$ ,  $SD = 3.0$ ) and three-and-a-half years older at T2 (i.e., range: 21–43 years,  $M = 23.8$ ,  $SD = 3.0$ ).

Informants ( $N = 149$ ) were mostly female (61.7%) and covered a broad age range from 18 to 67 years ( $M = 36.2$ ,  $SD = 15.4$ ). The majority were family members of participants (i.e., 46.3% parents, 8.7% siblings), followed by romantic partners (24.8%) and friends (19.5%). Duration of acquaintanceship ranged from five months to 28 years, with a mean of 13.2 years ( $SD = 7.9$ ). Thus, informants knew the participants reasonably well. This was also supported by high agreement in personality ratings between participants and informants, with self-other correlations ranging between  $r = .54$  for Agreeableness and  $r = .71$  for Conscientiousness, yielding an average agreement of  $\bar{r} = .64$  (see additional analyses on the OSF for details).

## Results and Discussion

### Preliminary Analyses: Stability of Change Goals Over Time

We first examined the stability of change goals over time. Tables 4 and 5 summarize the descriptive statistics of change goals

<sup>13</sup> Fifteen participants did not complete the questions on change goals and desired trait levels at T1, yielding  $N = 134$  for the corresponding analyses. We again checked for potential selective dropout by comparing sample characteristics of participants who completed T1 with those who completed T2. Importantly, the T1 and T2 samples neither differed with regard to the distribution of participants' sex,  $\chi^2(df = 1) = 1.44$ ,  $p = .230$ ,  $OR = 1.36$ , 95% CI [0.85, 2.25], nor with regard to participants' age at T1,  $t(680) = 0.54$ ,  $p = .592$ ,  $d = 0.05$ , 95% CI [-0.13, 0.23], supporting the comparability of (sub)samples.

**Table 4**

*Descriptive Statistics of HEXACO Change Goals Measured at T1, With Statistics From One-Sample *t* Tests Against the Scale's Midpoint, Prevalence of Change Goals (in %), and Correlations With Concurrent Trait Levels (Study 2)*

Variable	<i>M</i> ( <i>SD</i> )	<i>t</i> test against $\mu = 4$		Prevalence (in %) of goals to			<i>r</i> trait level	
		<i>t</i> (133) <sup>a</sup>	<i>d</i>	Decrease	Stay same	Increase	SR	OR
H change goals T1	4.59 (0.89)	7.70***	0.67 [0.48, 0.85]	7.5	44.0	48.5	-.16 [-.32, .01]	.02 [-.15, .19]
E change goals T1	3.82 (0.96)	2.15*	-0.19 [-0.36, -0.01]	34.3	42.5	23.1	-.46*** [-.58, -.31]	-.36*** [-.50, -.20]
X change goals T1	4.81 (0.93)	10.16***	0.88 [0.68, 1.08]	3.7	38.8	57.5	-.54*** [-.65, -.40]	-.49*** [-.61, -.35]
A change goals T1	4.80 (0.95)	9.75***	0.84 [0.64, 1.04]	5.2	37.3	57.5	-.38*** [-.52, -.23]	-.37*** [-.51, -.22]
C change goals T1	4.97 (1.08)	10.37***	0.90 [0.69, 1.10]	6.0	32.8	61.2	-.52*** [-.63, -.38]	-.46*** [-.58, -.32]
O change goals T1	4.83 (0.85)	11.38***	0.99 [0.78, 1.19]	0.8	40.6	58.7	-.45*** [-.57, -.30]	-.37*** [-.51, -.22]

*Note.*  $N = 133$ – $134$ . H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience; SR = self-report of trait levels; OR = observer report of trait levels; T1 = first measurement occasion. Change goals were measured on a scale from 1 (*low change goals*) to 7 (*high change goals*), with a midpoint of 4 (*no goals to change*). Trait levels measured at T1. Values in square brackets indicate the 95% confidence intervals.

<sup>a</sup> For Openness to Experience,  $df = 132$ .

\*  $p < .05$ . \*\*\*  $p < .001$ .

measured at T1 and T2, together with statistics from one-sample *t* tests investigating mean-level changes and stability correlations (for correlations between all change goals scales, see Table S7 in the online supplemental materials). In line with prior evidence (Asadi et al., 2020; Robinson et al., 2015) and our hypotheses (see preregistration), change goals were moderately stable over time, yielding an average stability of  $\bar{r} = .37$  across dimensions. More specifically, stability in change goals was highest for Agreeableness ( $r = .47$ ) and Conscientiousness ( $r = .47$ ), followed by Extraversion ( $r = .40$ ), Emotionality ( $r = .31$ ), Honesty-Humility ( $r = .27$ ), and Openness to Experience ( $r = .25$ ; Table 5). Mean-level changes in change goals were, in turn, only significant for Conscientiousness, showing a small decrease in change goals over time and thus mirroring the fact that individuals had most strongly changed on this dimension in the past three-and-a-half years (see Footnote 11).

### Hypothesis Tests: Change Goals

Given that we assessed participants' personality change goals at both T1 and T2, we used data from both measurement occasions to investigate change goals in Study 2. First, almost all participants reported goals to change (i.e., increase or decrease) on at least one HEXACO dimension (97.0% at T1 and 98.0% at T2). Among these, most participants wanted to change several aspects of their personality (i.e., 96.1% at T1 and 97.3% at T2). We suspect that this very high prevalence of goals to change can be attributed to the sample composition and context in Study 2, comprising psychology students attending a course on personality and having previously received information about their personality profile (at least at T1). In turn, participants on average wanted to change in a socially desirable way on all HEXACO dimensions. That is, as evidenced by one-sample *t* tests against the scale's midpoint indicating no desire to change, participants reported goals to increase in Honesty-Humility, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience, and to decrease in Emotionality (Tables 4 and 5). Effect sizes (Cohen's *d*) were medium to large, except for Emotionality for which effects were only small to medium-sized.

The prevalence of goals to change in any way (i.e., increase or decrease) again differed across dimensions, although differences were smaller than in Study 1, especially at T1. Specifically, at T1, most participants reported goals to change on Conscientiousness (67.2%),

followed by Agreeableness (62.7%), Extraversion (61.2%), Openness to Experience (59.4%), Emotionality (57.5%), and Honesty-Humility (56.0%; see Table 4). At T2, goals to change were most prevalent for Extraversion (68.5%), followed by Openness to Experience (65.8%), Agreeableness (63.8%), Emotionality (62.4%), Conscientiousness (59.7%), and Honesty-Humility (42.9%). Thus, replicating Study 1, desires to change were (consistently) least prevalent for Honesty-Humility. However, for Openness to Experience, desires to change were relatively common in Study 2.

To test our hypotheses concerning the trait-specific effects of trait levels on change goals, we next correlated participants' self-reports on the HEXACO dimensions with their respective change goals measured at the same measurement occasion (see Tables 4 and 5). Results for Honesty-Humility were again in line with our hypotheses and thus compatible with the self-relevance account: At both T1 and T2, self-reports in Honesty-Humility showed only small, nonsignificant relations with corresponding change goals (i.e.,  $r = -.16$  and  $r = -.08$ , respectively), although correlations were somewhat larger (in absolute terms) than in Study 1. By contrast, results for Openness to Experience differed from predictions, showing medium to large negative correlations between trait levels and change goals (i.e.,  $r = -.45$  at T1 and  $r = -.27$  at T2). For the remaining HEXACO dimensions, results were again in line with predictions, yielding medium to large negative correlations between trait levels and corresponding change goals (i.e.,  $-.54 \leq r \leq -.38$  at T1 and  $-.47 \leq r \leq -.29$  at T2). Of note, results were highly similar when correlating trait levels at T1 with change goals at T2 (see additional analyses on the OSF) as well as when relying on observer reports of HEXACO trait levels at T1 (see Table 4). Nonetheless, observer reports on Extraversion and Agreeableness showed incremental predictive validity beyond self-reports for corresponding change goals in multiple linear regressions including both self- and observer reports as predictors,  $\beta = -.23$ , 95% CI [-.75, -.06],  $p = .023$  (Extraversion), and  $\beta = -.23$ , 95% CI [-.73, -.08],  $p = .015$  (Agreeableness), respectively. All results from these multiple regression analyses are provided in the additional analyses on the OSF.

To shed further light on the relations between trait levels and change goals, we again explored the prevalence of goals to change in any way (i.e., increase or decrease vs. stay the same) among

**Table 5**  
*Descriptive Statistics of HEXACO Change Goals Measured at T2, With Statistics From One-Sample t Tests Against the Scale's Midpoint, Prevalence of Change Goals (in %), One-Sample t Tests Comparing the Means Between T1 and T2, Stability Correlations, and Correlations With Concurrent Trait Levels (Study 2)*

Variable	M (SD)	t test against $\mu = 4$			Prevalence (in %) of goals to			t test $M_{T1}$ vs. $M_{T2}$		$r_{T1,T2}$	r trait level
		t(148)	d	d	Decrease	Stay same	Increase	t(133) <sup>a</sup>	d		
H change goals T2	4.52 (0.78)	8.23 <sup>****</sup>	0.67 [0.50, 0.85]	2.7	57.1	40.3	0.87	-0.09 [-0.30, 0.11]	.27 <sup>**</sup> [.11, .42]	-.08 [-.23, .09]	
E change goals T2	3.61 (0.99)	4.79 <sup>***</sup>	-0.39 [-0.56, -0.23]	44.3	37.6	18.1	1.76	-0.18 [-0.38, 0.02]	.31 <sup>****</sup> [.15, .46]	-.29 <sup>****</sup> [-.43, -.13]	
X change goals T2	4.93 (0.92)	12.37 <sup>****</sup>	1.01 [0.81, 1.21]	2.0	31.5	66.4	1.02	0.10 [-0.09, 0.28]	.40 <sup>****</sup> [.25, .54]	-.34 <sup>***</sup> [-.47, -.19]	
A change goals T2	4.73 (0.93)	9.63 <sup>****</sup>	0.79 [0.60, 0.97]	6.7	36.2	57.1	1.16	-0.10 [-0.28, 0.07]	.47 <sup>****</sup> [.33, .60]	-.42 <sup>****</sup> [-.55, -.28]	
C change goals T2	4.75 (1.11)	8.23 <sup>****</sup>	0.67 [0.50, 0.85]	8.7	40.3	51.0	2.63 <sup>**</sup>	-0.24 [-0.41, -0.06]	.47 <sup>****</sup> [.32, .59]	-.47 <sup>****</sup> [-.59, -.33]	
O change goals T2	4.83 (0.79)	12.82 <sup>****</sup>	1.05 [0.85, 1.25]	1.3	34.2	64.4	0.44	-0.05 [-0.26, 0.16]	.25 <sup>***</sup> [.08, .40]	-.27 <sup>****</sup> [-.41, -.12]	

Note. N = 149 (T2). H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience; T1 = first measurement occasion; T2 = second measurement occasion (three-and-a-half years after T1). Change goals were measured on a scale from 1 (low change goals) to 7 (high change goals), with a midpoint of 4 (no goals to change). Trait levels measured at T2 (self-reported). Values in square brackets indicate the 95% confidence interval.

<sup>a</sup> For Openness to Experience,  $df = 132$ .  
<sup>\*</sup>  $p < .01$ . <sup>\*\*\*</sup>  $p < .001$ .

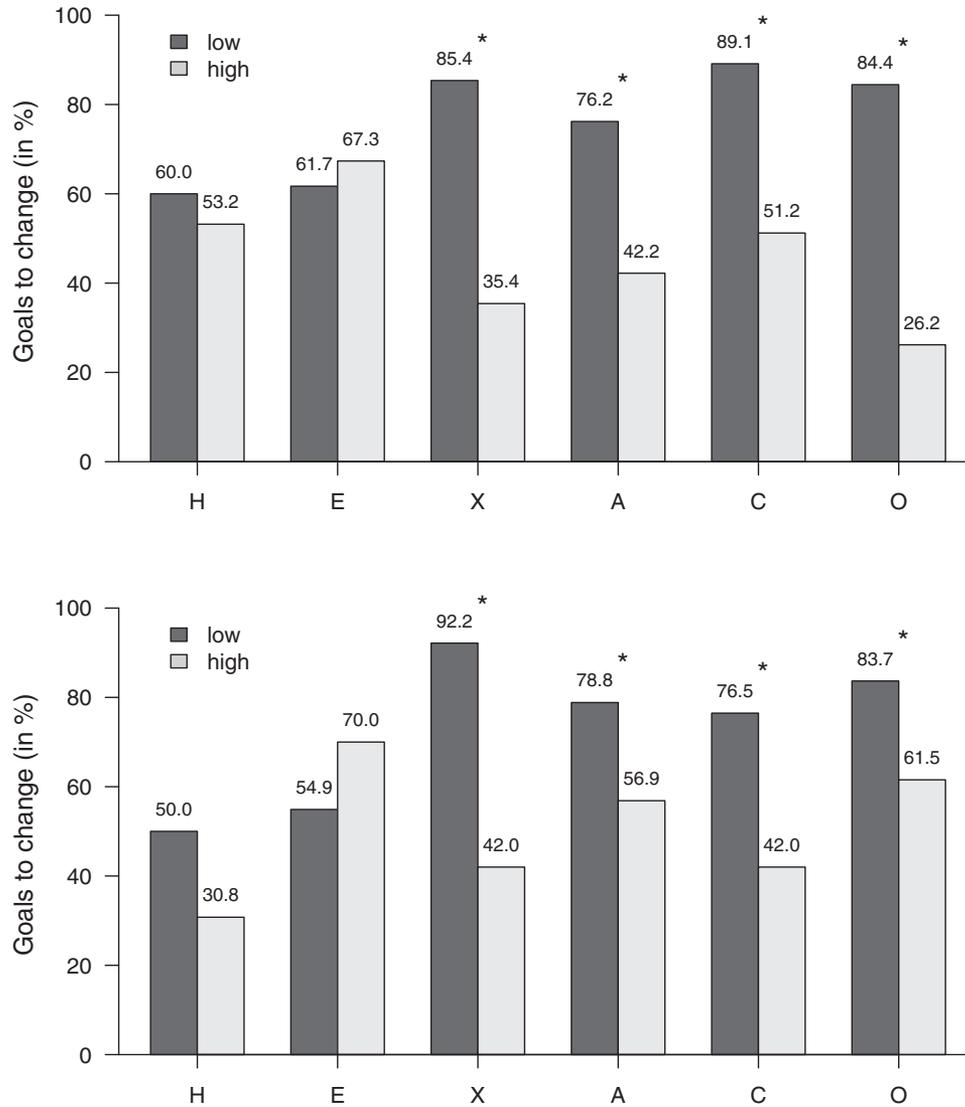
individuals with relatively low versus high levels on the corresponding HEXACO dimension (i.e., lower vs. upper third of trait level distributions).<sup>14</sup> As depicted in Figure 2, there were again no significant differences (Fisher's exact tests) in the prevalence of goals to change for Honesty-Humility between individuals with less desirable (low) versus more desirable (high) trait levels ( $OR = 0.76$ , 95% CI [0.31, 1.87],  $p = .535$  at T1 and  $OR = 0.45$ , 95% CI [0.18, 1.07],  $p = .069$  at T2). Accordingly, at least at T2, individuals with less desirable trait levels on Honesty-Humility were similarly inclined to change on this dimension as individuals with more desirable trait levels on the remaining dimensions were to change on these dimensions (see Figure 2). For Openness to Experience, however, desires to change were highly prevalent and more so among individuals with lower rather than higher trait levels ( $OR = 0.07$ , 95% CI [0.02, 0.21],  $p < .001$  at T1 and  $OR = 0.32$ , 95% CI [0.11, 0.87],  $p = .015$  at T2). Moreover, surprisingly, goals to change on Emotionality were not more frequent among participants with high versus low trait levels ( $OR = 0.78$ , 95% CI [0.31, 1.96],  $p = .670$  at T1 and  $OR = 0.53$ , 95% CI [0.21, 1.28],  $p = .151$  at T2). However, this finding was mainly attributable to individuals indicating a desire to change in an "undesirable" way (i.e., to increase on Emotionality). For the remaining dimensions, in turn, results were again in line with expectations, showing a higher prevalence of goals to change in any way among individuals with less desirable trait levels as compared to those with more desirable trait levels ( $0.10 \leq OR \leq 0.23$ , all  $ps \leq .002$  at T1 and  $0.06 \leq OR \leq 0.36$ , all  $ps \leq .021$  at T2).

Overall, Study 2 provided only partial support for our hypotheses and the self-relevance account, namely with regard to Honesty-Humility. However, note that the findings for Openness to Experience—particularly the high negative correlations between change goals and concurrent trait levels—stay in sharp contrast to accumulating evidence based on the Big Five (see Table 1). Moreover, it is noteworthy that goals to change in Honesty-Humility were less prevalent at T2 than at T1. On the one hand, this may suggest that some individuals may have felt having come closer to or even reached their ideal. On the other hand, this finding may result from providing participants with feedback about their personality at T1, but not at T2. We will discuss this possibility further below—and provide a corresponding test in Study 3.

<sup>14</sup> We again considered it important to repeat these analyses when a different method (median split) was used to classify participants as having relatively low versus high trait levels. Importantly, results remained virtually the same, thus demonstrating their robustness across different classification approaches. Moreover, we again compared the prevalence of change goals among participants who wanted to stay the same versus change in a socially desirable way, excluding those who wanted to change in a socially undesirable way. Using this approach, effect sizes slightly increased on average. Most importantly, results for Emotionality were now in line with expectations, yielding a higher prevalence of change goals among individuals with relatively high trait levels as compared to those with relatively low trait levels, even though this difference failed to reach a conventional level of statistical significance at T2 ( $OR = 0.31$ , 95% CI [0.12, 0.76],  $p = .005$  at T1 and  $OR = 0.49$ , 95% CI [0.22, 1.06],  $p = .069$  at T2).

**Figure 2**

Prevalence of Goals to Change (i.e., Increase or Decrease vs. Stay the Same) on the Six HEXACO Dimensions in Study 2 (in %), Separated for Individuals With Low Versus High Trait Level (i.e., Lower vs. Upper Third of Trait Level Distributions) on the Respective Dimension



Note. T1 data in upper panel, T2 data in lower panel. H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience.

\*  $p < .05$  (in Fisher's exact test).

Finally, we investigated the longitudinal associations between change goals at T1 and trait levels at T2. Specifically, if goals to change indeed result in corresponding personality change, change goals at T1 should positively relate to trait levels at T2 after controlling for trait levels at T1. In contrast to this reasoning, however, for none of the HEXACO dimensions, partial correlations between change goals at T1 and trait levels at T2 turned out significant (i.e.,  $-.16 \leq r \leq .05$ ).<sup>15</sup> However, in further exploratory regression analyses, we found that change goals indeed moderated the stability of individuals' trait levels on Openness to Experience,  $\beta = -.16$ , 95% CI  $[-.29, -.03]$ ,  $p = .019$ . Specif-

ically, individuals having higher change goals for Openness to Experience showed a stronger increase on this dimension over time as compared with individuals having lower change goals. For

<sup>15</sup> We also investigated whether differences in individuals' trait levels between T1 and T2 (i.e., difference scores;  $T2 - T1$ ) as indicators of actual change correlated with their change goals at T1. Positive correlations occurred for Emotionality and Conscientiousness (both  $r = .19$ ,  $p < .05$ ), meaning that higher change goals on these variables were associated with a stronger increase on both these dimensions over time (see additional analyses on the OSF for details).

the remaining HEXACO dimensions, by contrast, there was no indication of a moderation of the relation between trait levels at T1 and T2 by change goals (see additional analyses on the OSF for details). Nonetheless, the finding for Openness to Experience suggests that change goals may indeed trigger corresponding personality change, ultimately supporting the view that personality change can be self-regulated to some extent (Denissen et al., 2013; Hennecke et al., 2014).

### Further Exploratory Analyses

**Desired Trait Levels.** In addition to change goals, we assessed individuals' desired trait levels at both T1 and T2. For all HEXACO dimensions, participants perceived higher trait levels as more desirable. Accordingly, desirability ratings exceeded the scale's midpoint of 5 indicating *average* levels as most desirable for all dimensions (Tables 6 and 7; see also Table S8 in the online supplemental materials for the full correlation matrix among desired trait levels). As such, even for Emotionality, participants evaluated higher trait levels to be somewhat more desirable than average trait levels, ( $d_{T1} = 0.37$  and  $d_{T2} = 0.38$ ). This is in contrast to Study 1 where participants judged average levels in Emotionality to be most desirable. A potential reason for this discrepancy in results might be that the majority of participants in Study 2 were female (whereas participants were almost equally distributed across the sexes in Study 1). Emotionality shows the strongest sex differences among the HEXACO dimensions, with women scoring substantially higher than men (meta-analytic mean difference of  $d = 1.03$ ; Moshagen et al., 2019). Thus, it is conceivable that women have a preference for relatively high levels in Emotionality. Supporting this reasoning, women indeed indicated higher desired trait levels in Emotionality as compared with men (women:  $M_{T1} = 5.72$ ,  $SD_{T1} = 1.15$ ;  $M_{T2} = 5.52$ ,  $SD_{T2} = 1.19$ ; men:  $M_{T1} = 4.38$ ,  $SD_{T1} = 1.38$ ;  $M_{T2} = 5.30$ ,  $SD_{T2} = 1.54$ ). However, these differences were only significant for desired trait levels measured at T1,  $t(132) = 5.00$ ,  $p < .001$ ,  $d = 1.13$ , 95% CI [0.66, 1.59], not at T2,  $t(132) = 0.82$ ,  $p = .412$ ,  $d = 0.18$ , 95% CI [-0.25, 0.60].<sup>16</sup> Nonetheless, these findings can arguably explain why relatively high (rather than average) levels on Emotionality were judged as most desirable in Study 2.

Desired trait levels further showed moderate stability over time, with stability correlations ranging between  $r = .31$  for Extraversion and  $r = .57$  for Honesty-Humility, yielding an average stability of  $\bar{r} = .42$  (see Table 7). Accordingly, mean-level changes in desired trait levels were relatively weak, showing only small increases in desired trait levels for Honesty-Humility and Conscientiousness and a small decrease in desired trait levels for Extraversion (see Table 7). Moreover, desired trait levels were consistently—positively—related to individuals' concurrent trait levels on all HEXACO dimensions (Tables 6 and 7). Thus, unlike Study 1, even for Emotionality there was a positive correlation between individuals' self-reported trait levels and their desired trait levels, yielding a large effect at T1 ( $r = .52$ ) and a medium-sized effect at T2 ( $r = .33$ ). In any case, the positive correlations between current and desired trait levels demonstrate that individuals were somewhat satisfied with their personality, even though they reported desires to change on several aspects of their personality.

**Satisfaction With Personality.** Corroborating that participants were somewhat satisfied with their personality, we again

found relatively high levels of satisfaction with personality ( $M = 3.48$ ,  $SD = 0.63$ , on a scale ranging from 1 to 5). Satisfaction with personality was, in turn, negatively correlated with participants' concurrent change goals (at T2) for Honesty-Humility ( $r = -.28$ , 95% CI [-.42, -.12],  $p < .001$ ) and Agreeableness ( $r = -.25$ , 95% CI [-.39, -.09],  $p = .002$ ), while yielding negligible (negative) correlations for the remaining dimensions ( $-.08 \leq r \leq -.01$ ) except Emotionality, which showed a small but non-significant positive link ( $r = .14$ , 95% CI [-.02, .29],  $p = .089$ ).

More importantly, satisfaction with personality again showed a differential pattern of relations with individuals' concurrent trait levels (at T2) that was well in line with our findings from Study 1: Whereas satisfaction with personality showed meaningful relations with trait levels for Emotionality ( $r = -.25$ , 95% CI [-.40, -.10],  $p = .002$ ), Extraversion ( $r = .64$ , 95% CI [.54, .73],  $p < .001$ ), Agreeableness ( $r = .27$ , 95% CI [.12, .41],  $p < .001$ ), and Conscientiousness ( $r = .24$ , 95% CI [.08, .39],  $p = .003$ )—in the direction reflecting the traits' social desirability—it was unrelated to trait levels for Honesty-Humility ( $r = -.01$ , 95% CI [-.17, .15],  $p = .893$ ) and Openness to Experience ( $r = .02$ , 95% CI [-.14, .18],  $p = .794$ ). These findings once more suggest that individuals high and low on Honesty-Humility and Openness to Experience are equally satisfied with their personality, even though only high levels in both these dimensions are socially desirable. As such, the findings are incompatible with a social desirability account of change goals, but they are compatible with a self-relevance account.

### Study 3

Although Study 1 and 2 provided support for our hypotheses, the evidence for the proposed self-relevance account still remains inconclusive because we did not measure the traits' self-relevance directly. That is, we solely based our conclusions on the findings that (a) trait levels in Honesty-Humility and (in Study 1) Openness to Experience yielded close to zero relations with corresponding change goals and (b) Honesty-Humility and Openness to Experience have been assigned the highest self-relevance among the HEXACO dimensions in prior research (Thielmann, Hilbig, et al., 2020). In Study 3, we thus aimed at providing a more direct test of the self-relevance account (*vis-à-vis* the social desirability account). To this end, participants judged the perceived self-relevance (and social desirability) of their HEXACO trait levels and we also asked them directly about the reasons for their change goals, referring to both self-relevance and social desirability reasons.

Moreover, Study 3 aimed at clarifying some of the inconsistencies in results observed across our previous studies. Most strikingly, trait levels in Openness to Experience were only unrelated to corresponding change goals in Study 1, but they yielded a considerable negative association with change goals in Study 2 (i.e.,  $r = -.45$  at T1 and  $r = -.27$  at T2). A crucial difference between

<sup>16</sup> Interestingly, among participants in Study 1, there was no indication for higher desired trait levels in Emotionality among women,  $t(385) = 0.05$ ,  $p = .957$ ,  $d = -0.01$ , 95% CI [-0.21, 0.19]. We suspect that differences in desired trait levels on Emotionality are moderated by age, in the sense that men and women do converge on their desired trait levels on Emotionality with increasing age.

**Table 6**

*Descriptive Statistics of Desired Trait Levels on the HEXACO Dimensions Measured at T1, With Statistics From One-Sample *t* Tests Against the Scale's Midpoint and Correlations With Concurrent Trait Levels as Well as Change Goals (Study 2)*

Variable	<i>M</i> ( <i>SD</i> )	<i>t</i> test against $\mu = 5$		<i>r</i> trait level		
		<i>t</i> (133) <sup>a</sup>	<i>d</i>	SR	OR	<i>r</i> change goals
H desired level T1	6.80 (1.53)	13.60***	1.18 [0.96, 1.40]	.47*** [.33, .60]	.38*** [.22, .52]	.26** [.10, .41]
E desired level T1	5.48 (1.30)	4.27***	0.37 [0.19, 0.54]	.52*** [.39, .64]	.46*** [.32, .58]	.11 [−.06, .28]
X desired level T1	6.44 (1.08)	15.47***	1.34 [1.11, 1.57]	.50*** [.36, .62]	.34*** [.18, .48]	.01 [−.16, .18]
A desired level T1	6.64 (1.32)	14.43***	1.25 [1.02, 1.47]	.25** [.08, .40]	.18* [.01, .34]	.30*** [.14, .45]
C desired level T1	6.66 (1.24)	15.48***	1.34 [1.10, 1.57]	.27** [.10, .42]	.18* [.01, .34]	.18* [.01, .34]
O desired level T1	6.91 (1.25)	17.65***	1.52 [1.27, 1.77]	.52*** [.39, .64]	.52*** [.39, .64]	−.04 [−.21, .13]

*Note.* *N* = 131–134. H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience; SR = self-report of trait levels; OR = observer report of trait levels. Desired trait levels were measured on a scale from 1 (*low trait level desired*) to 9 (*high trait level desired*), with a midpoint of 5 (*average trait level desired*). T1 = first measurement occasion. Trait levels measured at T1. Values in square brackets indicate the 95% confidence intervals.

<sup>a</sup> For Honesty-Humility and Extraversion, *df* = 132.

\* *p* < .05. \*\* *p* < .01. \*\*\* *p* < .001.

studies (in addition to differences in sample characteristics) was that participants in Study 2—but not in Study 1—received feedback about their trait levels at T1 before reporting on their change goals. In this regard, it is also notable that almost all correlations between trait levels and change goals in Study 2 were (descriptively) stronger at T1 as compared with T2—and thus when participants learned about their trait levels shortly before reporting on their change goals. We thus considered it likely that receiving personality feedback may affect one's goals to change. For example, individuals with lower levels on a trait may systematically overestimate their trait level, and this may particularly be the case for traits that are strongly linked to values (e.g., Honesty-Humility and Openness to Experience). Indeed, evidence suggests that individuals think of themselves as relatively high in Honesty-Humility and Openness to Experience on average (Dunlop et al., 2019). As a consequence, individuals may underestimate the need to change in a socially desirable way on these traits in particular, ultimately resulting in a (close to) zero relation between trait levels and change goals. To test this possibility, in Study 3 half of participants received feedback about their trait levels prior to reporting on their

change goals. We also assessed participants' surprise and feelings about their trait levels. Among those participants who did not receive personality feedback, we assessed perceptions of one's relative standing on the HEXACO dimensions in comparison to others. Overall, beyond providing a direct test of the self-relevance and social desirability accounts, Study 3 allowed us to test (a) whether self-knowledge about one's trait levels affects change goals and (b) whether a reduced self-knowledge for Honesty-Humility and Openness to Experience may—alternatively to high self-relevance—account for the trait-specific differences in relations between trait levels and change goals.

## Method

The design, hypotheses, and analyses were preregistered prior to data collection (see <https://aspredicted.org/dy277.pdf>). All materials, data, scripts, and additional analyses and results are available on the OSF (<https://osf.io/trhzs/>). Again, we report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures included in the study. Ethical approval was

**Table 7**

*Descriptive Statistics of Desired Trait Levels on the HEXACO Dimensions Measured at T2, With Statistics From One-Sample *t* Tests Against the Scale's Midpoint, One-Sample *t* Tests Comparing the Means Between T1 and T2, Stability Correlations, and Correlations With Concurrent Trait Levels as Well as Change Goals (Study 2)*

Variable	<i>M</i> ( <i>SD</i> )	<i>t</i> test against $\mu = 5$		<i>t</i> test $M_{T1}$ vs. $M_{T2}$		<i>r</i> <sub>T1,T2</sub>	<i>r</i> trait level	<i>r</i> change goals
		<i>t</i> (148)	<i>d</i>	<i>t</i> (133) <sup>a</sup>	<i>d</i>			
H desired level T2	7.06 (1.41)	17.89***	1.47 [1.23, 1.70]	2.52*	0.20 [0.04, 0.36]	.57*** [.45, .68]	.36*** [.22, .50]	.23** [.07, .38]
E desired level T2	5.48 (1.26)	4.63***	0.38 [0.21, 0.55]	0.36	0.03 [−0.15, 0.22]	.38*** [.23, .52]	.33*** [.18, .46]	.22** [.06, .36]
X desired level T2	6.22 (1.27)	11.77***	0.96 [0.77, 1.16]	2.23*	−0.23 [−0.43, −0.02]	.31*** [.14, .45]	.32*** [.17, .46]	.09 [−.07, .25]
A desired level T2	6.66 (1.20)	16.85***	1.38 [1.15, 1.60]	0.19	0.02 [−0.17, 0.20]	.40*** [.25, .54]	.27** [.11, .41]	.17* [.01, .32]
C desired level T2	7.00 (1.17)	20.90***	1.71 [1.46, 1.96]	2.76**	0.27 [0.07, 0.47]	.35*** [.19, .49]	.12 [−.04, .28]	.29*** [.14, .43]
O desired level T2	6.87 (1.28)	17.76***	1.46 [1.22, 1.68]	0.13	−0.01 [−0.19, 0.17]	.45*** [.31, .58]	.51*** [.38, .62]	−.05 [−.21, .11]

*Note.* *N* = 149 (T2). H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience; T1 = first measurement occasion; T2 = second measurement occasion (three-and-a-half years after T1). Desired trait levels were measured on a scale from 1 (*low trait level desired*) to 9 (*high trait level desired*), with a midpoint of 5 (*average trait level desired*). Trait levels measured at T2 (self-reported). Values in square brackets indicate the 95% confidence intervals.

<sup>a</sup> For Honesty-Humility and Extraversion, *df* = 132.

\* *p* < .05. \*\* *p* < .01. \*\*\* *p* < .001.

obtained by the Vrije Universiteit Amsterdam through the same umbrella application as for Studies 1 and 2 (VCWE-2016-188).

### Materials

Personality traits were again assessed using the Dutch version (De Vries et al., 2009) of the HEXACO-PI-R (K. Lee & Ashton, 2006), comprising 208 items in total due to including measures of the interstitial facets of Altruism and Proactivity for exploratory reasons. All responses were collected on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Alpha reliabilities were satisfactory for all scales ( $.85 \leq \alpha \leq .91$ ; see additional analyses on the OSF for details).

We also used the same measure of change goals as before. That is, participants first received detailed information about each of the six HEXACO dimensions and were then asked to indicate for each dimension the extent to which they want to change. Responses were collected on a 7-point Likert-type scale ranging from 1 = *much lower* to 7 = *much higher* (and with 4 = *neither lower nor higher*). Note that, this time, we did not measure desired trait levels given our sole focus on change goals.

In addition to change goals, we measured participants' reasons for their goals to change. To this end, participants were presented with their responses to the six change goals questions (i.e., for each HEXACO dimension) and asked to bring three potential reasons in the order describing the respective change goal best. Each reason was sought to specifically reflect one account of change goals, reading "This trait is important to my self-concept/how I see myself" (i.e., self-relevance account), "This trait is considered socially desirable by others" (i.e., social desirability account), and "This trait can help me achieve certain life goals" (i.e., functional account, which may be an alternative to the social desirability account; see, e.g., Stieger, Eck, et al., 2020).<sup>17</sup> Participants could drag and drop the reasons to bring them in order, with the reason on top describing their respective change goal best.

To further provide a direct assessment of the self-relevance and social desirability of participants' trait levels, we created two new measures using a similar approach as for the assessment of change goals. Specifically, participants first read the same detailed information about each HEXACO dimension. To measure self-relevance, they were then asked to rate the extent to which their trait level on a dimension was relevant to their self-concept. It was emphasized that the self-relevance of a trait does not necessarily depend on one's trait level; rather, a trait may be important (or not) for one's self-concept irrespective of whether one scores high or low on the trait. Responses were collected on a 7-point Likert-type scale ranging from 1 = *very unimportant to my self-concept* to 7 = *very important to my self-concept*. To measure social desirability, in turn, participants were asked to rate the extent to which their trait levels on each dimension were socially desirable. Crucially, instructions emphasized that it is about how positively one's own traits are seen by *others*. Responses were collected on a 7-point Likert-type scale ranging from 1 = *my trait score is considered very socially undesirable* to 7 = *my trait score is considered very socially desirable*.

As before, we also once more assessed participants' satisfaction with personality using the same eight-item scale as in our previous studies. Participants' responses were collected on a 5-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly*

*agree*. Alpha reliability was satisfactory ( $\alpha = .88$ ). Note that, this time, we refrained from including a measure of satisfaction with life, given that it was beyond the focus of our investigation.

Finally, we aimed at obtaining insights into participants' reactions to receiving personality feedback. To this end, we asked those participants who received personality feedback (a) how surprised they were about their trait levels (i.e., "How surprised are you by your score on X?", with X being replaced by the name of the respective HEXACO dimension), using a 7-point Likert-type scale ranging from 1 = *not surprised at all* to 7 = *very surprised*, and (b) how they felt about their trait levels (i.e., "How do you feel about your score on X?", with X again being replaced by the name of the respective HEXACO dimension), using a 7-point Likert-type scale ranging from 1 = *very negative* to 7 = *very positive*. Participants who did not receive personality feedback were asked to provide relative self-assessments on the HEXACO dimensions ("Compared with others, I rate myself as . . . on X", with X being replaced by the name of the respective HEXACO dimension) using a 9-point stanine scale ranging from 1 = *very low* to 9 = *very high*, with a midpoint of 5 = *average*.

### Procedure

Prior to conducting the main study, we ran a pilot to test our newly created self-relevance and social desirability measures and to also obtain insights into participants' reactions to receiving personality feedback. A detailed overview of materials used in the pilot as well as the data and results are available on the OSF. Note that participants in the pilot were comparable to participants in the final sample regarding demographic characteristics.

The main study was conducted online via the same ISO-certified panel provider in the Netherlands as Study 1 (Flycatcher). The study contained three measurement occasions, each conducted around one week apart from each other. At the first measurement occasion (T1), participants provided detailed demographic information and completed the self-report form of the HEXACO-PI-R. At the second measurement occasion (T2), participants were asked to report on the self-relevance and the social desirability of their HEXACO trait levels. The order of the two measures was counterbalanced. Participants were randomly assigned to one of two conditions, the *feedback* condition and the *no feedback* condition. In the feedback condition, participants first received information about their personality profiles based on the HEXACO self-reports provided at T1. To this end, we determined participants' trait levels in comparison to a representative Dutch community sample (De Vries et al., 2009) using stanine scores (i.e., ranging from 1 = *very low* to 9 = *very high*). Participants obtained their scores and were then asked to rate the self-relevance and social desirability of their trait levels. In the *no feedback* condition, in turn, participants were instructed to first carefully think about their own trait levels for each HEXACO dimension and to confirm once having done so by checking a checkbox (for a similar procedure, see Study 9 in Thielmann, Hilbig, et al., 2020). Thereafter, they completed the same self-relevance and social desirability measures as in the *feedback* condition. Finally, participants in the *feedback* condition

<sup>17</sup> We thank an anonymous reviewer for pointing us to this alternative reason for goals to change, beyond social desirability and self-relevance.



reported on their reactions (i.e., surprise and feelings) to the personality feedback.

At the third measurement occasion (T3), participants first reported on their goals to change on the six HEXACO dimensions. Next, they were again presented with their previous responses to the change goals questions and asked about the reasons for their goals to change. Participants then completed the satisfaction with personality scale before again working on the self-relevance measure as completed at T2. This repeated assessment of self-relevance allowed us to examine the test-retest reliability of our newly created scale. Finally, participants in the *no feedback* condition provided relative self-assessments on the HEXACO dimensions in the form of stanine scores. As a compensation for participation, participants received credit points from the panel that they could exchange for a gift voucher, plus a ticket for a quarterly lottery organized by the panel.

### Participants

The sample size was determined based on an a priori power analysis using G\*Power (Faul et al., 2009). We aimed at detecting small to medium-sized correlations ( $r = .15$ ) with a conventional (two-tailed)  $\alpha = .05$  and high statistical power of  $1 - \beta = .95$ . This yielded a required sample size of  $N = 571$  participants completing all three measurement occasions. Of note, this sample size also ensured sufficient power ( $1 - \beta = .80$ ) to detect medium-sized (or smaller) effects in other relevant analyses (see preregistration for details).

To obtain the required sample size at T3, we overrecruited participants at T1, collecting data from 967 participants in total. Of these,  $n = 35$  were excluded from further participation based on the preregistered exclusion criteria (i.e., taking less than 2 s per HEXACO item on average, showing response option overuse,  $SD < 0.6$ , and/or showing inconsistencies in responses,  $SD > 1.6$ ). Thus, the final sample at T1 comprised  $N = 932$  participants who were invited for T2. Of these,  $N = 711$  (76.3%) completed T2, of which  $N = 603$  (84.8%) also completed T3. Participants in the final (T3) sample were almost equally distributed across the sexes (i.e., 52.1%), spanned a broad age range from 18 to 97 years ( $M = 52.1$ ,  $SD = 17.4$ ), and had diverse educational backgrounds. The majority of participants (i.e., 74.3%) were either married or living together as a couple. There were  $n = 313$  (51.9%) participants in

the *feedback* condition and  $n = 290$  (48.1%) in the *no feedback* condition.

## Results and Discussion

### Means and Prevalence of Change Goals

We first examined the prevalence of change goals across feedback conditions (see Table 8). As before, when considered for each HEXACO dimension individually, most individuals reported a desire to stay the same on most dimensions, ranging from 42.0% for Extraversion to 58.9% for Honesty-Humility, with an average of 51.1% across dimensions. Importantly, however, almost all participants (93.2%) reported goals to change on at least one dimension, and the majority of these (88.4%) desired to change on multiple dimensions. As such, the findings once more demonstrate the considerable prevalence of personality change goals. In turn, participants reported goals to change in a socially desirable way for all dimensions (see Table 8). That is, participants on average wanted to increase in Honesty-Humility, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience—yielding medium to large effects in comparison to the scale's midpoint indicating no goal to change—and to decrease in Emotionality—yielding a small to medium-sized effect. Moreover, replicating our previous findings, change goals were least prevalent for Honesty-Humility (41.1%) and Openness to Experience (43.8%).

Strikingly, however, there were considerable differences in change goals between feedback conditions for all dimensions except Extraversion (see Table 9). In the *feedback* condition, participants reported greater goals to change in a socially desirable way for Honesty-Humility, Agreeableness, Conscientiousness, and Openness to Experience, yielding small to medium-sized mean differences in comparison to the *no feedback* condition. For Emotionality, goals to change in a socially desirable way (i.e., to decrease) were, surprisingly, lower in the *feedback* condition, approaching the scale's midpoint indicating no desire to change. Crucially, change goals differed most strongly between feedback conditions for Honesty-Humility, showing an increase in the prevalence of goals to change in any way (i.e., increase or decrease) from 32.8% in the *no feedback* condition to 48.9% in the *feedback* condition. Note that this difference is comparable with the difference in the prevalence of change goals for Honesty-Humility

**Table 8**

*Descriptive Statistics of HEXACO Change Goals Across Feedback Conditions, With Statistics From One-Sample t Tests Against the Scale's Midpoint and Prevalence of Change Goals (in %) (Study 3)*

Variable	<i>M</i> ( <i>SD</i> )	<i>t</i> test against $\mu = 4$		Prevalence (in %) of goals to		
		<i>t</i> (602)	<i>d</i>	Decrease	Stay same	Increase
H change goals	4.47 (0.85)	13.73***	0.56 [0.47, 0.64]	4.0	58.9	37.2
E change goals	3.72 (1.01)	6.71***	-0.27 [-0.35, -0.19]	39.0	43.1	17.9
X change goals	4.65 (0.87)	18.38***	0.75 [0.66, 0.84]	5.1	42.0	52.9
A change goals	4.46 (0.80)	14.11***	0.57 [0.49, 0.66]	6.6	52.2	41.1
C change goals	4.42 (0.86)	11.90***	0.48 [0.40, 0.57]	8.5	54.1	37.5
O change goals	4.48 (0.77)	15.19***	0.62 [0.53, 0.71]	3.7	56.2	40.1

*Note.*  $N = 603$ . H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience. Change goals were measured on a scale from 1 (*low change goals*) to 7 (*high change goals*), with a midpoint of 4 (*no goal to change*). Values in square brackets indicate the 95% confidence intervals.

\*\*\*  $p < .001$ .

**Table 9**

*Descriptive Statistics of HEXACO Change Goals Within Feedback Conditions, With Prevalence of Change Goals (in %) and Statistics From Two-Sample t Tests Comparing the Means of Change Goals Across Conditions (Study 3)*

Variable	No feedback condition				Feedback condition				Comparison between conditions	
	M (SD)	Prevalence (in %) of goals to			M (SD)	Prevalence (in %) of goals to			t(601)	d
		Decrease	Stay same	Increase		Decrease	Stay same	Increase		
H change goals	4.29 (0.74)	5.2	67.2	27.6	4.65 (0.90)	2.9	51.1	46.0	5.33***	-0.43 [-0.60, -0.27]
E change goals	3.59 (1.04)	48.3	35.9	15.9	3.85 (0.97)	30.4	49.8	19.8	3.11**	-0.25 [-0.41, -0.09]
X change goals	4.68 (0.94)	8.6	33.5	57.9	4.63 (0.80)	1.9	49.8	48.2	0.61	0.05 [-0.11, 0.21]
A change goals	4.39 (0.83)	9.7	51.4	39.0	4.52 (0.78)	3.8	53.0	43.1	2.01*	-0.16 [-0.32, -0.003]
C change goals	4.31 (0.87)	12.1	53.5	34.5	4.51 (0.84)	5.1	54.6	40.3	2.93**	-0.24 [-0.40, -0.08]
O change goals	4.39 (0.77)	5.9	58.3	35.9	4.55 (0.76)	1.6	54.3	44.1	2.56*	-0.21 [-0.37, -0.05]

*Note.*  $n = 290$  (no feedback),  $n = 313$  (feedback). H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience. Change goals were measured on a scale from 1 (*low change goals*) to 7 (*high change goals*), with a midpoint of 4 (*no goal to change*). Values in square brackets indicate the 95% confidence intervals.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

between Study 1 (i.e., 31.0%)—where participants received no personality feedback prior to reporting on their change goals—and Study 2 (i.e., 56.0% at T1)—where participants received personality feedback before.

**Change Goals and Concurrent Trait Levels**

To address our main research question, we next investigated the relations between HEXACO change goals and concurrent trait levels (Table 10; for intercorrelations among change goals, see Table S10 in the online supplemental materials). In the *no feedback* condition, correlations were largely in line with hypotheses and our previous studies. That is, whereas change goals showed around medium-sized negative correlations with concurrent trait levels for Emotionality, Extraversion, Agreeableness, and Conscientiousness, no significant relation was apparent for Honesty-Humility ( $r = -.06$ ) whereas Openness to Experience even yielded a small *positive* link ( $r = .13$ ). As such, results closely replicated the correlational pattern observed in Study 1 and were thus consistent with our predictions derived from the self-relevance account. Of note, the pattern of results was even clearer when relating change goals to individuals’ relative self-assessments of their concurrent trait levels, showing virtually zero relations for Honesty Humility and Openness to Experience (i.e.,

$r = .04$  and  $r = -.01$ , respectively) while revealing medium-sized and significant negative relations for the remaining dimensions (i.e.,  $-.35 \leq r \leq -.27$ ; see additional analyses on the OSF for details).

However, once providing participants with personality feedback, the correlation between trait levels and change goals was also negative and significant for Honesty-Humility ( $r = -.27$ ). Indeed, feedback moderated the relation between trait levels and change goals for this trait: Predicting change goals on Honesty-Humility by trait levels (centered on the sample mean), feedback condition (dummy-coded, with 0 = *no feedback* and 1 = *feedback*), and their interaction yielded a significant interaction,  $\beta = -.24$ , 95% CI [-.81, -.18],  $p = .002$ . This suggests that individuals may want to change for the better on Honesty-Humility too, but only after having learned about their actual trait level. Similarly, there was a significant interaction between trait levels and feedback condition in the prediction of change goals for Openness to Experience,  $\beta = -.22$ , 95% CI [-.58, -.09],  $p = .006$ . This interaction was mainly attributable to the (weak) positive link between trait levels and change goals in the *no feedback* condition ( $r = .13$ ), whereas there was a weak (nonsignificant) negative link in the *feedback* condition ( $r = -.09$ ). For the remaining HEXACO dimensions, regression analyses showed no significant

**Table 10**

*Correlations Between Change Goals and Trait Levels Across and Within Feedback Conditions (Study 3)*

Variable	Correlations		
	Overall	No feedback	Feedback
H change goals	-.20*** [-.27, -.12]	-.06 [-.17, .06]	-.27*** [-.37, -.17]
E change goals	-.35*** [-.42, -.28]	-.33*** [-.43, -.23]	-.36*** [-.45, -.26]
X change goals	-.31*** [-.38, -.23]	-.27*** [-.38, -.16]	-.34*** [-.44, -.24]
A change goals	-.23*** [-.30, -.15]	-.19*** [-.30, -.07]	-.27*** [-.38, -.17]
C change goals	-.33*** [-.40, -.26]	-.25*** [-.36, -.14]	-.41*** [-.49, -.31]
O change goals	.01 [-.07, .09]	.13* [.02, .24]	-.09 [-.20, .02]

*Note.*  $N = 603$  (overall),  $n = 290$  (no feedback),  $n = 313$  (feedback). H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience. Values in square brackets indicate the 95% confidence intervals.

\*\*\*  $p < .001$ .

moderation by feedback condition (see additional analyses on the OSF for details), even though correlations were consistently stronger (i.e., more negative) in the *feedback* condition as compared with the *no feedback* condition (see Table 10). Nonetheless, trait-specific differences in correlations between change goals and concurrent trait levels were considerably smaller once participants received personality feedback prior to reporting on their change goals.

To provide further insights into the apparent differences in relations between trait levels and change goals as a function of feedback condition and HEXACO dimension, we again investigated the prevalence of goals to change in any way (i.e., increase or decrease vs. stay the same) among individuals with relatively low versus high trait levels on a HEXACO dimension (i.e., lower vs. upper third of trait level distributions).<sup>18</sup> As depicted in the upper panel of Figure 3, in the *no feedback* condition differences in the prevalence of goals to change on Honesty-Humility were again relatively weak, even though just yielding a significant difference ( $OR = 0.54$ , 95% CI [0.28, 1.01],  $p = .050$ ). Nonetheless, individuals with less desirable trait levels on Honesty-Humility were similarly or even less inclined to change on this dimension as individuals with more socially desirable trait levels on any other dimension were to change on these dimensions (upper panel of Figure 3). Similarly, the prevalence of goals to change for Openness to Experience was almost identical among individuals with relatively low versus high trait levels ( $OR = 1.01$ , 95% CI [0.56, 1.82],  $p > .99$ ). For the remaining dimensions, in turn, individuals with less desirable trait levels exhibited a higher prevalence of goals to change in any way as compared to individuals with more desirable trait levels ( $0.36 \leq OR \leq 0.50$ , all  $ps \leq .016$ ), thus being once more in line with expectations.

Crucially, however, differences in the prevalence of goals to change between individuals with relatively low versus high trait levels increased substantially once participants received feedback about their personality (lower panel in Figure 3). This was particularly the case for Honesty-Humility: Whereas in the *no feedback* condition only one third of individuals low in Honesty-Humility reported goals to change, this proportion almost doubled in the *feedback* condition; for individuals high in Honesty-Humility, in turn, goals to change were essentially unaffected by feedback. Overall, in the *feedback* condition the prevalence of goals to change differed significantly between individuals with relatively low versus high trait levels for *all* HEXACO dimensions ( $0.14 \leq OR \leq 0.44$ , all  $ps \leq .005$ ).

Taken together, these findings show that results were only in line with the self-relevance account as long as participants did not receive feedback about their trait levels prior to reporting on their change goals. Once receiving feedback, relations between trait levels and change goals largely followed the social desirability account for all HEXACO dimensions.

### Self-Relevance and Social Desirability

To provide a more direct test of the two theoretical accounts under scrutiny, we next investigated participants' ratings of the self-relevance and social desirability of their trait levels. Table 11 summarizes the descriptive statistics of self-relevance (measured at T2)<sup>19</sup> and social desirability, their correlations with concurrent trait levels and change goals, and  $t$  test statistics comparing the self-relevance of Honesty-Humility and Openness to Experience against the remaining dimensions (as preregistered; for intercorrelations of self-relevance and social desirability ratings, see Table S11 in the online supplement

materials). As expected, the highest self-relevance was ascribed to Honesty-Humility, which was indeed significantly higher than for any other HEXACO dimension (see Table 11). Unlike expected, however, the self-relevance of Openness to Experience was not consistently higher than for the remaining dimensions, but even significantly lower than for Agreeableness and Conscientiousness. As such, self-relevance ratings were only compatible with predictions for Honesty-Humility—thereby replicating prior evidence on the self-relevance of the HEXACO dimensions with regard to this trait dimension (Thielmann, Hilbig, et al., 2020)—but not for Openness to Experience.

Regarding the relation between self-relevance and change goals, however, results were generally incompatible with expectations and, thus, the self-relevance account. Specifically, correlations were weak at best for all dimensions (see Table 11), thus questioning that individuals want to change less for the better on those traits they deem highly relevant to the self. Results were essentially the same when recoding the change goals variable such that high values reflect a desire to change in any way (i.e.,  $-.14 \leq r \leq .10$ ; see additional analyses on the OSF for details). For social desirability, in turn, correlations with change goals provided support for the social desirability account, but only for some dimensions. Specifically, whereas individuals who rated their trait levels on Emotionality, Extraversion, Agreeableness, and Conscientiousness as less socially desirable indeed showed a greater desire for corresponding change in a socially desirable way ( $.10 \leq |r| \leq .23$ ), social desirability and change goals were virtually unrelated for Honesty-Humility ( $r = .04$ ) and Openness to Experience ( $r = -.04$ ). Importantly, this correlational pattern was comparable across feedback conditions (see OSF for details). Accordingly,  $z$  tests comparing correlations of self-relevance with change goals against correlations of social desirability with change goals (Meng et al., 1992) yielded significant differences favoring the social desirability account for all dimensions but Honesty-Humility and Openness to Experience (i.e., all  $|z| \geq 2.01$ ,  $p \leq .044$  vs.  $z = 0.93$ ,  $p = .350$  for Honesty-Humility and vs.  $z = 0.85$ ,  $p = .396$  for Openness to Experience).

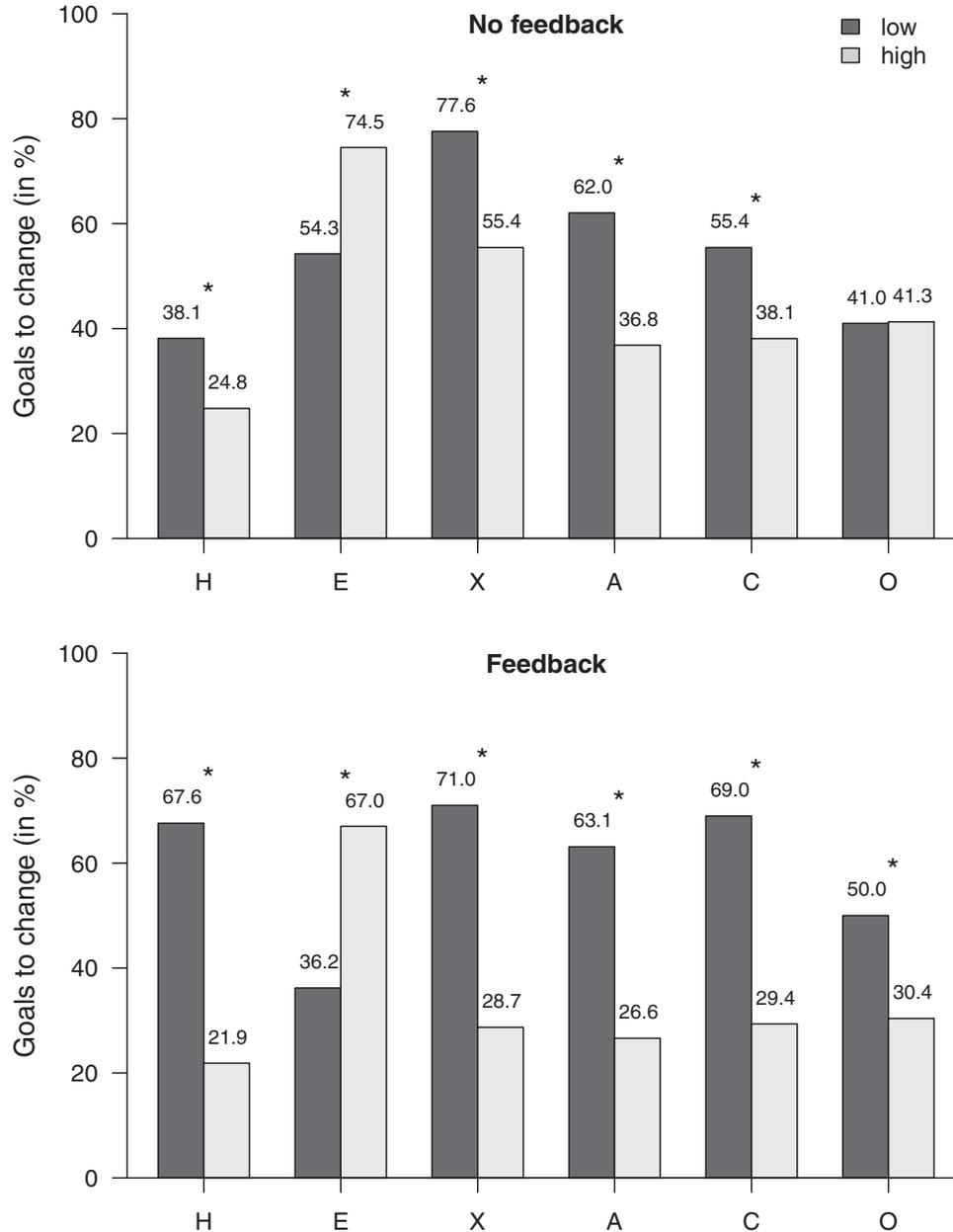
We also investigated the unique influence of self-relevance and social desirability on change goals per HEXACO dimension when both were included as predictors in a multiple regression predicting change goals (while controlling for feedback condition). For Honesty-Humility, there was a trend for an effect of self-relevance,  $\beta = .08$ , 95% CI [-0.003, .11],  $p = .051$ , but no effect of social desirability,  $\beta = .03$ , 95% CI [-0.04, .09],  $p = .466$ . For Openness to Experience, neither self-relevance,  $\beta = .02$ , 95% CI [-0.04, .06],  $p = .612$ , nor social desirability,  $\beta = -.05$ , 95% CI [-0.09, .03],

<sup>18</sup> To test the robustness of findings, we again repeated these analyses when a different method (median split) was used to classify participants as having relatively low versus high trait levels. Moreover, we once more compared the prevalence of change goals among participants who wanted to stay the same versus change in a socially desirable way while excluding those who wanted to change in a socially undesirable way. Both these approaches yielded essentially the same results. The only notable exception occurred for Honesty-Humility, for which goals to change did no longer significantly differ between individuals with relatively low and high trait levels in the *no feedback* condition (i.e.,  $OR = 0.79$ , 95% CI [0.47, 1.32],  $p = .381$  and  $OR = 0.79$ , 95% CI [0.45, 1.37],  $p = .426$ , respectively).

<sup>19</sup> We focus on the self-relevance measured first in our study (i.e., at T2) in what follows. Of note, all results are comparable for self-relevance assessed at T3 (see additional analyses on the OSF). Self-relevance ratings showed moderate stability across time for most dimensions (i.e., all  $r \geq .37$ ), with the exception of Agreeableness ( $r = .29$ ).

**Figure 3**

*Prevalence of Goals to Change in Any Way (i.e., Increase or Decrease vs. Stay the Same) on the Six HEXACO Dimensions in Study 3 (in %), Separated for Individuals With Relatively Low Versus High Trait Level (i.e., Lower vs. Upper Third of Trait Level Distributions) on the Respective Dimension and for the No Feedback (Upper Panel) Versus Feedback (Lower Panel) Condition*



Note. H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience.

\*  $p < .05$  (in Fisher's exact test).

$p = .292$ , yielded a significant influence on change goals. By contrast, change goals were significantly influenced by social desirability—but not by self-relevance—for Extraversion,  $\beta = -.25$ , 95% CI  $[-.23, -.11]$ ,  $p < .001$ , Agreeableness,  $\beta = -.21$ , 95% CI

$[-.19, -.08]$ ,  $p < .001$ , and Conscientiousness  $\beta = -.19$ , 95% CI  $[-.20, -.08]$ ,  $p < .001$ . For Emotionality, in turn, both self-relevance and social desirability yielded significant effects, revealing that participants wanted to change in a socially desirable way (i.e., de-

**Table 11**  
*Descriptive Statistics of Self-Relevance and Social Desirability Ratings, With t Test Statistics of the Comparison of Self-Relevance Ratings Against Honesty-Humility and Openness to Experience as Well as Correlations With Trait Levels and Change Goals (Study 3)*

Variable	Self-relevance				Social desirability				
	t test against H		t test against O		r change goals		r trait level		
	<i>t</i> (602)	<i>d</i>	<i>t</i> (602)	<i>d</i>	<i>r</i>	<i>M</i> ( <i>SD</i> )	<i>r</i>	<i>M</i> ( <i>SD</i> )	
H	—	—	10.58***	-0.55 [-0.44, -0.66]	.32*** [0.24, .39]	5.43 (1.11)	.28*** [0.20, .35]	5.43 (1.11)	.04 [-0.04, .12]
E	10.53***	0.52 [0.42, 0.62]	1.17	-0.06 [-0.17, 0.04]	.39*** [0.32, .45]	4.62 (1.19)	-.02 [-0.10, .06]	4.62 (1.19)	.10* [0.02, .18]
X	15.12***	0.80 [0.68, 0.91]	4.37***	0.22 [0.12, 0.32]	.36*** [0.29, .43]	4.48 (1.26)	.50*** [0.44, .56]	4.48 (1.26)	-.22*** [-0.30, -.14]
A	5.02 (1.21)	0.25 [0.15, 0.35]	6.43***	-0.33 [-0.44, -0.23]	.42*** [0.35, .48]	5.04 (1.27)	.50*** [0.44, .56]	5.04 (1.27)	-.20*** [-0.28, -.13]
C	5.02 (1.26)	0.24 [0.15, 0.34]	6.46***	-0.33 [-0.43, -0.23]	.44*** [0.37, .50]	4.96 (1.19)	.43*** [0.36, .49]	4.96 (1.19)	-.23*** [-0.31, -.16]
O	10.58***	0.55 [0.44, 0.66]	—	—	.57*** [0.51, .62]	4.71 (1.19)	.40*** [0.33, .46]	4.71 (1.19)	-.04 [-0.12, .04]

*Note.* *N* = 603. H = Honesty-Humility; E = Emotionality; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience. Values in square brackets indicate the 95% confidence intervals.  
 \* *p* < .05. \*\*\* *p* < .001.

crease) the higher the self-relevance,  $\beta = -.20$ , 95% CI [-0.22, -.10],  $p < .001$ , and the lower the social desirability of their concurrent trait level,  $\beta = .15$ , 95% CI [.10, .41],  $p < .001$ .<sup>20</sup>

Taken together, analyses of the self-relevance and social desirability ratings further supported that change goals for Honesty-Humility and Openness to Experience cannot be sufficiently accounted for by participants' desire to have socially desirable characteristics. Note that this conclusion was also backed by the analysis of reported reasons for change goals, which showed that participants consistently selected a high self-relevance as the primary reason for their change goals, particularly so for Honesty-Humility (see additional analyses on the OSF for details). Nonetheless, results for Honesty-Humility and Openness to Experience were also not consistently in line with the self-relevance account. For the remaining HEXACO dimensions, in turn, results provided direct empirical support for the social desirability account, suggesting that change goals for these dimensions can be accounted for by individuals' desire to have socially desirable characteristics that they lack.

**Satisfaction With Personality**

As in our previous studies, we measured individuals' satisfaction with their personality. On average, participants were relatively satisfied with what they were like ( $M = 3.61$ ,  $SD = 0.61$ , on a scale from 1 to 5). Higher satisfaction with one's personality was, in turn, negatively associated with goals to change in a socially desirable way on all HEXACO dimensions (i.e.,  $.08 \leq |r| \leq .26$ , all  $ps < .05$ ). More crucially still, correlations between satisfaction with personality and concurrent trait levels were again largely in line with hypotheses, thereby replicating the findings from Studies 1 and 2. Specifically, the weakest relations of satisfaction with personality to trait levels were again apparent for Honesty-Humility ( $r = .12$ , 95% CI [.04, .19],  $p = .004$ ) and Openness to Experience ( $r = -.004$ , 95% CI [-0.08, .08],  $p = .913$ ), whereas considerably larger associations (in absolute terms) occurred for the remaining dimensions, ranging between  $r = .21$ , 95% CI [.13, .29],  $p < .001$ , for Conscientiousness and  $r = .55$ , 95% CI [.49, .60],  $p < .001$ , for Extraversion. Thus, more desirable trait levels on these latter dimensions were related to higher satisfaction with one's personality. For Honesty-Humility and Openness to Experience, by contrast, individuals exhibited comparable satisfaction with their personality, irrespective of whether they had desirable (high) or undesirable (low) trait levels. Note that results were comparable across feedback conditions (see additional analyses on the OSF). Overall, these findings thus further question that the social desirability account can explain change goals for Honesty-Humility and Openness to Experience in particular.

**Further Exploratory Analyses**

Based on our primary results, we conducted additional exploratory analyses to better understand the effect of personality feedback on change goals and their relation to concurrent trait levels, which was particularly pronounced for Honesty-

<sup>20</sup> We also explored whether self-relevance and social desirability moderated the relation between trait levels and change goals. Results are provided in the additional analyses on the OSF.

Humility. Specifically, we considered it likely that individuals low in Honesty-Humility may overestimate their relative standing on this trait, thus underestimating the need for corresponding change. Supporting this reasoning, participants in the *no feedback* condition rated themselves clearly above average on Honesty-Humility ( $M = 6.16$ ,  $SD = 1.24$ , on a scale from 1 to 9, with 5 indicating an average level;  $M \leq 5.85$  for the remaining dimensions). Even more strikingly, relations between participants' relative self-assessments and their trait levels as measured via the HEXACO-PI-R showed only weak convergence for Honesty-Humility ( $r = .16$ , 95% CI [.05, .27],  $p = .006$ ), whereas convergence was considerably stronger for the remaining dimensions (i.e.,  $.44 \leq r \leq .64$ , all  $ps < .001$ ). This suggests that individuals low in Honesty-Humility may indeed overestimate their actual trait level. For Openness to Experience, by contrast, results did not indicate a similarly biased self-view.

Moreover, we investigated how surprised individuals in the *feedback* condition were about their trait levels and how (negatively vs. positively) they felt about their trait levels. Mirroring the findings from the relative self-assessments, participants were most surprised and felt the least positive about their trait levels in Honesty-Humility (surprise:  $M = 2.80$ ,  $SD = 1.75$  vs.  $2.41 \leq M \leq 2.65$  for the remaining dimensions; positive feelings:  $M = 4.83$ ,  $SD = 1.42$  vs.  $4.55 \leq M \leq 4.73$  for the remaining dimensions; both measured on a scale from 1 to 7). Moreover, predicting change goals on Honesty-Humility by corresponding trait levels, surprise about one's score (both centered on the sample mean), and their interaction revealed a significant interaction,  $\beta = -.06$ , 95% CI [-.26, -.001],  $p = .048$ , in the sense that higher surprise was associated with a stronger (negative) link between Honesty-Humility trait levels and change goals. For the remaining HEXACO dimensions, no comparable effects of surprise on the link between trait levels and change goals occurred. Similarly, there was a trend for an interaction between trait levels and positive feelings about one's score on corresponding change goals for Honesty-Humility,  $\beta = .06$ , 95% CI [-.02, .30],  $p = .080$ , suggesting that more positive feelings about one's trait level were associated with a weaker (negative) link between trait levels and change goals. However, this interaction was not unique for Honesty-Humility but occurred for several other HEXACO dimensions as well (see the additional analyses on the OSF for details). Nonetheless, taken together, findings from these exploratory analyses suggest that individuals tend to see themselves as higher in Honesty-Humility than they actually are, thus perceiving little need to change on this dimension in particular.

### General Discussion

In recent years, research has increasingly considered a yet understudied path to personality change: individuals' desire to change (e.g., Hennecke et al., 2014; Hudson, Fraley, Chopik, et al., 2020). Studies have shown that most people want to change certain aspects of their personality (e.g., Baranski et al., 2017; Hudson & Roberts, 2014; Robinson et al., 2015), and these change goals yield consistent (negative) relations with individ-

uals' concurrent levels on corresponding traits. Accordingly, it has been argued that individuals want to change for the better—that is, in a socially desirable manner—on those socially desirable characteristics that they lack (e.g., Hudson, Briley, et al., 2019; Hudson & Roberts, 2014). In contrast to this reasoning, our review of the Big Five literature showed that change goals are not universally (negatively) linked to individuals' concurrent trait levels, even for highly socially desirable traits. That is, whereas Neuroticism, Extraversion, and Conscientiousness yielded medium to large negative relations between trait levels and change goals ( $-.50 \leq \bar{r} \leq -.37$ ), weak relations at best emerged for Agreeableness ( $\bar{r} = -.12$ ) and Openness to Experience ( $\bar{r} = .00$ ; Table 1). This questions whether a desire to have socially desirable characteristics can sufficiently explain who wants to change and how on which personality traits.

In the present work, we therefore aimed at critically testing this social desirability account of change goals vis-à-vis an alternative account based on the *self-relevance* of traits. Specifically, we proposed that individuals with less socially desirable trait levels may *not* generally be more inclined to change for the better than individuals with more socially desirable trait levels. Instead, we argued that individuals may only want to change for the better on those traits that are less relevant to their identity. Conversely, individuals may not want to change for the better on those traits that are highly relevant to the self, which are arguably those traits underlying individual differences in values. Indeed, among the Big Five, Agreeableness and Openness to Experience are the two dimensions exhibiting the strongest links to values (Fischer & Boer, 2015). This reasoning based on the association of traits to values and corresponding differences in the self-relevance between traits has recently been proposed to account for trait-specific assumed similarity effects in personality judgments (K. Lee et al., 2009; Thielmann, Hilbig, et al., 2020). Here, we applied this reasoning for the first time to personality change goals.

In three studies, we asked participants ( $N = 432$  and  $N = 603$  adults from a community sample in Study 1 and Study 3 and  $N = 149$  university students in Study 2) to provide self-reports of the HEXACO personality dimensions (Ashton & Lee, 2007) as well as to indicate whether and how they wanted to change on these traits. In Study 2, we additionally collected observer reports of the HEXACO dimensions. Following the proposed self-relevance account—and in line with our meta-analytic summary of prior research—we hypothesized that trait levels should *not* be related to change goals for Honesty-Humility and Openness to Experience, but they should be negatively related to change goals for the remaining trait dimensions. This is because Honesty-Humility and Openness to Experience are the two HEXACO dimensions that bear the strongest links to values (Anglim et al., 2017; K. Lee et al., 2010) and that have also been shown to have particularly high self-relevance (Thielmann, Hilbig, et al., 2020). Moreover, we expected that individuals' change goals will be linked to the perceived self-relevance of the traits and more so than to the traits' perceived social desirability, which we tested in Study 3. To provide further insights into potentially underlying mechanisms of

change goals, we also assessed individuals' satisfaction with their personality.

### The Trait-Specificity of Change Goals—and How to Account for It

Overall, the present studies provided consistent support for trait-specific differences in the relation between change goals and trait levels. Across studies, change goals were only weakly (if at all) related to concurrent trait levels for Honesty-Humility and Openness to Experience, whereas they showed negative relations for the remaining HEXACO dimensions (see Figure 4 for sample size-weighted average correlations across studies; Field, 2001; Hunter & Schmidt, 1990).<sup>21</sup> These findings were replicated in Study 2 when using observer reports rather than self-reports of individuals' personality traits. In general, correlations reflected the pattern of results observed for the Big Five (see left panel in Figure 4) and were thus well in line with the predictions derived from the self-relevance account.

Crucially, however, the picture changed once providing participants with feedback about their personality prior to assessing their change goals (Study 3; see also T1 in Study 2). That is, once participants learned about their relative standing on the HEXACO dimensions, individuals with less desirable (lower) trait levels in Honesty-Humility also reported greater goals to change in a socially desirable way than their counterparts with more desirable (higher) trait levels. For Openness to Experience, there was a similar tendency for a stronger (more negative) relation between change goals and concurrent trait levels once participants received personality feedback before reporting on their change goals. Although this tendency was relatively weak in Study 3, it was substantial in Study 2 (especially at T1 where participants received personality feedback shortly before reporting on their change goals). These findings imply that the trait-specific differences in relations between change goals and concurrent trait levels may—at least in part—be attributable to trait-specific differences in self-knowledge. For Honesty-Humility, we indeed found direct empirical support for this idea: Participants were not only most surprised about their trait levels—which particularly held for those low in Honesty-Humility—their relative self-assessments also showed only weak convergence with their self-reports on the HEXACO-PI-R. This finding was also supported by a relatively weak accuracy of participants' retrospective personality assessment as observed in Studies 1 and 2 (see additional analyses on the OSF for details). For Openness to Experience, however, there was no comparable evidence for limited self-knowledge. Future research is thus needed to further illuminate how the effect of personality feedback on change goals for Openness to Experience comes about.

In general, the observation that the trait-specific differences in relations between change goals and concurrent trait levels almost vanished once individuals learned about their actual trait levels is incompatible with the self-relevance account as proposed here. Accordingly, we also did not find any direct support for the idea that individuals may want to change less on those traits they deem highly relevant to their identity. Thus, we have to reject the hypothesis that self-relevance is a key driver of personality change goals.

But do these findings automatically imply that the link between change goals and trait levels can *generally* be accounted for by individuals' desire to have socially desirable characteristics that they (perceive to) lack? Our results suggest “no.” First, change goals were only negatively related to the social desirability of individuals' concurrent traits levels for Emotionality, Extraversion, Agreeableness, and Conscientiousness—showing that those individuals with less desirable trait levels wanted to change more in a socially desirable way—but *not* for Honesty-Humility and Openness to Experience. Importantly, this was the case irrespective of whether participants received personality feedback before reporting on their change goals or not. Moreover, more socially desirable trait levels were only consistently associated with higher satisfaction with one's personality for Emotionality, Extraversion, Agreeableness, and Conscientiousness ( $.20 \leq |\bar{r}| \leq .56$ ), but—again—*not* for Honesty-Humility ( $\bar{r} = .09$ ) and Openness to Experience ( $\bar{r} = .04$ ). Thus, individuals were not consistently more satisfied with their personality when they had more socially desirable trait levels. Taken together, these findings imply that different mechanisms may underlie change goals for different traits. Whereas a desire to have socially desirable characteristics can very well account for change goals on some traits, it cannot account for change goals on those traits bearing strong links to values. As an aside, note that our findings are also incompatible with the idea that individuals may want to particularly change for the better on value-related traits, as suggested by the reasoning that “values . . . may capture motivation for growth and change” (Thalmayer et al., 2019, p. 1). We will discuss implications of these findings below.

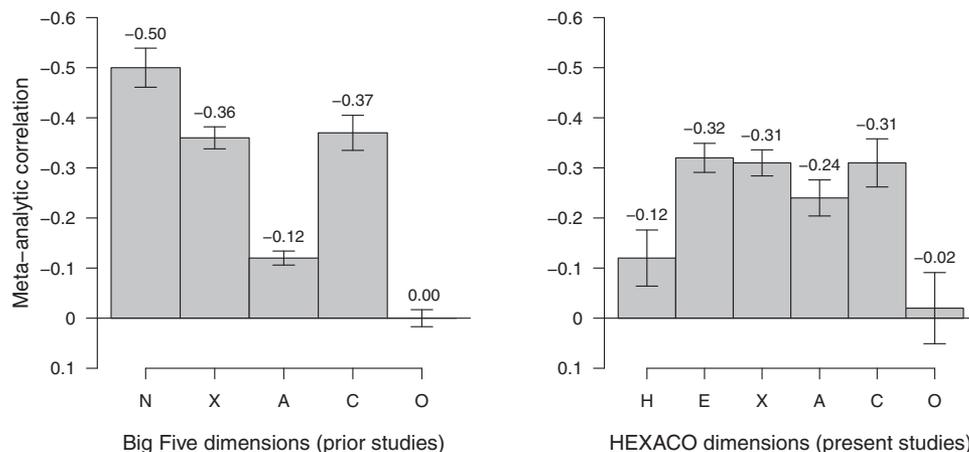
### Additional Findings Related to Change Goals

Beyond the main findings regarding the trait-specificity of change goals and how to account for it, some other results warrant further attention. First, it is noteworthy that the correlation between change goals and concurrent trait levels was considerably smaller for Emotionality than for its Big Five counterpart Neuroticism, as reported in previous studies (i.e.,  $\bar{r} = -.32$  vs.  $\bar{r} = -.50$ ; Figure 4). We suspect that this difference is attributable to the lower evaluativeness of Emotionality as compared with Neuroticism. That is, whereas evidence on the Big Five suggests that high levels in Neuroticism are fairly undesirable (Bäckström et al., 2009; John & Robins, 1993; Viswesvaran & Ones, 1999), evidence on the HEXACO model suggests Emotionality to have a relatively neutral tone (De Vries, Realo, et al., 2016; Dunlop et al., 2012; MacCann, 2013). Accordingly, participants in our studies considered *average* levels in Emotionality as relatively desirable. As such, these findings are once again in line with the reasoning underlying the social desirability account.

<sup>21</sup> Importantly, these findings cannot be attributed to range restriction of Honesty-Humility and/or Openness to Experience and resulting differences in the reliability and validity of the respective scales. First, meta-analytic evidence suggests that all HEXACO scales yield comparable reliabilities in terms of Cronbach's alpha (Moshagen et al., 2019). Second, several meta-analytic investigations show that both Honesty-Humility and Openness to Experience predict theoretically-implied outcome criteria corresponding to their theoretical conceptualizations (Heck et al., 2018; Y. Lee et al., 2019; Pletzer et al., 2019; Soutter et al., 2020; Thielmann, Spadaro, et al., 2020; Zettler et al., 2020).

**Figure 4**

Meta-Analytic Correlations Between Change Goals and Concurrent Trait Levels for the Big Five (Prior Studies; Left Panel) and the HEXACO Dimensions (Present Studies; Right Panel)



Note. Error bars represent one standard error. N = Neuroticism; X = Extraversion; A = Agreeableness; C = Conscientiousness; O = Openness to Experience; H = Honesty-Humility; E = Emotionality.

Moreover, our findings from Study 2 can speak to the longitudinal effects of change goals. Specifically, we found moderate stability of change goals across a three-and-a-half-year period among students, replicating prior research on the stability of change goals among the Big Five (Asadi et al., 2020; Robinson et al., 2015). Descriptively, stability in change goals was—again—lowest for Honesty-Humility and Openness to Experience, although differences in stability as compared with the remaining HEXACO dimensions were relatively small (i.e.,  $r = .27$  and  $r = .25$ , respectively, vs.  $.31 \leq r \leq .47$ ). In turn, mean-level changes in change goals were nonsignificant for all dimensions except Conscientiousness, on which individuals had actually considerably changed over time. In addition, we also investigated whether change goals had significant effects on individuals' actual personality change. Indeed, we found some evidence hinting at effects of change goals on personality change, in line with the idea that personality change may to some extent be self-regulated (Denissen et al., 2013; Hennecke et al., 2014; Wood & Denissen, 2015). However, effects were not consistent across different analytic approaches, implying that they may be weak at best. Our sample in Study 2 might thus have simply been too small to uncover consistent effects of change goals on personality changes. In any case, future research is needed to further investigate whether and how change goals may—without any therapeutic or experimental involvement—affect personality change (Baranski et al., 2020). As has been noted elsewhere “having a desire to change one's personality traits is not sufficient if a person lacks the capacity or opportunity to implement appropriate further state changes” (Bleidorn et al., 2020, p. 290). By implication, future research on the long-term effects of change goals on personality change needs to consider the complexity of related (including environmental) processes at play.

### Theoretical Implications, Limitations, and Directions for Future Research

The present findings have important implications for theory and research on change goals and personality change more generally. First and foremost, individuals' desire to have socially desirable characteristics that they lack can account for their goals to change on several traits, namely Emotionality (and, likewise, Big Five Neuroticism), Extraversion, (HEXACO) Agreeableness, and Conscientiousness. In fact, our results offer the most direct evidence to date for this idea that has been proposed early on (Hudson & Roberts, 2014) but, to our knowledge, not yet been tested directly. However, the present findings also show that a desire to have socially desirable characteristics cannot sufficiently account for change goals on those trait dimensions underlying individual differences in values. This suggests that different mechanisms may drive change goals for different (classes of) personality traits. Contrary to our expectations, the traits' self-relevance failed to offer a valid explanation for these trait-specific differences. Future research is thus desired to identify the driving force(s) underlying change goals for value-related traits in particular.

Moreover, our results have vital implications for the understanding of self-knowledge and its consequences. Prior research and theorizing has emphasized that individuals have certain blind spots in their self-perception, which should be most pronounced for highly evaluative traits (Vazire, 2010). Here, we likewise found the lowest self-knowledge for Honesty-Humility—the most evaluative trait among the HEXACO dimensions (De Vries, Realo, et al., 2016; see also our findings on desired trait levels and the traits' social desirability). This limited self-knowledge, in turn, had crucial effects on individuals' change goals: Those low in Honesty-Humility arguably overestimated their trait levels, thus seeing less need to change for the better than actually warranted. Once providing these individuals with personality feedback, however, they also wanted to change in a socially desirable way. As such, the



findings are compatible with evidence showing that higher self-knowledge may have positive consequences for interpersonal relationships (Tenney et al., 2013). Future research should pick up on these findings to more systematically study self-knowledge as well as self-other-knowledge asymmetry of the HEXACO dimensions (see, e.g., Thielmann et al., 2017).

Overall, the present work provides new insights into research on personality change goals and offers fruitful directions for future research. Notwithstanding these advantages, however, some limitations ought to be acknowledged. First, we focused on broad personality traits only, leaving aside other, more specific trait characteristics. Prior research on change goals has generally focused on broad personality dimensions (i.e., the Big Five) and only recently started to consider other trait concepts individuals may want to change on (Hudson, Chopik, et al., 2020). Future research on change goals may thus expand to also consider other trait-like concepts, including trait facets, to ultimately increase our knowledge about the trait-specificity of change goals.

Second, we measured change goals with a single item per HEXACO dimension only. As such, our approach is somewhat different from the measurement of personality traits and most prior research on change goals which adapted established personality questionnaires to measure change goals with multiple items per trait each (Costantini et al., 2020; Hudson & Roberts, 2014; Sun & Goodwin, 2020)—although some studies also used a similar one-item assessment of Big Five change goals as we used here (Robinson et al., 2015). However, we see several advantages of the current approach: First, using different types of scales to measure change goals and trait levels counteracts the risk that results are merely (or at least largely) attributable to shared method variance. Second, using a single-item format ensured a relatively low burden for participants while at the same time allowing to additionally measure other concepts related to personality change and goals to change (e.g., desired trait levels, self-relevance) in a similar way. Finally, our results essentially replicated prior evidence on change goals among the Big Five (i.e., for Openness to Experience and—to the extent possible—Agreeableness; see Table 1 and Figure 4) as well as among morality-related traits (Sun & Goodwin, 2020), including Honesty-Humility (Costantini et al., 2020). We thus maintain that showing similar results using different approaches underlines the robustness of these findings and supports their generalizability across different methods.

## Conclusion

Most individuals desire to change certain aspects of their personality. Here, we have shown that the relation between how individuals see themselves and how they want to change systematically differs across traits. For some traits, the relation between trait levels and change goals can be accounted for by individuals' desire to have socially desirable characteristics that they lack. For other traits, however—namely those underlying individual differences in values—the picture seems to be more complex. Specifically, individuals do not want to change for the better on these traits in particular, unless they learn about their actual trait levels. Taken together, our findings suggest the involvement of trait-specific differences in self-knowledge as a potential source of the trait-specificity of personality change goals and also highlight the role of values for the understanding of personality psychological

phenomena. It is our hope that the present work will encourage future research to provide an even better understanding of who wants to change how, and why.

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