Goals to change personality traits: Concurrent links between personality traits, daily behavior, and goals to change oneself

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A B S T R A C T

Across four studies, we developed and validated a measure of people's goals to change their personality traits. In doing so, we explored the prevalence and correlates of such change goals. We found that the vast majority of people want to change aspects of their personalities, and that these desires are organized around the big-five personality dimensions. Change goals were related to theoretically relevant predictors, including life satisfaction and current personality traits. In three subsequent daily–diary studies, we found that change goals were discriminant from more generalized trait-relevant motives, and that change goals were negatively correlated with daily behavior, to the extent that traits and behavior covaried. Implications for studying people's goals and attempts to change their personality traits are discussed.

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1. Introduction

Do people want to change their personality traits? For more than 20 years, theorists have argued that the answer to this question is likely "yes." Specifically, multiple scholars have proposed that people who are distressed with aspects of their lives—including their existing personal qualities—sometimes form goals to change to their personality traits, because they believe that such changes might assuage their dissatisfaction (Baumeister, 1994; Kiecolt, 1994). Recently, these ideas have garnered a resurgence in popularity, with an increasing number of psychologists speculating that people's desires to change their personality traits may play an important role in determining their current patterns of thoughts, feelings, and behaviors (Denissen & Penke, 2008; Hoyle, 2006; Hoyle & Sherrill, 2006; Morf, 2006), as well as potentially even shaping the development of their personality traits over time (e.g., Bleidorn et al., 2010; Hennecke, Bleidorn, Denissen, & Wood, 2014).

Despite the growing interest in and potential importance of people's goals to change their personality traits, there is very little empirical information about such change goals. In fact, there is not even a widely accepted, validated way to measure people's goals to change their traits. The purpose of the present research was to take the first steps in empirically examining people's goals to change their personality traits. Across four studies, we [1] created a measure to assess people's goals to change their personality traits,

[2] examined whether these change goals were organized by the big five personality factors (Goldberg, 1993), [3] investigated the prevalence of change goals, [4] tested several theoretically relevant predictors of change goals (e.g., life satisfaction; Baumeister, 1994; Kiecolt, 1994), [5] examined whether change goals are discriminant from other broader, more generalized types of motives, and [6] estimated the correlations between change goals and existing traits and concurrent daily behavior. To be clear, the present studies were not designed to test whether people can actually change their personality traits—but rather to develop a scale to measure change goals and to test the concurrent relations of change goals to theoretically relevant outcomes.

1.1. Goals to change personality traits

Personality traits are defined as relatively enduring, automatic patterns of thoughts, feelings, and behaviors that characterize individuals' typical ways of responding to different situations (Roberts, 2009). There is a strong consensus among contemporary personality psychologists that the most important individual differences in personality traits are organized with respect to the "big five" personality dimensions: extraversion, agreeableness, conscientiousness, emotional stability (the opposite of neuroticism), and openness to experience (Goldberg, 1993). Importantly, personality traits are only one component of people's personalities. Other aspects of personality, including motives—such as desires and goals—are also thought to influence individuals' thoughts, feelings, and behaviors, independently of their personality traits (McAdams & Pals, 2006; Roberts & Wood, 2006).

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For more than 20 years, theorists have argued—that in addition to more traditional types of motives, such as overarching needs (e.g., for achievement; Elliot & Harackiewicz, 1996), broad life goals (e.g., Roberts & Robins, 2000), current personal strivings (Emmons, 1986), and implementation intentions (Gollwitzer & Brandstätter, 1997)—that some people also form goals specifically to *change* their existing personality traits (Baumeister, 1994; Kiecolt, 1994). Theoretically, these types of change goals eventuate when individuals become distressed with aspects of their lives—including their own existing personal characteristics—and they perceive that changes to their personality traits might assuage their dissatisfaction (Baumeister, 1994; Kiecolt, 1994). For example, people who are distressed by unsatisfactory social lives may perceive that increased levels of extraversion would absolve their social woes—and thus they may form goals to become more extraverted. On a simpler level, some personality traits are socially valued in and of themselves (e.g., extraversion, conscientiousness; Dunlop, Telford, & Morrison, 2012). As such, people who are low in socially desirable personality traits may be intrinsically motivated to increase with respect to those traits.

More recently, several scholars have argued that people's motives to change their personality traits can influence their *current* thoughts, feelings, and behaviors, above and beyond the effect of personality traits (Denissen & Penke, 2008; Hoyle, 2006; Hoyle & Sherrill, 2006; Morf, 2006). For example, Quinlan, Jaccard, and Blanton (2006) found that college students who feared becoming boring persons in the future engaged in higher levels of binge drinking behaviors than did their peers—ostensibly in attempt to become more fun and interesting persons. As such, irrespective of whether people can *actually* change their personality traits (which is outside the scope of the current paper), people's change goals may predict *concurrent* thoughts, feelings, and behaviors above and beyond their personality traits. Moreover, if change goals are to affect change in personality traits, one would expect them to work in a concrete, bottom up fashion. Specifically, we would expect goals to change traits to also predict behavior patterns above and beyond the effect of personality traits themselves.

Despite the growing theoretical interest in goals to change personality traits, essentially no empirical research has directly examined these types of change goals. In fact, currently no accepted, validated measure of change goals[1] even exists. As such, many foundational questions remain unexplored. For example, it is unclear whether goals to change personality traits are relatively prevalent—or whether such goals occur only among the most highly distressed individuals (Baumeister, 1994; Kiecolt, 1994). Additionally, little is empirically known about the associations between change goals and theoretically relevant predictors (e.g., dissatisfaction; Baumeister, 1994; Kiecolt, 1994; low scores on existing traits), or how change goals relate to other common constructs, like traits, broader types of motives, and concurrent daily behavior.

1.2. Do people want to change their personality traits?

Although people's goals to change their personality traits have not been widely or systematically studied, the existence of such goals can be inferred from previous research on *desired selves* and *possible selves* (e.g., Higgins, 1987; Markus & Nurius, 1986). Specifically, in these studies, participants are typically asked to freely generate a list of several qualities that they desire to possess and to rate the extent to which they already possess those characteristics. Many people report discrepancies between their *actual* characteristics and who they *ideally* wish they were, or dutifully feel they *ought* to be (called "self-discrepancy;" Higgins, 1987). Furthermore,

consistent with Baumeister (1994) and Kiecolt's (1994) theories, these studies have linked generalized dissatisfaction with one's life and reduced wellbeing to increased discrepancies between one's ideal and actual selves (Higgins, 1987; Higgins, Roney, Crowe, & Hymes, 1994; Higgins, Vookles, & Tykocinski, 1992).[2]

These studies, however, were not designed to explicitly or systematically measure individuals' goals to change their personality traits *per se*. Specifically, because participants are prototypically asked to freely generate a few qualities that describe their actual and ideal selves, two participants may choose to rate themselves on completely different characteristics. For example, some participants may rate their actual and ideal levels of extraversion, while others may not. This has inhibited previous researchers' abilities to systematically explore people's goals to change their personality traits in several ways. For one, it is unclear whether goals to change specific traits (e.g., extraversion) are relatively prevalent, or whether such goals are reserved for a minority of highly dissatisfied individuals (e.g., Kiecolt, 1994). Beyond this, without a systematic exploration of people's goals to change their personality traits *per se*, it is difficult to understand the structure and correlates of such change goals.

The present research was designed to overcome these limitations by explicitly and systematically measuring participants' goals to change their personality traits within the context of the big five (Goldberg, 1993). Doing so provided a common metric for all participants to rate their goals to change specific personality traits, which afforded several benefits. First, we were able to examine the structure underlying people's change goals. Specifically, it is possible that people's change goals are organized with respect to the big five personality dimensions (Goldberg, 1993). If this were the case, we would expect that people who express desires to become more talkative, for example, would also indicate motives to increase with respect to other traits that pertain to extraversion, such as assertiveness and activity. Such a finding would suggest that people generally desire to change broad dimensions, like extraversion, as opposed to cherry-picked qualities. Alternatively, it is possible that individuals' change goals are not structured around the big five personality traits. For example, it may be the case that people identify relatively specific, focused, ad-hoc traits that they would like to change (e.g., being more organized) rather than wanting to change with respect to broader dimensions.

A second benefit of our methodology is that it allowed us to systematically examine the prevalence of goals to change specific personality traits (e.g., extraversion). As such, we were able to examine whether many people desire to change their personality traits, or whether such desires are reserved for a select few. Finally, we were also able to explore the concurrent relationships between goals to change traits and [1] theoretically relevant predictors (e.g., life satisfaction; Kiecolt, 1994), [2] existing traits, [3] broader types of more generalized motives, and [4] daily behavior. Doing so served the dual purposes of establishing the criterion validity of our newly developed change goals scale, as well as allowing us to begin to understand how change goals relate to behavior, above and beyond the effect of traits.

1.3. Traits, change goals, and behavior

How might we expect individuals' goals to change their personality traits to relate to *concurrent* daily behavior, above and beyond

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[1] Throughout this manuscript, "change goals" always refers specifically to goals to change *personality traits*.

[2] These studies typically conceptualize self-discrepancies as causing reduced wellbeing. That is, focusing on how one falls short of one's ideals may dampen life satisfaction. Although this is likely true, scholars such as Kiecolt (1994) and Baumeister (1994) have argued that causality may also operate in the other direction—it is also possible that low levels of wellbeing might inspire goals to change oneself.

the effect of their existing traits? This is a surprisingly complex question, mostly because there is little consensus among personality researchers regarding the relationship between personality traits and motives (including the motive to change oneself). There exist at least three conceptualizations of how motives affect behavior in relation to traits.

First, from a *motives as primary* perspective, some personality researchers believe that traits are ultimately caused by motives, in conjunction with other factors such as abilities and situational constraints (e.g., Funder, 1991; McCabe & Fleeson, 2012; Mischel & Shoda, 2008; Murray, 1938). For example, an individual's level of extraversion might be partially driven by his or her *desire* to be outgoing and sociable. From this perspective, we would expect that traits would mediate the effects of motives on behavior.

Second, from a *traits as primary* perspective, some theorists argue that traits ultimately cause all behavior, including motives (which are considered "characteristic adaptations") (McCrae & Costa, 2008). For example, a person's level of extraversion might determine how much they *want* to be sociable and outgoing. Thus, we would expect one of two outcomes. First, motives may mediate the effects of traits on behavior. Second, traits may independently cause motives and behaviors, rendering any relationship between behavior and motives spurious. If this is true, motives may or may not be related to behavior. For example, introverted individuals may be especially likely to desire increases in extraversion (because extraversion is a socially desirable trait; Dunlop et al., 2012); however, since their behavior is solely determined by traits (and not motives), we would potentially expect a negative zero-order correlation between the desire to increase in extraversion and extraverted behavior.

Finally, from a *traits and motives as independent* perspective, other scholars have argued that traits and motives are separate components of personality that independently predict behavior (e.g., McAdams & Pals, 2006; Roberts & Wood, 2006). As such, although traits and motives may influence each other, they are ultimately separate entities with unique impacts in determining behavior. Importantly, from this perspective, traits and motives may interact to predict behavior (Winter, Stewart, John, Klohnen, & Duncan, 1998). If this perspective is correct, we would expect one of two patterns of results. First, traits and motives may independently, simultaneously predict daily behavior, and neither traits nor motives will mediate each other. For example, a person's level of extraversion may predict his or her extraverted behaviors; and similarly his or her goal to increase in extraversion may independently predict extraverted behaviors. In fact, to the extent that goals to change personality traits would ultimately be effective, one would expect these goals to predict behaviors above and beyond traits.

Alternatively from this perspective, traits and motives may interact. For example, Cheng and Ickes (2009) found a mutually compensatory interaction between conscientiousness and self-motivation in predicting students' GPAs. Specifically, they found that students with *either* high conscientiousness *or* high self-motivation tended to have high GPAs. Possessing *both* high conscientiousness *and* high self-motivation yielded no additional gains. Only students who were low in *both* conscientiousness *and* self-motivation incurred low GPAs. If traits and goals to change oneself interact similarly, we might expect that, for persons low in a trait (e.g., extraversion), the goal to increase in that trait will be especially predictive of behavior. In contrast, for individuals high in a trait, the goal to increase may be less predictive of behavior.

1.4. Overview of the present research

Four studies were conducted to examine individuals' goals to volitionally change their personality traits. In Study 1, we developed a new measure to assess participants' goals to change their personality traits, based off of the Big Five Inventory (John & Srivastava,

1999). In addition to completing the change goals measure, participants also rated their existing personality traits, their satisfaction with life more generally, and their satisfaction with nine specific life domains (e.g., friendships, school, money, recreational activities). These data were used to validate our measure of change goals in two ways. First, we examined the factor structure of our change goals measure to test whether it is appropriate to assess change goals within the big five framework (Goldberg, 1993). Second, we tested whether change goals are related to theoretically relevant predictors. For example, we tested whether dissatisfaction with specific life domains (e.g., daily emotions) predicted goals to change relevant traits (e.g., emotional stability, extraversion) (Baumeister, 1994; Kiecolt, 1994) and also whether people who scored low with respect to socially desirable traits (e.g., extraversion) were most likely to desire to increase with respect to those traits. Finally, the data in Study 1 were also used to estimate the prevalence of change goals—whether they are relatively common or reserved for only the most dissatisfied individuals.

In Studies 2–4, participants provided daily ratings of their behavior for up to 14 days. These data were used to test the *concurrent* relationships between change goals and daily behavior. Furthermore, in Studies 3–4, we also collected measures of more generalized trait-relevant motives. These data were used to establish the discriminancy of change goals from other more generalized types of motives, and also to evaluate several theories about how traits and motives jointly affect behavior.

2. Study 1

Study 1 was designed with three goals in mind. First, it served as an initial exploration of whether goals to change personality traits can be measured using traditional self-report personality questionnaires. This involved developing a new measure and testing its factor structure. Second, we examined the relationships between existing traits and change goals. Finally, we measured participants' dissatisfaction with various aspects of their lives to evaluate whether specific types of dissatisfaction (e.g., friendships) are related to goals to change relevant personality traits (e.g., extraversion, agreeableness) (Baumeister, 1994; Kiecolt, 1994).

2.1. Method

2.1.1. Participants

Two separate samples of undergraduate students were collected. The first sample consisted of 102 participants. The second sample consisted of 162 participants. Sample sizes were determined simply by the number of participants that could be recruited from the onset of the studies until the end of the semester. Both samples completed the same self-report personality measures (listed below); however, the second sample also completed daily diary entries (discussed in Study 2). These samples were combined into a single sample of 264 participants (47% male) in order to boost statistical power for our analyses. This sample size enabled greater than 93% power to detect average-sized zero-order effects ($r \sim .21$; Richard, Bond, & Stokes-Zoota, 2003). In this combined sample, participants' ages ranged from 18 to 27 ($M = 19.32$, $SD = 1.45$). The racial composition of the sample was 59% White, 28% Asian, 9% Hispanic, and 7% Black. In return for completing the study, participants were awarded partial fulfillment of a course requirement.

2.2. Measures

2.2.1. Personality traits

Participants provided self-report ratings of their personality traits using the 44-item Big Five Inventory (BFI; John & Srivastava, 1999). The BFI contains subscales for each of the five personality

dimensions—extraversion, agreeableness, conscientiousness, emotional stability (the opposite of neuroticism), and openness to experience. For each subscale, participants rated their agreement with 8–10 self-descriptions on a 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). A sample extraversion item is, "I see myself as someone who is talkative." Items were averaged to form composites (αs ranged from .60 [openness] to .88 [extraversion]).

2.2.2. Goals to change personality traits

Participants rated their goals to change their personality traits using a modified version of the BFI. Participants were presented with the standard 44 items in the BFI. However, the instructions, wording on the items, and the response scales were changed to allow participants to rate how much they would like to *change* each personality trait. For example, one extraversion item is "I want to be talkative." Participants rated each item on a 5-point scale from "much more than I currently am" (+2) to "I do not desire to change in this trait" (0) to "much less than I currently am" (−2). Thus, participants could indicate that they wanted to increase, decrease, or stay the same with respect to any trait. Positive and negative scores on these scales represent goals to increase and decrease with respect to a trait, respectively. Reliabilities for each subscale were high, ranging from α = .75 (goals to change openness) to .84 (goals to change agreeableness). Henceforth, we refer to this scale as the Change Goals Big Five Inventory (C-BFI). The full text of the C-BFI can be found in Appendix A and online (www.PersonalityAssessor.com/measures/cbfi/).

2.2.3. Life satisfaction

Participants' overall satisfaction with their lives was assessed using the 5-item Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). A sample item is, "In most ways, my life is close to my ideal." Participants rated agreement with items on a 5-point scale ranging from "strongly disagree" (1) to "strongly agree" (5). Items were averaged to form a composite (α = .84).

In addition to completing the SWLS, participants also rated their satisfaction with nine specific life domains using a measure developed for this study. Participants rated each domain with a single 5-point rating from "very dissatisfied" (1) to "very satisfied" (5). The nine life domains were: (1) your school/career, (2) your financial situation, (3) your family relationships, (4) your health, (5) your sexual relationships, (6) your recreational activities, (7) your friendships, (8) your religions, and (9) the emotions you experience on a daily basis.

2.3. Results and discussion

2.3.1. Are people's change goals organized by the big five personality dimensions?

First, we used principal axis factoring (PAF) to examine whether people's change goals, as measured via the C-BFI, are organized by the big five personality dimensions. A total of 5 factors had eigenvalues greater than or equal to one. As can be seen in Table 1, which contains the varimax rotated factor loadings, people's change goals almost perfectly aligned with the big five personality dimensions. The only exception was that one openness item—"I want to be someone who prefers work that is routine"—did not load strongly onto any factor. However, its strongest loading (λ = .25) was on the factor representing goals to increase in conscientiousness, rather than on the factor representing goals to increase in openness.[3] The results

[3] Nevertheless, this item was included in the "goals to change openness" composite. Its loading on the conscientiousness factor was not strong enough to justify including it in the "goals to change conscientiousness" composite. The item was not dropped because we were reluctant to modify the scale post hoc based on the results of a single factor analysis.

Table 1
Principal axis factor analysis of the Change Goals Big Five Inventory (C-BFI).

Item	Varimax rotated factors				
	1	2	3	4	5
E1	−**.63**	−.09	.00	.04	.11
E2	**.47**	−.10	.22	−.02	.08
E3	−**.47**	.20	.22	.16	.29
E4	−**.62**	.28	.11	.10	.30
E5	**.70**	−.04	.09	−.05	.00
E6	−**.40**	−.07	.14	.03	.26
E7	**.57**	−.01	−.09	−.20	−.03
E8	−**.60**	.14	.16	.13	.20
A1	.12	−**.44**	.06	−.23	−.07
A2	.06	**.48**	.34	.08	.33
A3	−.09	−**.57**	−.21	−.27	−.11
A4	−.08	**.44**	.17	.17	.24
A5	−.08	**.38**	.21	.11	.16
A6	.22	−**.59**	−.12	−.18	−.02
A7	.02	**.61**	.29	.08	.24
A8	−.06	−**.66**	−.24	−.28	−.17
A9	−.17	**.47**	.25	.09	.28
C1	.04	.23	**.62**	.09	.19
C2	−.02	−.09	−**.45**	−.14	−.05
C3	.02	.30	**.58**	−.01	.27
C4	.03	−.15	−**.51**	−.03	−.04
C5	.19	−.11	−**.52**	−.16	−.04
C6	.00	.24	**.52**	.15	.27
C7	−.12	.21	**.51**	.14	.34
C8	.01	.16	**.43**	.12	.22
C9	.17	−.05	−**.47**	−.13	−.12
S1	.17	−.35	−.16	−**.43**	.01
S2	−.07	.19	.18	**.66**	.20
S3	.19	−.15	−.01	−**.60**	−.05
S4	.19	−.14	−.10	−**.68**	−.02
S5	.05	.10	.07	**.50**	.14
S6	.10	−.35	−.07	−**.52**	.01
S7	.02	.13	.13	**.64**	.15
S8	.22	−.05	−.15	−**.70**	−.16
O1	−.14	.14	.14	.14	**.56**
O2	−.18	.14	.06	.08	**.53**
O3	−.05	.19	.19	.13	**.63**
O4	−.08	.18	.18	−.04	**.56**
O5	−.23	.13	.09	.19	**.54**
O6	.00	.05	.10	.07	**.72**
O7	.17	−.12	**.25**	−.05	−.03
O8	−.12	.17	.20	.10	**.68**
O9	−.06	.10	.08	.05	**.72**
O10	−.02	.01	.06	.09	**.68**
Variance explained (%)	7.02	7.93	7.63	7.98	10.67

Note: Each item's primary loading is highlighted in **boldface**.

of this PAF are consistent with the ideas that (1) people's change goals are organized in terms of the big five personality factors [i.e., people want to increase in *extraversion*, not merely ad-hoc traits related to extraversion], and (2) goals to change big five personality dimensions can be measured with instruments like the C-BFI. Based on this PAF, we created composites representing goals to change with respect to each of the big five personality dimensions, which were used in all subsequent analyses.

2.3.2. Do people want to change their personality traits?

Table 2 contains the descriptive statistics and correlations for participants' ratings of their personality traits and change goals. Because change goals were rated on a scale from −2 (e.g., "I want to be much less talkative than I currently am") to 0 (e.g., "I do not want to change with respect to being talkative") to +2 (e.g., "I want to be much more talkative than I currently am"), the positive mean values for goals to change each personality dimension indicate that, on average, people wanted to increase with respect to each

of the big five traits. People most desired to increase in emotional stability ($M = 0.96$, $SD = 0.55$) and conscientiousness ($M = 0.95$, $SD = 0.50$), followed by extraversion ($M = 0.68$, $SD = 0.50$), agreeableness ($M = 0.61$, $SD = 0.50$), and openness ($M = 0.61$, $SD = 0.44$). As can be seen in Fig. 1, which contains a histogram of participants' goals to change with respect to extraversion, 87% of participants reported desires to *increase* in extraversion (positive values) and 10% of participants indicated that they wanted to stay the same as they currently were (zero values). In contrast, only a tiny minority (3%) of people reported the desire to decrease with respect to extraversion (negative values). Similar patterns were found with the other four personality trait domains, as well. For each of the other dimensions, between 89% (agreeableness) and 97% (conscientiousness) of people expressed desires to increase, and no more than 3% of people expressed desires to decrease. These findings suggest that people do, in fact, have goals to change their personality traits and that these motives can be captured using standard self-report personality questionnaires.

2.3.3. Relationships between traits and change goals

As can be seen in Table 2, there were strong negative correlations between possessing a trait (e.g., extraversion) and desiring to change with respect to that trait (average $r = -.39$). The only exception to this rule was that individuals' levels of trait-openness did not at all predict their goals to increase in openness ($r = .00$).[4] Since goals to change were almost exclusively positive (i.e., people wanted to increase in traits; see Fig. 1), the most appropriate interpretation of these findings is that people who were low in certain personality traits most wanted to increase with respect to those traits. For example, introverts were most likely to desire to become more extraverted. These findings are consistent with the idea that the big five personality dimensions are socially desirable in and of themselves (Dunlop et al., 2012), and accordingly, people want to increase in desirable traits that they lack.

2.3.4. Does dissatisfaction with areas of one's life predict goals to change relevant traits?

Table 3 contains the descriptive statistics and inter-correlations for participants' overall life satisfaction (SWLS), as well as their satisfaction with nine life domains (school, finances, family life, health, sexual relationships, recreation, friendships, religion, and daily emotions). Table 4 contains the correlations between personality traits, change goals, and the life satisfaction variables. Consistent with theory (e.g., Baumeister, 1994; Kiecolt, 1994), we found that dissatisfaction with specific life domains predicted goals to change relevant traits. Low levels of life satisfaction were associated with goals to increase in extraversion, conscientiousness, and emotional stability, all $rs \leqslant -.15$, $ps \leqslant .02$. Similarly, people tended to want to increase in extraversion if they were not satisfied with their finances, sex lives, recreational activities, friendships, religion, or daily emotions, all $rs \leqslant -.14$, $ps \leqslant .01$. Participants tended to express goals to become more agreeable when they were dissatisfied with their schools, $r = -.12$, $p = .05$. Individuals desired to become more conscientious if they were not satisfied with their schools, finances, families, sex lives, or daily emotions, all $rs \leqslant -.14$, $ps \leqslant .03$. People wanted to become more emotionally stable if their friendships or daily emotions were dissatisfying, $rs \leqslant -.19$, $ps < .01$. All measures of dissatisfaction with different life domains were unrelated to goals to change with respect to openness, all $|r|s \leqslant .09$, $ps \geqslant .16$. These findings are con-
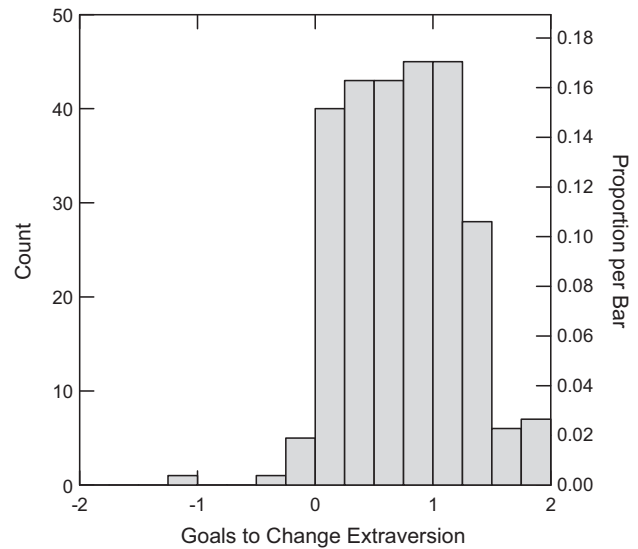

Fig. 1. Histogram of participants' goals to change with respect to extraversion.

sistent with the theoretical notion that when individuals are distressed or unsatisfied with parts of their lives, they may desire to change relevant personality traits that they perceive would assuage their dissatisfaction. For example, people who are dissatisfied with their daily emotions may perceive that increases in emotional stability (i.e., decreases in negative affect) and extraversion (i.e., increases in positive affect) would ameliorate their dissatisfaction.

Although the links between dissatisfaction and change goals are consistent with theory (e.g., Baumeister, 1994; Kiecolt, 1994), there exists an alternative explanation for these findings. Namely, as can be seen in Table 4, personality traits were linked to life satisfaction. Also, goals to change oneself were strongly negatively related to one's existing traits. As such, the relationships between dissatisfaction with one's life and change goals may be driven by their common variance with traits. To test this alternative explanation, we employed a series of regression analyses. In each equation, one life satisfaction variable was regressed simultaneously onto a trait and the goal to change that trait. For example, in one model we regressed life satisfaction onto both extraversion and goals to increase in extraversion. The standardized parameter estimates from these analyses are tabulated in parentheses in Table 4. Although many of the previously statistically significant associations between change goals and life satisfaction were no longer statistically significantly different from zero when traits were controlled, with only three exceptions, the partial associations were also not statistically significantly different from the zero-order correlations, all $ps > .05$. The only formerly statistically significant associations that were significantly changed by controlling traits were between: life satisfaction and goals to change extraversion ($\beta = -.08$; 95% confidence interval [CI] [$-.22$, $.05$]; zero-order $r = -.23$), satisfaction with daily emotions and goals to increase in extraversion ($\beta = -.09$; 95% CI [$-.22$, $.05$]; zero-order $r = -.24$), and satisfaction with daily emotions and goals to increase in emotional stability ($\beta = .00$; 95% CI [$-.15$, $.14$]; zero-order $r = -.30$). Collectively, these findings provide support for the notion that when individuals are dissatisfied with areas of their lives, they may desire to change traits that they feel might assuage their dissatisfaction. The relationships between dissatisfaction and goals to change one's traits may be partially, but not fully, attributable to existing personality traits.

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[4] We hesitate to interpret this correlation because it may simply be an artifact of sampling error. Nevertheless, if this correlation represents a true null population effect, it may be the case that (1) openness is simply not as socially desirable as the other four dimensions, or (2) people who are low in openness are also less open to the notion of changing their trait-openness.

Table 2
Study 1 descriptive statistics and correlations for traits and change goals.

	M	SD	1	2	3	4	5	6	7	8	9
Traits											
1. Extraversion	3.34	0.71	–								
2. Agreeableness	3.86	0.49	**.19**	–							
3. Conscientiousness	3.49	0.58	.06	**.25**	–						
4. Stability	3.10	0.68	**.22**	**.27**	**.17**	–					
5. Openness	3.61	0.51	.11	.07	−.01	.05	–				
Change goals											
6. Extraversion	0.68	0.50	**−.52**	−.06	.04	**−.14**	−.04	–			
7. Agreeableness	0.61	0.50	−.03	**−.30**	**−.20**	**−.18**	−.02	**.25**	–		
8. Conscientiousness	0.95	0.50	−.03	**−.13**	**−.46**	**−.14**	.08	**.21**	**.53**	–	
9. Stability	0.96	0.55	**−.12**	**−.20**	−.07	**−.65**	−.03	**.32**	**.48**	**.38**	–
10. Openness	0.61	0.44	−.08	.02	−.04	−.06	.00	**.34**	**.45**	**.46**	**.33**

Note: **Boldface**, $p \leqslant .05$; 95% confidence intervals are approximately ±.12 around each point estimate.

Table 3
Study 1 descriptive statistics and correlations for satisfaction variables.

	M	SD	1	2	3	4	5	6	7	8	9
1. Life satisfaction	3.45	0.79	–								
2. School	3.66	1.02	**.45**	–							
3. Finances	3.11	1.18	**.33**	**.29**	–						
4. Family[a]	3.92	1.20	**.39**	**.36**	**.34**	–					
5. Health	3.70	1.05	**.31**	**.22**	.12	**.29**	–				
6. Sexual relations	3.34	1.14	**.44**	**.22**	**.20**	**.20**	**.18**	–			
7. Recreation	3.67	1.04	**.33**	**.23**	**.25**	**.24**	**.30**	**.19**	–		
8. Friendships	4.00	0.95	**.38**	**.29**	.12	**.30**	**.18**	.17	**.31**	–	
9. Religion	3.56	1.01	**.31**	**.13**	**.15**	.18	.08	.06	**.13**	**.20**	–
10. Emotions	3.35	1.03	**.51**	**.26**	**.24**	**.39**	**.29**	**.33**	**.25**	**.38**	**.20**

Note: **Boldface**, $p \leqslant .05$; 95% confidence intervals are approximately ±.12 around each point estimate.
[a] Satisfaction with family was omitted from one sample by error; correlations are based on $n = 102$.

Table 4
Study 1 zero-order correlations between satisfaction, traits and change goals (and standardized regression coefficients when traits and change goals are mutually controlled).

	Satisfaction with									
	Life	School	Money	Family[a]	Health	Sex	Recreation	Friends	Religion	Emotions
Trait										
E	**.32 (.28)**	**.17 (.21)**	.00 (−.10)	.16 (.14)	.10 (.12)	**.24 (.17)**	**.24 (.23)**	**.23 (.16)**	**.14** (.06)	**.34 (.29)**
A	**.16 (.14)**	**.14** (.12)	.05 (.03)	.11 (.12)	.10 (.07)	**.13** (.11)	**.14 (.14)**	**.23 (.22)**	.09 (.11)	**.27 (.27)**
C	**.19** (.11)	**.37 (.31)**	**.14** (.09)	**.23 (.23)**	.12 (.09)	**.14** (.09)	**.15 (.14)**	−.02 (−.06)	−.03 (.01)	.10 (.10)
S	**.19 (.16)**	.09 (.13)	.01 (.03)	.17 (.17)	**.15 (.17)**	.12 (.15)	**.14 (.18)**	**.19** (.11)	.02 (.05)	**.46 (.46)**
O	.04 (.04)	−.04 (−.04)	.06 (.06)	−.19 (−.19)	−.04 (−.04)	−.07 (−.07)	.11 (.11)	.00 (.00)	**.19 (.19)**	.04 (.04)
Change goal										
E	**−.23** (−.08)	−.02 (.08)	**−.15 (−.20)**	−.13 (−.04)	−.03 (.03)	**−.23** (−.14)	**−.14** (−.02)	**−.21** (−.13)	**−.19 (−.16)**	**−.24** (−.09)
A	−.11 (−.07)	**−.12** (−.09)	−.09 (−.08)	−.02 (.02)	−.10 (−.07)	−.09 (−.06)	−.03 (.01)	−.09 (−.02)	.04 (.07)	−.07 (.01)
C	**−.22 (−.17)**	**−.27** (−.13)	**−.15** (−.11)	**−.20** (−.07)	−.10 (−.05)	**−.14** (−.09)	−.08 (−.01)	.07 (−.10)	.08 (.09)	**−.14** (−.12)
S	**−.15** (−.04)	−.02 (.07)	.01 (.03)	−.11 (.01)	−.08 (.03)	−.05 (.05)	−.05 (.07)	**−.19** (−.12)	.01 (.05)	**−.30** (.00)
O	−.08 (−.08)	−.09 (−.09)	−.07 (−.07)	−.01 (−.01)	−.05 (−.05)	−.06 (−.06)	−.05 (−.05)	−.06 (−.06)	−.03 (−.03)	−.06 (−.06)

Note: **Boldface**, $p \leqslant .05$; non-parenthetical numbers are zero-order correlations; numbers in parentheses are the standardized parameter estimates from regressing each satisfaction variable onto traits and change goals simultaneously.
E = extraversion; A = agreeableness; C = conscientiousness; S = emotional stability; O = openness.
[a] Satisfaction with family was omitted from one sample by error; correlations are based on $n = 102$.

3. Study 2

In Study 1, we found that individuals have goals to change their personality traits, and that these goals are organized with respect to the big five personality dimensions. Furthermore, change goals were related to theoretically relevant predictors, including life dissatisfaction (Baumeister, 1994; Kiecolt, 1994) and lacking socially desirable traits. In Study 2, we collected daily diary reports of participants' behavior for up to 14 days. These data were used to test the idea that motives to change oneself might predict *current* daily behavior (e.g., Denissen & Penke, 2008; Morf, 2006; Quinlan et al., 2006).

What might we expect to find? In Study 1, traits and change goals were strongly negatively correlated. To the extent that traits are an accurate reflection of daily behavior, we might expect to find negative zero-order correlations between change goals and daily behavior. Such a finding would reinforce the idea that people low in socially desirable traits (and the accompanying trait-relevant behavior) want to increase with respect to those traits.

Nevertheless, it is also possible that more complex relationships might exist between change goals and daily behavior. First, it may be the case that, when traits are controlled, change goals are positively related to daily behavior. Previous research has suggested that desired personal qualities (e.g., to not be boring) can predict

current behavior (e.g., binge drinking) (Quinlan et al., 2006). As such, it may be the case, for example, that given identical levels of trait-extraversion, that persons with higher desires to increase in extraversion actually exhibit higher levels of extraverted behaviors. (Notably, this is not a test of whether people can *actually change* their levels of extraversion, but is rather a test of whether such motives predict *current* behavior.) Second, it may be the case that traits and change goals interact to predict behavior (Cheng & Ickes, 2009), such that goals to change any given trait only predict daily behavior for individuals who are especially low with respect to that trait.

3.1. Method

3.1.1. Participants

Participants were the subset of 162 (50% male) undergraduate students described as sample 2 from Study 1. Ages ranged from 18 to 27 years old ($M = 19.34$, $SD = 1.57$). The sample was 60% White, 28% Asian, 7% Hispanic, and 7% Black. Based on prior research linking personality traits to behaviors in daily diary studies (e.g., Jackson et al., 2010), we expected to observe above-average-sized zero-order correlations ($r \sim .30$); 162 participants enabled greater than 97% power to detect such effects (and approximately 77% to detect average-sized zero-order correlations). A series of simulations suggested that—given the moderately high correlation between traits and change goals (average Study 1 $r = -.39$)—power to detect average-sized simultaneous effects of traits and change goals ($\beta = .20$) was slightly lower (approximately 72%). We did not have strong *a priori* expectations regarding how large the trait × change goals interactions might be. However, to the extent that these interactions might be smaller than main effects for traits or change goals, power to detect interactions would be lower than power to detect main effects.[5]

We recorded data from participants for a maximum of 14 days. Of the 162 participants who enrolled in the study, 156 (96%) provided data for at least 5 days; 136 (84%) provided at least 10 days' worth of data; and 84 (52%) completed the study. Attrition analyses revealed that total days of participation was negatively correlated with extraversion ($r = -.23$, $p < .01$). Total days of participation was unrelated to all other personality traits and change goals (all $|r|s \leqslant .15$, $ps \geqslant .06$). At the end of the study, participants received partial fulfillment of a course requirement in exchange for participating. Participants who dropped out of the study early received pro-rated credit.

3.1.2. Procedure and measures

Participants were brought into the lab for a 20-minute introductory session. During this session, participants completed an initial survey containing the measures described in Study 1, including personality traits (BFI), and change goals (C-BFI). After completing the survey, participants were instructed that they were to complete a short checklist of daily behaviors, just before going to bed, for the following 14 nights. The checklist was accessed by visiting a website and entering an identification number. The checklist included the 50-item Daily Behavior Questionnaire (DBQ; Church et al., 2008), in which participants were provided a list of behaviors, and were asked to indicate with a simple "yes" or "no" scale whether they had performed the behavior within the past 24 hours. For example, one item was, "Did you hug someone within the past 24 hours?" The DBQ contained 5 subscales to measure each personality domain—extraversion, disagreeableness

Table 5
Study 2 descriptive statistics for daily behaviors.

Trait-relevant behavior	M	SD
Extraversion	4.84	2.51
Agreeableness	8.36	1.89
Conscientiousness	5.85	1.77
Stability	6.56	2.31
Openness	2.50	2.05

Table 6a
Study 2 traits and change goals entered into separate models as zero-order predictors.

Behavior	Trait			Change goal		
	b	SE	β	b	SE	β
Extraversion	**0.58**	0.12	**0.23**	−0.10	0.13	−0.04
Agreeableness	**0.24**	0.10	**0.13**	**−0.22**	0.10	**−0.12**
Conscientiousness	**0.39**	0.08	**0.22**	**−0.18**	0.09	**−0.10**
Stability	**0.63**	0.12	**0.27**	**−0.57**	0.12	**−0.25**
Openness	**0.38**	0.12	**0.18**	0.05	0.12	0.02

Note: **Boldface**, $p \leqslant .05$; b = unstandardized outcome, standardized predictors; β = standardized outcomes and predictors.

(reversed to measure agreeableness), conscientiousness, neuroticism (reversed to measure emotional stability), and openness to experience. At the end of the study duration, participants were sent a debriefing letter via email.

3.2. Results and discussion

Participants completed an average of 12.39 ($SD = 3.36$) entries. We used multilevel modeling (MLM) to analyze the relations between participants' personality traits, change goals, and daily behavior. To do so, data were aggregated daily within participants. For example, there are 10 extraverted behaviors in the DBQ. On each day, participants either performed each behavior ("1") or did not ("0"). Thus, by summing the 10 extraversion items within a single day, participants' daily extraversion scores could vary from 0 to 10, interpretable as the number of extraverted behaviors that were performed that day (αs ranged from .43 [conscientiousness] to .73 [extraversion]).[6] As a result, each participant received a score for extraverted behaviors, agreeable behaviors, conscientious behaviors, emotionally stable behaviors, and open behaviors for each day. The means and standard deviations for participants' daily behaviors can be found in Table 5.

3.2.1. Relationships between traits, change goals, and daily behavior

In our first series of analyses, we modeled the separate zero-order effects of traits and change goals on daily behavior. To do so, we created a series of 10 models. For each personality dimension, we created one model that predicted daily behavior from individuals' traits, and a second model that predicted daily behavior from individuals' goals to change the relevant trait. For example, the trait-model for extraversion was:

$$(Daily\ Behavior)_{ij} = b_0 + b_1(Extraversion)_j + U_j + \varepsilon_{ij}$$

All predictors (but not behaviors) were standardized across the

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[5] The present analyses use multilevel equations with multiple predictors, which makes computing or simulating *a priori* power for any given coefficient considerably more difficult. However, these non-multilevel power analyses should give the reader a sense of the effect sizes our study could reasonably detect.

[6] When completing the DBQ, participants were provided separate radio buttons to indicate "Yes, I performed this behavior" and "No, I did not perform this behavior." Thus, "no" responses were separable from missing data. For participants with missing data, we divided the number of affirmative responses by total responses and multiplied this number by 10. For example, a participant who checked "yes" for 4 extraverted behaviors and omitted one response would receive a daily score of $(4/9 \times 10) = 4.44$.

Table 6b
Study 2 MLM analyses predicting daily behavior simultaneously from traits, change goals, and the interaction between the two.

Behavior	Trait			Change goal			Interaction		
	b	SE	β	b	SE	β	b	SE	β
Main effects model									
Extraversion	**0.70**	0.13	**0.28**	0.24	0.13	0.10	–	–	–
Agreeableness	**0.19**	0.10	**0.10**	−0.17	0.10	−0.09	–	–	–
Conscientiousness	**0.38**	0.09	**0.22**	−0.03	0.09	−0.02	–	–	–
Stability	**0.44**	0.15	**0.19**	**−0.30**	0.15	**−0.13**	–	–	–
Openness	**0.38**	0.12	**0.18**	0.06	0.12	0.03	–	–	–
Interaction model									
Extraversion	**0.67**	0.13	**0.27**	0.19	0.13	0.08	−0.19	0.10	−0.07
Agreeableness	**0.22**	0.10	**0.12**	−0.19	0.10	−0.10	−0.16	0.09	−0.09
Conscientiousness	**0.39**	0.09	**0.22**	−0.02	0.09	−0.01	−0.02	0.07	−0.01
Stability	**0.49**	0.15	**0.21**	−0.24	0.15	−0.11	**−0.23**	0.10	**−0.10**
Openness	**0.38**	0.12	**0.18**	0.04	0.12	0.02	0.07	0.10	0.03

Note: **Boldface**, $p \leqslant .05$; b = unstandardized outcome, standardized predictors; β = standardized outcomes and predictors.

entire sample before being entered into the model. As such, for the unstandardized MLM coefficients, a *b* of 1 would indicate that for each standard deviation increase in the predictor, an average of 1 additional trait-relevant daily behavior was performed each day. We also report standardized coefficients (β) which were obtained by standardizing all variables—including behaviors—across the entire sample before entering them into the equation. As can be seen in Table 6a, personality traits were consistently related to daily behavior, *b*s ranged from $b = 0.24$, $\beta = 0.13$ (agreeableness) to $b = 0.63$, $\beta = 0.27$ (stability), all $ps \leqslant .01$. In contrast, change goals were negatively related to daily behavior for agreeableness ($b = -0.22$, $\beta = -0.12$, $p = .02$), conscientiousness ($b = -0.18$, $\beta = -0.10$, $p = .04$), and emotional stability ($b = -0.57$, $\beta = -0.25$, $p < .01$), and unrelated to daily behavior for extraversion ($b = -0.10$, $\beta = -0.04$, $p = .42$) and openness ($b = 0.05$, $\beta = 0.02$, $p = .70$).[7]

These findings suggest that, as expected, traits are moderate predictors of daily behavior. The largely negative relationships between change goals and behavior are consistent with the strong negative correlations between traits and change goals found in Study 1 (see Table 2). Specifically, people who lack socially desirable traits (Dunlop et al., 2012)—and thus the accompanying trait-relevant behavior—may desire to increase in those traits.

Next, we examined the simultaneous and interactive effects of traits and change goals on daily behavior. That is, we examined whether traits and motives have different effects on daily behavior when each is mutually controlled, and also whether they interact to predict daily behavior. To do so, we created separate series of models to predict daily behavior for each of the five personality dimensions. For each dimension, a *main effects model* predicted trait-relevant daily behavior from a random intercept, participants' traits, and their goals to change their traits. An *interaction model* was created by simply adding a term representing the interaction between traits and change goals to the main effects model.

The parameter estimates from these analyses are presented in Table 6b. As can be seen in the main effects models, individuals' personality traits remained predictive of their trait-relevant daily

behaviors, even controlling for change goals, *b*s ranged from $b = 0.19$, $\beta = 0.10$ (agreeableness) to $b = 0.70$, $\beta = 0.28$ (extraversion), all $ps \leqslant .05$. This suggests that change goals neither mediate nor explain the effect of traits on daily behavior.

In contrast, controlling for traits tended to make the relationship between change goals and daily behaviors less negative/more positive (average $\Delta b = 0.16$, average $\Delta \beta = 0.08$). For example, when controlling for traits, the negative zero-order relationship between goals to change conscientiousness and conscientious behavior (formerly $b = -0.18$, $\beta = -0.10$) was completely eliminated, $b = -0.03$, $\beta = -0.02$, $p = .77$. This suggests that the moderate negative relationships between change goals and trait-relevant daily behavior are partially, albeit not fully, explained by shared variance with traits. That is, people who are low in a trait tend to desire to increase with respect to that trait (see Study 1), and people who are low in a trait also perform fewer trait-relevant daily behaviors, producing a partially spurious negative correlation between change goals and daily behavior.

Finally, we examined whether traits and change goals interacted to predict daily behavior. As seen in Table 6b, traits and goals interacted to statistically significantly predict daily behavior for emotional stability ($b = -0.23$, $\beta = -0.10$, $p = .02$), but not for extraversion, agreeableness, conscientiousness, or openness (all $|b|s < 0.19$, all $|\beta|s < 0.09$, all $ps \geqslant .06$). Barring replication, we hesitate to interpret this isolated interaction. As such, the findings from Study 2 collectively suggest that traits are predictive of daily behavior, whereas any relationship between change goals and daily behavior is spurious, attributable to shared variance with traits.

4. Study 3

In Study 2, we found that change goals were negatively related to daily behavior. This finding suggests that individuals who are low with respect to socially desirable traits—and the accompanying trait-relevant behavior—tend to want to increase with respect to those traits. However, the associations between change goals and behavior disappeared when traits were controlled. This suggests that change goals are *not* predictive of behavior beyond traits, and that any relationship between change goals and behavior is mostly spurious, attributable to shared variance with traits.

In isolation, this finding is ambiguous and difficult to interpret. Specifically, it is unclear from Study 2 alone whether *change goals in particular* are non-predictive of traits, or whether *motives*, more broadly, fail to predict behavior when traits are controlled. Stated differently, if *all* motives fail to predict daily behavior (as measured via the DBQ) when traits are controlled, it is not particularly infor-

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[7] To provide a frame of reference in a more familiar correlational metric, we also computed a single aggregate behavior score for each dimension for each participant, collapsing across time. We correlated this aggregate behavior score with traits and change goals. The correlation between traits and aggregate behavior ranged from $r = .19$ (agreeableness) to $r = .39$ (stability), all $ps < .01$. Change goals were related to aggregate behavior for agreeableness ($r = -.18$, $p = .02$), conscientiousness ($r = -.15$, $p = .05$), and emotional stability ($r = -.37$, $p < .01$), but not for extraversion ($r = -.10$, $p = .20$) or openness ($r = .01$, $p = .93$). Any differences between these correlations and the standardized MLM coefficients (β) reported in the text are due to the fact that the aggregate behavior scores do not properly weight participants' data by amount of data provided (e.g., the correlation treats a participant who provided 2 days of data identically to a participant who provided 14 days of data).

mative that *change goals*, a specific type of motive, would also fail to predict behavior.

To explore this possibility and aid in interpreting our findings in Study 2, in Study 3, we attempted to replicate Study 2 with only one minor change. Rather than measuring participants' change goals, we created a measure of participants' *generalized trait-relevant motives*. Specifically, we modified the response options on the C-BFI. Participants saw the exact same items as are contained in the C-BFI (e.g., "I want to be talkative"). However, we changed the response scale (which, in the C-BFI, runs from "much less than I currently am" to "much more than I currently am") to a simpler scale that ran from "strongly disagree" to "strongly agree." Importantly, this measure does not invoke the concept of *change* at all. Rather it is a simple motivational measure that taps, for example, how much participants are motivated to be extraverted, irrespective of whether they want to *change* their levels of extraversion.

It is important to note that, for people who want to change themselves, there is likely a high degree of overlap between *change goals* and *generalized trait-relevant motives*. For example, wanting *to become more* extraverted (desiring change) necessarily entails that one wants *to be* extraverted (desiring a state of being). However, it is also possible for people who do *not* wish to change themselves to have high levels of generalized trait-relevant motives. For example, someone who is strongly extraverted may *want* to be extraverted, even though they do not want to *increase* in extraversion. Stated differently, an entity can be *wanted* even though it is already possessed (e.g., most parents presumably want their children). In fact, even though *change goals* are negatively correlated with traits, we might expect generalized trait-relevant motives to be *positively* correlated with traits. Such a phenomenon might be the result of self-verification processes (i.e., people like and want their existing personality traits).

In summary, in Study 3, we used the same design as Study 2, but instead measured people's *generalized trait-relevant motives* rather than their change goals. These data were used to examine whether generalized motives also fail to predict behavior when modeled simultaneously with traits. The results of Study 3 were expected to help facilitate interpretation of Study 2.

4.1. Method

4.1.1. Participants

A total of 178 participants were recruited for Study 3—yielding greater than 76% power to detect our expected zero-order effect sizes ($r \sim .20$; based on Study 2). The sample size was chosen to be similar to that of Study 2. Of the 178 participants, 60 were recruited using the university subject pool in exchange for partial fulfillment of a course requirement. As in Study 2, these participants completed an introductory survey that contained measures of traits and motives, and then completed up to 14 daily diary entries. Participants who dropped out of the study early received prorated credit. The remaining 118 participants were recruited online, at the first author's website, www.PersonalityAssessor.com. Visitors to Personality Assessor complete personality tests and experiments as a recreational/leisure activity in order to obtain feedback about their personalities. The study was described as a free personality test that enabled users to compare their personality traits to their daily behavior. Participants first completed 5 daily diary entries and subsequently completed measures of traits and motives. As such, all online participants (with personality data available) provided exactly 5 waves of data. Online participants were required to wait at least one day between diary entries; however, they were allowed to take as much time as they wanted to complete all 5 entries. These participants received no compensation, other than feedback about their personality traits and daily behavior.

Participants were 83% female with an average age of 25.80 years ($SD = 10.42$). The racial composition of the sample was 66% White, 16% Asian, 9% Hispanic, and 8% Black. Attrition analyses revealed that the total number of entries completed by participants was unrelated to any of the study variables at Time 1, all $|r|s \leqslant .05$, $ps \geqslant .54$.

4.2. Measures

4.2.1. Personality traits

As in Studies 1–2, personality traits were measured using the BFI. Reliabilities ranged from $\alpha = .78$ (agreeableness) to $\alpha = .88$ (extraversion and conscientiousness).

4.2.2. Generalized trait-relevant motives

Participants' generalized motives for each personality dimension were measured using a modified version of the BFI. Participants were presented with the standard 44 BFI items. However, the wording of each item was changed to allow participants to indicate their *motives* relevant to each trait. For example, one item was "I want to be talkative." All items were rated on a scale from "strongly disagree" (1) to "strongly agree" (5). As such, this is a relatively straightforward measure of how much participants want to be extraverted, agreeable, conscientious, emotionally stable, and open to experience, irrespective of their current levels of those traits. Importantly, this measure does *not* invoke the concept of *change*. Reliabilities for each subscale were high, ranging from $\alpha = .77$ (conscientiousness) to .84 (agreeableness). Henceforth, we refer to this scale as the Motive Big Five Inventory (M-BFI). To avoid confusion, we always call these variables "generalized trait-relevant motives" (as opposed to "change goals" in Study 2).

4.2.3. Daily behavior

As in Study 2, participants' daily behaviors were measured using the DBQ.

4.3. Results and discussion

As expected, participants' *generalized motives* for each big five dimension were *not* negatively related to their existing trait levels. In fact, generalized motives relevant to each trait were *positively* correlated with existing levels of the trait ($rs \geqslant .32$, $ps < .01$). For example, individuals who reported high levels of extraversion also reported *wanting* to be extraverted. The only exception to this was that trait-emotional stability did not significantly correlate with generalized motives related to emotional stability ($r = .13$, $p = .09$). These findings may reflect a self-verification process, whereby individuals *like* and *want* their existing personality traits.

Participants completed between 1 and 19 diary entries ($M = 7.43$, $SD = 4.02$). As in Study 2, data were aggregated within persons and analyzed using MLM. Our first series of analyses examined the separate zero-order relationships between traits

Table 7a
Study 3 traits and generalized trait-relevant motives entered into separate models as zero-order predictors.

Behavior	Trait			Generalized motive		
	b	*SE*	*β*	*b*	*SE*	*β*
Extraversion	**0.86**	0.10	**0.37**	**0.46**	0.12	**0.19**
Agreeableness	**0.48**	0.09	**0.25**	**0.23**	0.10	**0.14**
Conscientiousness	**0.76**	0.09	**0.39**	**0.32**	0.10	**0.16**
Stability	**0.98**	0.10	**0.41**	0.11	0.13	0.05
Openness	**0.39**	0.11	**0.20**	0.18	0.11	0.09

Note: **Boldface**, $p \leqslant .05$; *b* = unstandardized outcome, standardized predictors; *β* = standardized outcomes and predictors.

Table 7b
Study 3 MLM analyses predicting daily behavior from traits, generalized trait-relevant motives, and the interaction between the two.

Behavior	Trait			Generalized motive			Interaction		
	b	SE	β	b	SE	β	b	SE	β
Main effects model									
Extraversion	**0.82**	0.12	**0.36**	0.09	0.12	0.03	–	–	–
Agreeableness	**0.52**	0.11	**0.27**	−0.07	0.12	−0.02	–	–	–
Conscientiousness	**0.73**	0.09	**0.37**	0.09	0.09	0.05	–	–	–
Stability	**0.98**	0.11	**0.41**	−0.02	0.12	−0.01	–	–	–
Openness	**0.47**	0.15	**0.25**	−0.13	0.14	−0.06	–	–	–
Interaction model									
Extraversion	**0.86**	0.12	**0.38**	0.08	0.12	0.03	−0.12	0.10	−0.05
Agreeableness	**0.52**	0.12	**0.27**	−0.08	0.13	−0.05	−0.02	0.08	−0.04
Conscientiousness	**0.76**	0.10	**0.38**	0.08	0.10	0.04	−0.07	0.10	−0.03
Stability	**0.96**	0.11	**0.40**	−0.01	0.12	0.00	0.07	0.12	0.02
Openness	**0.45**	0.15	**0.24**	−0.18	0.15	−0.09	**−0.21**	0.09	**−0.11**

Note: **Boldface**, $p \leqslant .05$; b = unstandardized outcome, standardized predictors; β = standardized outcomes and predictors.

and behavior, and generalized motives and behavior. We subsequently modeled the simultaneous and interactive effects of traits and generalized motives on daily behavior.

As can be seen in Table 7a, traits had moderate zero-order relationships with behavior, bs ranged from $b = 0.39$, $\beta = 0.20$ (openness) to $b = 0.98$, $\beta = 0.41$ (stability), all ps < .01. Similarly, on a zero-order level, generalized trait-relevant motives were related to behavior for extraversion ($b = 0.46$, $\beta = 0.19$, $p < .01$), agreeableness ($b = 0.23$, $\beta = 0.14$, $p = .02$), and conscientiousness ($b = 0.32$, $\beta = 0.16$, $p < .01$). Generalized motives were unrelated to daily behavior for stability ($b = 0.11$, $\beta = 0.05$, $p = .39$) and openness ($b = 0.18$, $\beta = 0.09$, $p = .11$). Collectively, these findings indicate that, in contrast to change goals, people's generalized motives were aligned with their behavioral reports.

Next, we explored whether traits and generalized motives simultaneously predicted daily behavior when controlling for each other, and also whether they might interact to predict behavior. As can be seen in Table 7b, even when controlling for generalized motives, traits continued to predict daily behavior, bs ranged from $b = 0.47$, $\beta = 0.25$ (openness) to $b = 0.98$, $\beta = 0.41$ (stability), all ps < .01. In contrast, when controlling for traits, generalized motives ceased to predict daily behavior, all $|b|s \leqslant 0.13$, $|\beta|s \leqslant 0.06$, ps $\geqslant .31$. Furthermore, traits and generalized motives did not interact to predict behaviors for any dimension ($|b|s \leqslant 0.12$, $|\beta|s \leqslant 0.05$, ps $\geqslant .18$) except openness ($b = -0.21$, $\beta = -0.11$, $p = .02$). Given that it is an idiosyncratic exception, we hesitate to interpret this interaction.

In contrast to change goals (Study 2), which were negatively correlated with people's existing traits and daily behavior, people's generalized motives for traits were *positively* related to both preexisting traits and daily behavior. Like change goals, however, generalized motives ceased to predict daily behaviors when traits were controlled. Collectively, these findings suggest that *motives in general* fail to predict behavior (as measured via the DBQ) above and beyond the effects of traits. As such, the Study 2 finding that *change goals* were unrelated to behavior when traits were controlled does not appear to reflect a special property of change goals, but it rather seems to reflect that trait-relevant *motives*, more generally, fail to predict behavior.

5. Study 4

In Studies 2–3, we found that traits were predictive of behavior—even when controlling change goals (Study 2) and generalized trait-relevant motives (Study 3). In contrast, neither change goals nor generalized trait-relevant motives predicted daily behaviors when traits were controlled. Study 4 was designed to replicate both Studies 2–3 with a more highly powered design, in order to

ensure that the lack of effects in Studies 2–3 were not due to low power. In Study 4, our sample size afforded more than 90% power to detect average-sized zero-order effects ($r \sim .20$; whereas the power to do so in Studies 2–3 was closer to 75%).

Additionally, Study 4 extended Studies 2–3 in two ways. First, we included measures of *both* change goals *and* generalized trait-relevant motives. This allowed us to examine whether change goals are discriminant from broader generalized trait-relevant motives. Establishing the discriminant validity of the change goals scale from other types of motives is extremely important. Without doing so, it is possible that the participants in Studies 1–2 indicated desires to *increase* in extraversion, for example, simply because they were generally motivated to behave in an extraverted manner, and that their responses to the C-BFI did not truly indicate desires *to change*. By including measures of both change goals and generalized trait-relevant motives in Study 4, we were able to evaluate this possibility.

Finally, Study 4 extended Study 2 by using a far more diverse sample than Study 2. This enabled us to explore the generalizability of the findings from Study 2. For example, are change goals prevalent among the general population (Study 4), or only among young college students (Study 2)?

5.1. Method

5.1.1. Participants

A total of 314 participants were recruited online at the first author's website using the same recruitment procedure described in Study 3. This sample size was selected to be 50% greater than those used in Studies 2–3, and afforded greater than 95% power to detect average-sized zero-order correlations ($r \sim .20$), and about 76% power to detect somewhat smaller correlations ($r \sim .15$). Based on simulations, power to detect simultaneous effects of traits and motives was slightly lower (approximately 93% power to detect $\beta = .20$, and approximately 70% power to detect $\beta = .15$). The average effect of motives controlling traits in Studies 2–3 was $|\beta| = .12$, which Study 4 had approximately 55% power to detect. The sample was 76% women with ages ranging from 18 to 69 years old ($M = 30.32$, $SD = 12.66$), and the racial composition was 58% White, 21% Asian, 6% Black, and 5% Hispanic.

5.1.2. Procedure and measures

Participants completed an initial survey that measured their (1) personality traits, (2) generalized motives for each personality trait, and (3) goals to change each personality trait.[8] As in Study

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[8] The order of the change goals and generalized motives questionnaires was randomly counterbalanced.

Table 8
Study 4 correlations among traits, change goals, and generalized trait-relevant motives.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Traits																
1. Extraversion	3.06	0.81	–													
2. Agreeableness	3.63	0.64	.26	–												
3. Conscientiousness	3.43	0.68	.22	.32	–											
4. Stability	2.87	0.79	.34	.33	.33	–										
5. Openness	3.70	0.60	.18	.08	.04	.05	–									
Change goals																
6. Extraversion	0.62	0.52	−**.31**	.09	−.17	−.21	.07	–								
7. Agreeableness	0.63	0.57	.08	−**.02**	−.04	−.18	.05	.31	–							
8. Conscientiousness	0.88	0.55	−.06	−.04	−**.48**	−.18	.13	.38	.48	–						
9. Stability	0.94	0.58	−.11	−.14	−.19	−**.55**	.05	.33	.44	.53	–					
10. Openness	0.70	0.49	.05	.07	−.03	.00	**.15**	.37	.42	.48	.33	–				
Generalized motives																
11. Extraversion	3.77	0.61	**.47**	.32	−.01	.08	.18	**.46**	.26	.26	.18	.26	–			
12. Agreeableness	4.20	0.61	.27	**.56**	.17	.05	.18	.25	**.50**	.22	.23	.24	.54	–		
13. Conscientiousness	4.39	0.49	.14	.22	**.22**	.02	.19	.19	.27	**.39**	.34	.39	.41	.57	–	
14. Stability	4.46	0.49	.09	.19	.06	**.01**	.26	.21	.22	.30	**.43**	.27	.41	.57	.70	–
15. Openness	4.15	0.62	.15	.13	.04	.05	**.71**	.23	.19	.29	.22	**.50**	.39	.42	.52	.52

Note: All correlations $|r| \geqslant .09$ are significant, $p \leqslant .05$; 95% confidence intervals are approximately ±.09 around each point estimate; Intra-dimension correlations are highlighted in **boldface**.

Table 9a
Study 4 traits, generalized trait-relevant motives, and change goals entered into separate models as zero-order predictors.

Behavior	Trait			Generalized motive			Change goal		
	b	SE	β	b	SE	β	b	SE	β
Extraversion	**0.90**	0.11	**0.36**	**0.72**	0.12	**0.29**	−0.08	0.13	−0.03
Agreeableness	**0.53**	0.10	**0.26**	**0.51**	0.11	**0.25**	0.07	0.11	0.03
Conscientiousness	**0.92**	0.09	**0.46**	**0.45**	0.11	**0.23**	**−0.47**	0.10	**−0.24**
Stability	**1.43**	0.12	**0.54**	0.01	0.16	0.00	**−0.98**	0.13	**−0.37**
Openness	**0.77**	0.11	**0.34**	**0.62**	0.11	**0.28**	0.00	0.12	0.00

Note: **Boldface**, $p \leqslant .05$; b = unstandardized outcome, standardized predictors; β = standardized outcomes and predictors.

2, participants reported their *change goals* using the C-BFI that involved rating stems similar to "I want to be talkative" on a scale from "much less than I currently am" (−2) to "I do not want to change" (0) to "much more than I currently am" (+2). As in Study 3, participants rated their *generalized motives* for each trait using the M-BFI that involved rating stems similar to "I want to be talkative" on a scale from "strongly disagree" (1) to "strongly agree" (5). The primary difference between the C-BFI *change goal* scale and the M-BFI *generalized motives* scale is that the former measures desires specifically to *change* oneself, whereas the latter measures a generalized motives relevant to each trait (e.g., it is possible that someone wants to be extraverted, already *is* extraverted, and therefore feels no need to *change* him- or herself).

Subsequently, participants were encouraged to complete the DBQ for up to 5 days (although some participants voluntarily completed the DBQ up to 8 times).[9] Attrition analyses revealed that several personality variables were related to the total number of waves participants completed. People tended to complete more diary entries if they were low in extraversion ($r = −.11$, $p = .05$), high in emotional stability ($r = .13$, $p = .02$), had low motives related to extraversion ($r = −.19$, $p < .01$), agreeableness ($r = −.13$, $p = .03$), or emotional stability ($r = −.14$, $p = .02$), and did not have goals to change with respect to extraversion ($r = −.11$, $p = .05$), conscientiousness ($r = −.11$, $p = .05$), or emotional stability ($r = −.14$, $p = .01$). No other personality variables were related to the number of waves completed.

5.2. Results and discussion

Descriptive statistics and intercorrelations for all study variables are listed in Table 8. Replicating Study 2 in a far more diverse sample, people generally expressed goals to increase with respect to each of the big five personality dimensions (Ms ranged from 0.62 [extraversion] to 0.94 [emotional stability]). These findings suggest that the high prevalence of change goals found in Study 2 was not merely an artifact of the sample characteristics.

5.2.1. Relationship between traits, change goals, generalized motives, and behavior

Participants completed between 1 and 8 diary entries ($M = 2.31$, $SD = 1.81$). As in previous studies, data were aggregated daily within participants and analyzed using MLM. In our first series of analyses, we created separate models to predict daily behavior from only traits, only generalized trait-relevant motives, or only change goals. As can be seen in Table 9a, replicating Studies 2–3, traits were moderate-to-strong predictors of daily behavior, bs ranged from $b = 0.53$, $β = 0.26$ (agreeableness) to $b = 1.43$, $β = 0.54$ (stability), all ps < .01. Replicating Study 3, generalized motives were also related to behavior for extraversion ($b = 0.72$, $β = 0.29$, $p < .01$), agreeableness ($b = 0.51$, $β = 0.25$, $p < .01$), conscientiousness ($b = 0.45$, $β = 0.23$, $p < .01$), and openness ($b = 0.62$, $β = 0.28$, $p < .01$), but not for emotional stability ($b = 0.01$, $β = 0.00$, $p = .97$). Finally, largely replicating Study 2, change goals were *negatively* related to daily behavior for conscientiousness ($b = −0.47$, $β = −0.24$, $p < .01$) and emotional stability ($b = −0.98$, $β = −0.37$,

Table 9b
Study 4 MLM analyses predicting daily behavior from traits, generalized trait-relevant motives, change goals, and interactions.

Behavior	Trait			Motive			Change goal			Trait × motive			Trait × change goal		
	b	SE	β	b	SE	β	b	SE	β	b	SE	β	b	SE	β
Main effects model															
Extraversion	**0.71**	0.16	**0.29**	**0.40**	0.19	**0.16**	−0.06	0.18	−0.03	–	–	–	–	–	–
Agreeableness	**0.31**	0.13	**0.15**	**0.40**	0.16	**0.19**	−0.13	0.14	−0.06	–	–	–	–	–	–
Conscientiousness	**0.69**	0.12	**0.35**	**0.43**	0.12	**0.22**	**−0.28**	0.13	**−0.14**	–	–	–	–	–	–
Stability	**1.22**	0.15	**0.46**	0.19	0.15	0.07	**−0.39**	0.17	**−0.15**	–	–	–	–	–	–
Openness	**0.53**	0.16	**0.24**	**0.38**	0.18	**0.17**	**−0.28**	0.14	**−0.12**	–	–	–	–	–	–
Trait × motive model															
Extraversion	**0.76**	0.13	**0.31**	**0.33**	0.14	**0.14**	–	–	–	−0.04	0.09	−0.02	–	–	–
Agreeableness	**0.37**	0.12	**0.18**	**0.35**	0.14	**0.17**	–	–	–	0.05	0.44	0.02	–	–	–
Conscientiousness	**0.86**	0.09	**0.43**	**0.28**	0.10	**0.14**	–	–	–	0.04	0.10	0.02	–	–	–
Stability	**1.43**	0.13	**0.53**	0.01	0.13	0.00	–	–	–	0.01	0.15	0.00	–	–	–
Openness	**0.64**	0.15	**0.28**	0.21	0.16	0.09	–	–	–	0.04	0.07	0.02	–	–	–
Trait × change goal model															
Extraversion	**0.95**	0.12	**0.39**	–	–	–	0.21	0.13	0.09	–	–	–	0.01	0.11	0.00
Agreeableness	**0.53**	0.11	**0.26**	–	–	–	0.07	0.11	0.04	–	–	–	0.02	0.07	0.01
Conscientiousness	**0.93**	0.10	**0.47**	–	–	–	0.00	0.10	0.00	–	–	–	−0.15	0.08	−0.08
Stability	**1.29**	0.14	**0.48**	–	–	–	**−0.27**	0.14	**−0.10**	–	–	–	−0.01	0.11	−0.01
Openness	**0.79**	0.11	**0.35**	–	–	–	−0.11	0.11	−0.05	–	–	–	0.05	0.10	0.02
Full model															
Extraversion	**0.67**	0.16	**0.27**	**0.47**	0.20	**0.19**	−0.12	0.18	−0.05	−0.09	0.10	−0.04	0.15	0.12	0.06
Agreeableness	**0.29**	0.14	**0.14**	**0.46**	0.17	**0.22**	−0.14	0.13	−0.07	−0.04	0.10	−0.02	0.11	0.11	0.05
Conscientiousness	**0.73**	0.12	**0.37**	**0.39**	0.12	**0.20**	−0.24	0.14	−0.12	0.05	0.11	0.02	−0.09	0.09	−0.05
Stability	**1.22**	0.16	**0.46**	0.22	0.16	0.08	**−0.41**	0.17	**−0.15**	**−0.05**	0.15	−0.02	0.04	0.12	0.02
Openness	**0.50**	0.16	**0.22**	**0.48**	0.20	**0.21**	**−0.31**	0.14	**−0.14**	**−0.01**	0.08	−0.01	0.15	0.13	0.07

Note: **Boldface**, $p \leqslant .05$; b = unstandardized outcome, standardized predictors; $β$ = standardized outcomes and predictors; motive = generalized motive.

$p < .01$), but not for the remaining personality dimensions, all $|b|s \leqslant 0.08$, $|β|s \leqslant 0.03$, $ps \geqslant .58$.

Next, we examined the simultaneous and interactive effects of traits, generalized motives, and change goals on daily behavior. For each dimension (e.g., extraversion), we created 4 models: a main-effects model (behavior = trait + generalized-motive + change-goal), a trait × generalized-motive interaction model (behavior = trait + generalized-motive + trait × generalized-motive) that replicated the analyses from Study 3, a trait × change goal interaction model (behavior = trait + change-goal + trait × change-goal) that replicated the analyses from Study 2, and a "full model" that included both the trait × generalized-motive and the trait × change-goal interaction terms. The parameter estimates for all analyses are tabulated in Table 9b.

5.2.2. Replication of Study 2

As can be seen by comparing the "Trait × Change Goal Models" in Table 9b to the analyses from Study 2 (Table 6b), we replicated the pattern of results from Study 2. That is, when traits were controlled, the negative associations between change goals and daily behavior generally disappeared. This suggests that change goals are negatively related to daily behavior only because of their shared variance with traits. That is, people who are low in desirable traits (and the accompanying behavior) tend to desire to increase with respect to those traits. Notably, the interaction between trait-emotional stability and goals to increase in emotional stability found in Study 2 did not replicate.

5.2.3. Replication of Study 3

As can be seen by comparing the "Trait × Generalized Motive Models" in Table 9b to the analyses from Study 3 (Table 7b), the two studies differ somewhat in their pattern of results. In Study 3, generalized motives were not significant predictors of daily behavior after controlling for traits. In contrast, in Study 4, even when controlling for traits, generalized motives were related to daily behavior for extraversion ($b = 0.33$, $β = 0.14$, $p = .02$), agreeableness ($b = 0.35$, $β = 0.17$, $p = .01$), and conscientiousness

($b = 0.28$, $β = 0.14$, $p < .01$), but not for emotional stability ($b = 0.01$, $β = 0.00$, $p = .96$) or openness to experience ($b = 0.21$, $β = 0.09$, $p = .19$). Contrasting with Study 3, these findings suggest that generalized trait-relevant motives actually predict people's daily behavior, above and beyond the effects of their existing traits. As we elaborate in greater detail in the general discussion, this pattern of results is most consistent with theories that paint traits and motives as separate, independent components of personality (McAdams & Pals, 2006; Roberts & Wood, 2006).

Why did the pattern of results differ between Study 3 and Study 4? One potential explanation is that Study 3 was a slightly longer longitudinal study than was Study 4. On average, in Study 3, participants provided 7.43 daily diary entries, whereas Study 4 participants provided an average of only 2.31 diary entries. It is possible that the correlations from Study 4 were inflated by the initial assessment (in which traits, generalized motives, change goals, and behaviors were all measured in a single session). In order to rule out this possibility, we reanalyzed the data from Study 3, including only a maximum of three entries provided by any participant (including the fifth session where traits, generalized motives, and behaviors were measured at once; this lowered the average number of entries to 2.98). The pattern of significance was unchanged, suggesting that the differences in Studies 3 and 4 are not attributable to the greater number of entries provided by participants in the former study.

An alternative possibility is that Studies 3 and 4 actually did not find different patterns of results. It is true that, in Study 3, when traits were controlled, the point-estimates of the association between generalized motives and daily behavior were not significantly different from zero. However, when traits were controlled, the point estimates for generalized conscientiousness motives and generalized extraversion motives in Study 3 were also not significantly different from the point estimates found in Study 4, $ps \geqslant .07$. As such, the only significant difference between the results in Study 3 and Study 4 pertain to agreeableness. Given the combined findings in Studies 3–4, it seems inappropriate to conclude that the effect of generalized motives on behavior when

traits are controlled is zero. Rather, it is likely that the relationship between generalized motives and daily behavior, controlling for traits, is quite small but positive, and that Study 3 was not adequately powered to detect these effects.

5.2.4. Simultaneous effects of traits, generalized motives, and change goals

For our final analyses, we examined the simultaneous effects of traits, generalized motives, and change goals on behavior. As can be seen in the "Main Effects Models" in Table 9b, when traits, generalized motives, and change goals were entered as simultaneous predictors, all of their relationships with daily behavior were slightly reduced in size, but the general zero-order pattern remained intact. Traits remained moderate predictors of daily behavior, even when controlling for both generalized motives and change goals, bs ranged from $b = 0.31$, $\beta = 0.15$, $p = .02$ (agreeableness) to $b = 1.22$, $\beta = 0.46$, $p < .01$ (stability). Similarly, generalized motives continued to positively correlate with daily behavior (all $bs \geqslant 0.38$, $\beta s \geqslant 0.17$, $ps \leqslant .04$) except for emotionally stable behavior ($b = 0.19$, $\beta = 0.07$, $p = .19$). Change goals continued to negatively predict behavior for conscientiousness, emotional stability, and openness, all $bs \leqslant -0.28$, $\beta s \leqslant -0.12$, $ps \leqslant .04$. Finally, neither traits and generalized motives nor traits and change goals interacted to predict daily behavior for any trait, all $|b|s \leqslant 0.15$, $|\beta| \leqslant 0.07$, $ps \geqslant .23$.

Taken as a whole, the results from Study 4 generally suggest that traits, generalized motives, and change goals are independent, non-interacting predictors of daily behavior. One important implication of these findings is that change goals and generalized trait-relevant motives (e.g., "I want to be extraverted") are separate (albeit related) constructs that have different predictive validities. For example, change goals were *negatively* related to traits and unrelated to behavior when traits were controlled, whereas generalized trait-relevant motives were *positively* related to traits and behavior. As such, people's goals to change their personality traits are a promising new area of research that is discriminant from other lines of inquiry that examine generalized trait-relevant motives (e.g., to be sociable).

6. General discussion

Prior research indicates that people desire to change aspects of themselves (e.g., Higgins, 1987; Markus & Nurius, 1986). Although theorists have speculated for more than 20 years that people's goals to change their personality traits are a potentially important component of personality (Baumeister, 1994; Hennecke et al., 2014; Kiecolt, 1994), very few studies have empirically examined people's change goals. In the present studies, we developed and validated a measure designed to assess people's change goals. We systematically explored (1) whether individuals have goals to change their personality traits, (2) whether these change goals are organized with respect to the big five personality dimensions, (3) links between existing traits, dissatisfaction with one's life, and change goals, and (4) whether change goals predict daily behavior, above and beyond traits.

6.1. Do individuals have goals to change their traits, and why?

In Study 1, participants self-reported their personality traits, their goals to change their personality traits, and their levels of satisfaction with various aspects of their lives (e.g., school, recreational activities, friendships). Findings indicated that people's change goals are organized with respect to the big five personality dimensions (Goldberg, 1993). That is, people tended to desire to change broad dimensions (e.g., extraversion) rather than cherry-picking ad-hoc qualities to change. For example, if someone indicated that they wanted to become more talkative, they also tended to express desires to become more assertive, energetic, and enthusiastic, and less reserved. Furthermore, our findings indicated that change goals are extremely prevalent—a vast majority of people expressed desires to increase with respect to each big five personality dimension—especially emotional stability and conscientiousness.

In later studies, we found that change goals (e.g., to *increase* in extraversion) are unique and non-redundant with more generalized types of motives (e.g., the desire *to be* sociable and extraverted). As such, when someone expresses the goal to become, for example, *more* extraverted, it is not merely a manifestation of a broader desire to be generally extraverted. Rather, its predictive validities, which are not eliminated by controlling for generalized motives, imply that the change goal seems to actually tap the desire to *change, per se.*

Why do people want to change their personality traits? In Study 1, we explored two possibilities. First, existing levels of specific traits were strongly negatively related to goals to increase with respect to those traits. For example, introverts were most likely to desire increased extraversion. This finding aligns with the idea that most of the big five personality dimensions are socially desirable (e.g., Dunlop et al., 2012), and reflective of social maturity (Roberts, Wood, & Caspi, 2008); as a consequence, people low in desirable traits may want to increase with respect to those traits for their intrinsic value.

Second, dissatisfaction with specific areas of one's life was linked to goals to change relevant personality traits. For example, people who were dissatisfied with their sex lives, recreational activities, friendships, or daily emotions tended to express desires to increase in extraversion—perhaps because they perceived that being more extraverted would ameliorate their woes related to sex, recreation, social interactions, and emotional experiences. Similarly, participants who were dissatisfied with the financial or academic aspects of their lives tended to express desires to increase in conscientiousness—perhaps because they believed that being more thorough, reliable, hardworking, and organized might help remedy financial or academic problems. These findings are consistent with theories that postulate that dissatisfaction with areas of one's life may drive goals to change relevant traits (Baumeister, 1994; Kiecolt, 1994).

It is important to note, however, that the associations between satisfaction with life domains and change goals tended to be attenuated when traits were controlled. This finding may indicate that the links between life satisfaction and change goals are largely spurious, driven by their shared variance with traits. For example, it may be the case that individuals who are relatively introverted tend to be dissatisfied with their friendships, and they incidentally also tend to desire increases in extraversion—perhaps because extraversion is socially desirable (Dunlop et al., 2012). Of course, it is also possible that more complex time-based processes—which are difficult to discern in cross-sectional data—link traits, life satisfaction and change goals together (e.g., sustained dissatisfaction might lead to goals to change traits). Future research should utilize longitudinal methods to fully elucidate the associations between traits, life satisfaction, and change goals.

6.2. Links between change goals and concurrent daily behavior

In two studies, participants self-reported their personality traits and their change goals. Subsequently, they completed daily behavior checklists for several days. Traits were consistently related to daily behavior, even when controlling for individuals' motives to change themselves. In contrast, change goals were generally unrelated to daily behavior after traits were controlled. In later studies,

we demonstrated small and somewhat inconsistent links between more generalized trait-relevant motives and behavior, even when traits were controlled.

How should we interpret these findings? There are at least two non-exclusive possibilities. First, it may be the case that people's change goals, unlike more generalized trait-relevant motives, simply do not predict daily behavior beyond the effect of traits. Consistent with theory, this may simply reflect that change goals are a *result* of *concurrent* behavior, rather than an antecedent. Stated differently, the fact that an individual lacks conscientious thoughts, feelings, and behaviors (and thus is low in trait-conscientiousness) may *inspire* the goal to change.

A second, interrelated possibility is that our studies may have captured only a snapshot that represents the *beginning* of the process of changing oneself. Theoretically, the decision to change oneself is driven by discontent with aspects of one's life (Baumeister, 1994; Kiecolt, 1994). For example, an introvert who is dissatisfied with his social life, sexual prospects, or even his introversion *per se* might form the goal to become more extraverted. Now, even if he is successful in attaining true trait change—perhaps through systematically modifying his behavior (Magidson, Roberts, Collado-Rodriguez, & Lejuez, 2012; Roberts & Jackson, 2008) or by committing to social roles that will engender extraversion within him (Hudson, Roberts, & Lodi-Smith, 2012; Stevenson & Clegg, 2011)—this change may take time to manifest. And presumably, as he attains his desired level of extraversion, the goal to *increase* in extraversion will be sated, fulfilled, and will begin to dissipate (the alternative would be desiring to increase in extraversion *ad infinitum*). As such, an individual should most strongly endorse the goal to *increase* in extraversion when he is most dissatisfied and is furthest from his goal—when his traits and behavior are at their most introverted point. To the extent that volitional self-change is possible, change goals should predict *future trajectories* of traits and behaviors, rather than *concurrent* traits and behaviors. That is, someone with the goal to increase in extraversion should become more extraverted in traits and behavior *over time*.

6.3. Implications for personality development

The largest question spurred by the present studies is whether volitional self-change is even possible. That is, can people actually attain goals to change their personality traits? Although no empirical evidence currently exists that can answer this question, current personality theories provide a promising prognosis for attempts at volitional trait change. Traditionally, scholars have argued that a major reason that individuals experience differential patterns of personality trait change over time is that they commit to different social roles (e.g., romantic relationships, careers) that demand particular patterns of behavior (e.g., Hudson et al., 2012; Lehnart, Neyer, & Eccles, 2010). For example, committing to a career requires that one behave in a conscientious manner. Researchers have extended this logic and argued that *any* behavioral changes that are sustained over a long enough timeframe may calcify into enduring personality trait change—perhaps through modifications to the epigenome (Burke, 2006; Magidson et al., 2012; Roberts & Jackson, 2008; Roberts et al., 2008). A natural consequence of this logic is that if individuals can volitionally maintain behavioral changes over an extended period of time, they may be successful in attaining desired changes to their personality traits through sheer willpower. Beyond this, social roles are well-known to provide the structure necessary for lasting behavioral changes that facilitate trait change (Lodi-Smith & Roberts, 2007). As such, more strategic individuals may be able to selectively pursue social commitments that foster desired traits within themselves (Stevenson and Clegg, 2011).

These ideas are extremely compelling and provide a rich foundation for future research programs. Unfortunately, given the short duration of the present studies, we were unable to test for changes in participants' traits or behaviors over time. Future longitudinal research should explore whether individuals' change goals predict trajectories of change in traits and behavior. Beyond this, scholars should explore what types of strategies or interventions might help people attain desired personality trait changes. For example, it is possible that forming small, attainable behavioral goals (Gollwitzer and Brandstätter, 1997) may facilitate trait change. Alternatively, providing social structures that reinforce desired patterns of behavior may engender lasting trait change (Lodi-Smith and Roberts, 2007; Roberts and Jackson, 2008).

6.4. Evaluating theories of traits, motives, and behavior

Finally, our findings can also be used to test several models of how traits and motives might combine to predict behavior. In brief, the three most prevalent models of traits and motives are: (1) *motives as primary*: traits are caused by motives (among other factors) (e.g., Funder, 1991; McCabe and Fleeson, 2012; Mischel and Shoda, 2008; Murray, 1938), and therefore traits should mediate the effects of motives on behavior; (2) *traits as primary*: traits ultimately cause all behavior, including motives (McCrae and Costa, 2008), and so motives should mediate the effects of traits on behavior and/or motives should be unrelated to behavior; and (3) *traits and motives as independent*, potentially interacting predictors of behavior (e.g., McAdams and Pals, 2006; Roberts and Wood, 2006).

6.4.1. Change goals and traits

On a zero-order level, traits were positively related to daily behavior, and change goals were *negatively* related to daily behavior. When traits and change goals were modeled simultaneously, traits continued to predict behavior, whereas change goals did not. This has two possible interpretations. First, using a traditional mediation model, one could claim that traits mediate the effect of change goals on behavior. However, given the negative relationship between traits and change goals, it is theoretically nonsensical to claim that the goal to become more extraverted, for example, *causes* introversion, which in turn causes introverted behavioral patterns. Rather, a more intuitive interpretation is that traits (e.g., introversion) cause *both* daily behavior (e.g., introverted behavior) *and* the goal to change (e.g., goals to become more extraverted). As such, the relationship between change goals and behavior is likely spurious, driven by shared variance with traits. This aligns with the *traits as primary* perspective (McCrae and Costa, 2008).

That being said, as we have mentioned above, it is possible that change goals may influence *future* developmental trajectories of traits and/or daily behavior. Recent studies have found that on a within-person level, traits seem to operate in the service of motives (McCabe and Fleeson, 2012). For example, goals to connect with people or to have fun can lead to higher levels of state-extraversion, which in turn can lead to extraverted behaviors (e.g., positive affect). To the extent that similar processes operate with respect to change goals, the goal to become more extraverted, for example, may produce higher levels of state-extraversion. If these elevated levels of state extraversion persist over long periods of time, they may calcify into increased trait-extraversion (Magidson et al., 2012; Roberts and Jackson, 2008). Future research should explore this possibility with extended longitudinal designs.

6.4.2. Traits and generalized trait-relevant motives

In Studies 3–4, we also measured individuals' generalized trait-relevant motives. For example, we asked individuals how much they *wanted* to be extraverted (e.g., talkative, sociable, outgoing, assertive). Because the concept of *change* was not invoked, this measure represented a more generalized motive *to be* extraverted. Whereas change goals were negatively related to traits (e.g., neurotic individuals

wanted to be more emotionally stable), generalized trait-relevant motives were *positively* related to traits (perhaps through self-verification processes; i.e., liking one's existing traits).

Across both studies, traits and motives generally had positive zero-order relationships with behavior. When traits and generalized motives were mutually controlled, traits continued to predict behavior in both studies. When traits were controlled, generalized motives failed to significantly predict behavior in Study 3, but continued to significantly predict behavior in Study 4. However, although the Study 3 effect estimates were not significantly different from zero, with respect to extraversion and conscientiousness, they were also not significantly different from the estimates in Study 4. As such, Studies 3 and 4 can be viewed as replications of each other, which when taken together, seem to suggest that—when traits are controlled—the effect of motives on behavior is small but robust (i.e., the null effects in Study 3 were probably due to its lower power to detect small effects amidst sampling error). This is most consistent with the *traits and motives as independent* perspective (e.g., McAdams and Pals, 2006; Roberts and Wood, 2006), in which traits and motives are separate components of personality that separately determine behavior. Thus, the model that captures the relation between traits and motives depends, in part, on how motives are assessed. When asked as goals to change traits, the *traits as primary* model applies. When asked as general motives for a trait, the *traits and motives as independent* model holds. High-powered future studies should continue to explore these issues to enable meta-analytic estimates of the joint effects of traits and motives on behavior.

6.5. Contributions, limitations, and future directions

The present studies were the first to systematically explore people's goals to change their personality traits. Collectively, our findings demonstrated that individuals do, in fact, have goals to change their personality traits, that these change goals are organized by the big five personality dimensions, and that change goals are related to theoretically relevant criteria (e.g., scoring low in socially desirable traits). Furthermore, change goals (e.g., to become more extraverted) are unique constructs that are not redundant with more general types of motives (e.g., generally wanting to be sociable and extraverted).

As this is a fledgling area of research, there are many extremely important questions that remain utterly unexplored. As we have stressed, perhaps the single most important issue is whether people can, in fact, *attain* desired changes to their personality traits. Future longitudinal research should explore whether change goals predict trajectories of personality trait development over time, as well as trajectories of behavior over time. For example, it is possible that people who desire to become more agreeable actually experience increases in trait-agreeableness and agreeable behavior over time. Future researchers should also explore potential interventions and mechanisms that might facilitate volitional trait change—potentially including committing to different social roles that foster trait development (Hudson et al., 2012; Lehnart et al., 2010; Stevenson and Clegg, 2011), or guiding participants in planning small, concrete behavioral goals that help them attain the desired changes to their personality traits (Gollwitzer and Brandstätter, 1997).

One final limitation of the present studies is that they relied on self-report measures. Although goals to volitionally change one's own personality must necessarily be self-reported, future research should correlate such goals with observer-reports of personality traits, behaviors, and trajectories of these variables over time.

7. Conclusion

Do people want to change their personality traits? The present studies explicitly and systematically examined individuals' goals to change their personality traits and found that a vast majority of individuals do, in fact, have goals to change themselves. We hope that future researchers investigate the plausibility of actually attaining goals for volitional trait change using extended longitudinal designs with large sample sizes.

Appendix A. Change Goals Big Five Inventory (C-BFI)

A.1. Instructions

How much do you want to change yourself? Here are a number of personality traits that you may or may not want to change within yourself. Please rate the extent to which you want to change each trait.

A.2. Response scale

All items are rated using the following response scale (note: "am" must be changed to "do" when grammatically required by the item text—e.g., "I want to have an assertive personality"):

Much more than I currently am (+2).
More than I currently am (+1).
I do not want to change in this trait (0).
Less than I currently am (−1).
Much less than I currently am (−2).

A.3. Items

1. I want to be talkative.
2. I want to be reserved (r).
3. I want to be someone who is full of energy.
4. I want to be someone who generates a lot of enthusiasm.
5. I want to be someone who tends to be quiet (r).
6. I want to have an assertive personality.
7. I want to be sometimes shy, inhibited (r).
8. I want to be outgoing, sociable.
9. I want to be someone who tends to find fault with others (r).
10. I want to be someone who is helpful and unselfish with others.
11. I want to be someone who starts quarrels with others (r).
12. I want to have a forgiving nature.
13. I want to be generally trusting.
14. I want to be someone who can be cold and aloof (r).
15. I want to be someone who is considerate and kind to almost everyone.
16. I want to be someone who is sometimes rude to others (r).
17. I want to like to cooperate with others.
18. I want to be someone who does a thorough job.
19. I want to be someone who can be somewhat careless (r).
20. I want to be a reliable worker.
21. I want to be someone who tends to be disorganized (r).
22. I want to be someone who tends to be lazy (r).
23. I want to be someone who perseveres until the task is finished.
24. I want to be someone who does things efficiently.
25. I want to be someone who makes plans and follows through with them.
26. I want to be someone who is easily distracted (r).
27. I want to be someone who is depressed, blue (r).
28. I want to be someone who is relaxed, handles stress well.
29. I want to be someone who can be tense (r).
30. I want to be someone who worries a lot (r).
31. I want to be emotionally stable, not easily upset.
32. I want to be someone who can be moody (r).

33. I want to be someone who remains calm in tense situations.
34. I want to be someone who gets nervous easily (r).
35. I want to be original, come up with new ideas.
36. I want to be curious about many different things.
37. I want to be ingenious, a deep thinker.
38. I want to have an active imagination.
39. I want to be inventive.
40. I want to be someone who values artistic, aesthetic experiences.
41. I want to be someone who prefers work that is routine (r).
42. I want to be someone who likes to reflect, play with ideas.
43. I want to have artistic interests.
44. I want to be sophisticated in art, music, or literature.

A.4. Administration and scoring

Items should be presented in randomized order. Reverse items are indicated above with (r). Average items to form composites as follows:

1. Items 1–8: goals to change extraversion.
2. Items 9–17: goals to change agreeableness.
3. Items 18–26: goals to change conscientiousness.
4. Items 27–34: goals to change emotional stability.
5. Items 35–44: goals to change openness to experience.

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